PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS

A systematic tabular presentation of accurate data on the physical properties of 511 organic cyclic compounds compiled by R. R. Dreisbach of the Dow Chemical Co. These comprehensive and basic data were determined for specially prepared, high purity compounds. In addition to the precisely measured properties the author has calculated new values for many constants based upon his new experimental values.

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Physical Properties Of Chemical Compounds

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Definition of the Symbols and Parameters Used, with the Methods of Calculating the Parameters

Mol. % Pur.: Mole % purity by weight.

F.P.: Freezing point, ° C.

F.P. 100%: Freezing point curve extrapolated to 100% purity.

B.P. 760 mm., 100 mm., etc.: Boiling points at these pressures, ° C.

P_{25}: Pressures at 25° C., in mm.

P_t: Pressure corresponding to temperature t_t in mm.

d^{20}, etc.: Density at 20° C., etc., g./ml.

a, b: Constants of Law of Rectilinear Diameters, $d_v + d_L = a + bt$
d_v = density of the vapor, g./ml.; d_L = density of the liquid, g./ml.

n_D^{20}, etc.: Refractive index for the sodium line at 20° C., etc.

"C": Constant of the Eykman equation, $(n_D^2 - 1)/(n_D + 0.4) \times 1/d$ = "C"

MR (obs.): Molal refraction (obs.) = $(n_D^2 - 1)/(n_D^2 + 2) \times M/d$ = MR at 20° C. (M = mol. wt.)

MR (calc.): Molal refraction calculated from atomic refractive indices. See page 9.

(n_D − d/2): Refractivity intercept equals refractive index minus one half the density, both at the same temperature, 20° C.

D: Dielectric constant run at a frequency of 10^5 (cycles/sec.) and at 25° C. unless otherwise noted. When reported as data of The Dow Chemical Co., error about ±0.005. Where Reference 5 is noted it was obtained by squaring the refractive index at 20° C.

A, B, C: Constants of the Antoine vapor pressure equation for the liquid state, giving P (pressure) in mm. and t (temperature) in ° C. This is in the range between the temperatures as indicated. These temperatures in general are the boiling point at 30 mm. to a T_R of 0.75 to 0.80. See method of obtaining A, B, C on page 6.
Antoine equation: $\log P = A - B/(t + C)$

A*, B*, K, c, t_k, t_x: Constants of the saturated vapor density equation
$\log d_v$(g./ml.) = $A^* - B^*/(t + C)$ to the temperature t_k
$\log d_v$(g./ml.) = $A^* - B^*/(t + C) + K/(1.1\ T_C - 273.2 - t) + c$
from temperature t_k to a reduced temperature, T_R, of 0.92
t_k = Temperature at which it is necessary to change from the simple vapor density equation to the corrected vapor density equation in the higher ranges, ° C.
$t_k = t_x + K/c$ and $t_x = (1.1\ T_C - 273.2)$° C.

A* and B* where the latent heat at the atmospheric boiling point is available.
$V_g - V_L = (31381.7 \times \Delta Hv \times dt/dp)/T$

Where the latent heat is not available use
$M(\Delta Hv)/T_B = 21.0$ and from this $\Delta Hv = (T_B \times 21.0)/M$
The value 21.0 (or any other value as 21.4 say) is obtained from the nearest related compound which has a latent heat available. Then proceed as in case where latent heat is available for Vg value at B.P.

Since $d_v = 1/Vg$
$\log d_{v760} = A^* - B^*/(t_B + C)$ at 760 mm.
$\log d_{v30} = A^* - B^*/(t_{30} + C)$ at 30 mm.
Solve for A*, B*, since t and d_v at 760 mm. and 30 mm. and C are known.

A′, B′, C′: Constants of the Antoine vapor pressure equation below 30 mm. pressure, covering the temperature range as indicated. See method of obtaining the constants on page 6.

A′*, B′*: Constants of the vapor density equation below 30 mm. These two values are obtained by using the boiling point at 30 mm. and the pressure at 25° C. (obtained from the values A′, B′, C′) and assuming that at 25° C. the relationship PV/RT = 1. Then we have Vg at 25° C. = $RT/MP = 62{,}361 \times (25 + 273.2)/MP$.

Then dv = 1/Vg. Inserting these values of vapor density we then solve the two equations for the values of A′* and B′* as in the case of A* and B*.

Ac, Bc, Cc: Constants of the Antoine vapor pressure equation for the liquid state from T_R = 0.75 (or a higher T_R as indicated) to the critical temperature. See method of obtaining the constants on page 7.

Cryoscopic Constants, A°, B°: Cryoscopic constants for calculating mole % purity. See *J. Research Natl. Bur. Standards*, **35** (1945); RP 1676.

t_e° C.: Temperature at which a mole of the vapor occupies 22.414 liters and the vapor is in equilibrium with the liquid, in ° C.

$$te = \frac{B^*}{(A^* - \log dv_e)} - C$$

dt/dp: Rate of change of boiling point with pressure, given by equation $dt/dp = B/[2.3026 \times P \times (A - \log P)^2]$° C./mm.

ΔHm: Latent heat of fusion in cal./g.

ΔHv: Latent heat of vaporization at the temperature designated, cal./g.

t_e(d, e): The latent heat of vaporization at the temperature t_e as given by the equation ΔHv = d − et, and indicates the accuracy of this equation at the temperature t_e.

ΔHv/T_e: Molal latent heat of vaporization at t_e divided by T_e. (Equal to the molal entropy of vaporization at t_e.)

d, e; d′, e′: These are parameters of the latent heat of vaporization equation, ΔHv-(cal./g.) = d − et. This is valid between the temperatures indicated. It has been found that the latent heat between the boiling point at 30 mm. and the boiling point at 760 mm. is almost a linear function of the temperature. As seen in most cases this equation holds almost to the temperature t_e. Above and below this the latent heat is not linear with temperature except for short intervals.

d_e: Critical density, g./ml.

v_e: Critical volume, ml./g.

t_e: Critical temperature, ° C. See also page 7.

P_e mm.: Critical pressure in mm. Where this was not obtained from the literature it is calculated as follows (The Thomson method, private communication from George W. Thomson): The critical temperature is inserted in the Antoine equation, using the A, B, and C values to calculate the critical pressure.

This value is too low. This is then multiplied by 1.07 and is assumed to be the critical pressure. In the great majority of cases, this will agree with determined values to within ±3%. For high boiling compounds this value must be decreased, since in most cases there is somewhat irregular drift with increasing temperature, so this should be continually lowered as the boiling point becomes increasingly higher.

PV/RT: Compressibility at the temperature designated.

$z = PV/RT$

where P = pressure in mm., V = volume in ml./mole, and R = 62361.

ΔHc: Heat of combustion, kcal./mole, gas at constant pressure, 298.16° K. or 25° C.

ΔHf: Heat of formation, kcal./mole, liquid at 298.16° K. or 25° C.

ΔFf: Free energy of formation, kcal./mole, liquid at 298.16° K. or 25° C.

η: Kinematic viscosity in centistokes, at temperature designated. The kinematic viscosity is given by the equation

$\log \eta = A^v + B^v/T$

between the temperatures indicated to an accuracy of 1% or better.

B.P. ° C., 30 mm.; dt/dp; ΔHv; PV/RT: These values at 30 mm. are calculated from the Antoine equation using A, B, and C. It has been found that at 30 mm. in almost all Cox Chart Families the ratio PV/RT is negligibly different from one. This, then, has been taken as one point (the other point being the B.P. at 760 mm.) from which to calculate A* and B*, always assuming the compressibility as 1.0000 at 30 mm.

c_p: Specific heat at constant pressure at temperature designated, cal./g. ° K.

c_v: Specific heat at constant volume at temperature designated, cal./g. ° K.

f, g, h, f′, g′, h′: Parameters of the heat content equation for the liquid for the temperature ranges designated, ° K.
c_p (liquid) = $f + gT + hT^2$

m, n, o, m′, n′, o′: Parameters of the heat content equation for the vapor for the temperature ranges designated, ° K.
c_p (vapor) = $m + nT + oT^2$

γ: Surface tension in dynes/cm., at temperature designated.

[P]: Parachor at the temperature designated:
$M(\gamma)^{1/4}/(d_L - d_v) = [P]$

[P] Sugd.: Parachor from atomic and structural values as given by Sugden. See Table. The parachor value for oxygen as hydroxyl (alcohols) in these tables is taken as 15. Sugden gives the values of 20 for oxygen and 30 for oxygen in esters, which does not seem to work for alcohols and phenols.

Exp. L.l.; Exp. L.u.: Explosion limits lower and upper range, % by wt.

Dispersion: Specific dispersion, $10^4(n_F - n_C)/d$, ml./g. at 25° C.
n_F, n_C = refractive index for F and C lines.
d = density, g./ml.

Flash and Fire Points, ° C.: Cleveland open cup (ASTM D 92-46) if not otherwise designated. Closed cup (ASTM D 56-36) will be designated as such.

M Spec.: Mass Spectrograph.

Ultra V.: Ultraviolet.

X-Ray Dif.: X-Ray Diffraction.

Infrared: Infrared Spectrograph.

Solubility at 25° C., in solvents as designated.

Explanation of the methods used for calculating the various parameters in the foregoing:

A, B, C: The A, B, and C constants, except where given by the API reports, are calculated by means of the Thomson method [*Chem. Revs.*, **38**, 1–39 (1946)] using the determined boiling points at three different pressures. The three formulas for this are as follows:
$(y_3 - y_2)/(y_2 - y_1)\cdot(t_2 - t_1)/(t_3 - t_2) = 1 - (t_3 - t_1)/(t_3 + C)$
$B = (y_3 - y_1)/(t_3 - t_1)\cdot(t_1 + C)(t_3 + C)$ and
$A = y_1 + B/(t_1 + C)$
where y_1, y_2, and y_3 are equal to log P_1, log P_2, and log P_3 at temperatures t_1, t_2, and t_3. Unless the data for the three points are *very* accurate the C value can be considerably in error. As a check on this method an empirical formula developed by Thomson (private communication from George W. Thomson) will give a much better value of C if the data are much in error. This formula is $C = 239 - 0.19t_B$. The A and B values can then be readily determined from the two points given, since they are much less critical.

A′, B′, C′ (for pressures below 30 mm.): Applicable when molar heats of vaporization are available at 25° C. and the Antoine equation can be used to obtain the boiling point at 30 mm. Let A, B, C be the constants of the usual Antoine equation valid above 30 mm. and let A′, B′, C′ be the constants of the Antoine equation sought for below 30 mm. These two equations are taken to give the same value of the pressure-temperature slope at 30 mm.
$\log 30 = A - B/(t_1 + C) = A' - B'/(t_1 + C')$
$B/(t_1 + C)^2 = B'/(t_1 + C')^2$

Since PV/RT may be assumed to be 1.0000 at t_1, the temperature corresponding to 30 mm., and is also 1.0000 at 25° C., the molar heat of vaporization at 25° C., $M\Delta Hv_2$, is given by

$M\Delta Hv_2 = 2.3026\ RB'\ [(t_2 + 273.2)/(t_2 + C')]^2$

where t_2 = 25° C. To solve for A', B', C' let

$g_2 = M\Delta Hv_2/2.3026\ R(t_2 + 273.2)^2 = M\Delta Hv_2/406883$ if t_2 = 25° C.

Also $g_2 = B'/(t_2 + C')^2$

Since t_1, t_2 and all values on left hand side of equations above are known then B' and C' are readily obtained as follows:

$[B'/(t_2 + C')^2][(t_1 + C')^2/B'] = g_2\ (t_1 + C')^2/B' =$ say, h^2

Then $C' = (t_1 - ht_2)/(h - 1)$ and $B' = g_2(t_2 + C')^2$

Also $B' = B[(t_1 + C')/(t_1 + C)]^2$

$A' = \log 30 + B'/(t_1 + C')$ since P_1 = 30 mm.

These formulas were developed with the aid of George Thomson.

When heats of vaporization at 25° C. are not known:

In this case the C' value is estimated and A' and B' are calculated from known data. It was noticed that C' has a value approximately 18 higher than C when latent heats at 25° C. are known. By adding this increment to C we have C', then B' from the relation for the first case

$B' = B[(t_{30} + C')/(t_{30} + C)]^2$

and then A' as in first case.

Ac, Bc, Cc: This method was developed by George Thomson [*Chem. Revs.*, **38**, No. 1, 23 (1946)] and is similar to the one for obtaining A', B', C'. It is assumed that the parameters A, B, C of the Antoine equation are good to a T_R 0.75 or a higher reduced temperature, and this temperature corresponds to the 25° C. in the case of A', B', C', and the critical point corresponds to the 30 mm. point.

$B/(t_1 + C)^2 \cdot (t_c - t_1)/(y_c - y_1) = 1 + (t_c - t_1)/(t_1 + Cc)$

and $Bc = (y_c - y_1)/(t_c - t_1) \cdot (t_1 + Cc)(t_c + Cc)$; $Ac = B/(t_c + Cc) + y_c$

where t_1 ° C. = T_R 0.75, t_c ° C. = critical temperature

$y_1 = \log P$ at t_1, $y_c = \log P_c$

The first equation is used to evaluate Cc, the second, Bc, and the third, Ac.

Association: The association in the vapor phase of organic acids seems to vary inversely as the temperature for some acids, at least for part of the range. In part of the range, and also apparently for some acids over the whole range, the association is fairly constant. The association is given in these sheets by the formula $M_x = p - rt$. For instance, for acetic acid this formula would be $M_x = 2.225 - 0.004085\ t$ from 0° C. to 100° C. From 100° C. to a T_R of 0.92, $M_x = 1.85$. That is to say, the vapor density as calculated by the A*, B* formula would have to be multiplied by this correction factor to take care of the association. Further, if the reciprocal of the density is used as calculated to give vapor volume, it would be necessary to divide by 1.85 to get the actual vapor volume.

t_c: Where the critical temperature has not been determined, it is calculated by Watson's equation:

$T_c/T_c = 0.283(M/d_s)^{0.18}$

where d_s = liquid density, g./ml. at the boiling point, and M = molecular weight. This is used for all hydrocarbons and halohydrocarbons.

f, g, h, m, n, o, etc.: For a short temperature range the equation $C_p = f + gT + hT^2$ reproduces almost exactly determined data. The parameters were set up on the IBM machines using eight determined values where that many or more were available.

The IBM machines were used to set up the Antoine constants from determined data. A preliminary C value was obtained from the equation $C = 239. - 0.19t_B$. A and B were then obtained and new C values either side of the first C used and new A and B values found. In each case above, the boiling points at the experimental pressures were calculated and compared with the determined boiling points.

Actually the value of C was generally obtained from $C = 239. - 0.19t_B$, since the determined values must be *very very* accurate to give better values of C.

Cox Chart Families

1. Alkyl and halo benzenes
2. Styrenes
3. Thiaalkyl benzenes
4. Thiophenes
5. Alkyl naphthalenes
6. Tetrahydronaphthalenes
7. Decahydronaphthalenes
8. Aromatic phenols
9. Thiophenols
10. Aromatic amines
11. Nitrobenzenes
12. Aromatic alcohols (Phenyl ethyl alcohols)
13. Aromatic ketones
14. Aromatic esters
15. Cyclopentanes
16. Cyclopentenes
17. Thiacyclopentanes
18. Thiacyclopropanes
19. Cyclohexanes
20. Cyclohexenes
21. Thiacyclohexanes
22. Miscellaneous

Atomic Refractive Indices Used for Computing Molecular Refractive Index

All values are for the sodium line.

Carbon singly bound and alone	2.592
Carbon singly bound	2.418
Carbon double bond	1.733
Carbon triple bond	2.398
Carbon conjugated	1.27
Hydrogen	1.100
Oxygen—hydroxyl	1.525
Oxygen—ethereal	1.643
Oxygen—ketonic	2.211
Oxygen—as ester	1.64
Sulfur—as SH	7.69
Sulfur—as RSR	7.97
Sulfur—as RCNS	7.91
Sulfur—as RSSR	8.11
Nitrogen	
as aliphatic primary amine	2.45
as aromatic primary amine	3.21
as aliphatic secondary amine	2.65
as aromatic secondary amine	3.59
as aliphatic tertiary amine	3.00
as aromatic tertiary amine	4.36
as hydroxylamine	2.48
as hydrazine	2.47
as aliphatic cyanide	3.05
as aromatic cyanide	3.79
as aliphatic oxime	3.93
as primary amide	2.65
as secondary amide	2.27
as tertiary amide	2.71
NO as nitrites	5.91
NO as nitrosoamine	5.37
NO_2 as alkyl nitrite	7.44
NO_2 as alkyl nitrate	7.59
NO_2 as nitro paraffin	6.72
NO_2 as nitro aromatic	7.30
NO_2 as nitramine	7.51
Fluorine	0.95*
Chlorine	5.967
Bromine	8.865
Iodine	13.900

* This value for one fluorine atom attached to carbon. The value 1.1 is to be used for each fluorine atom in polyfluorides.

Atomic and Structural Constants for Calculation of Parachor

	Sugden		Sugden
CH_2	39.0	Br	68.0
C	4.8	I	91.0
H	17.1	Single bond	..
O	20.0	Double bond	23.2
O (Alcohol)	15.0	Triple bond	46.6
O_2 (Ester)	60.0	3-Membered ring	16.7
N	12.5	4-Membered ring	11.6
N (Nitrile)	14.4	5-Membered ring	8.5
S	48.2	6-Membered ring	6.1
F	25.7	7-Membered ring	..
Cl	54.3	Aliphatic alcohol...subtract	6.0

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TABLE I. ALKYL AND HALO BENZENES

No. 1

NAME	Benzene	STRUCTURAL FORMULA
Mole % Pur. 99.996	Ref. 2	Molecular Formula C_6H_6	Molecular Weight 78.108	

		Ref.
F.P. °C	5.533	2
F.P. 100%		
B.P. °C		
760 mm	80.100	2
100	26.075	2
30	2.30	4
10	-15.7	5
1	-45.	5
Pressure		
mm 25°C	95.18	5
t_e	964.4	5
Density		
g/ml 20°C	0.87901	2
d_4^t 25	0.87370	2
30	0.86837	4
a	0.90025	4
b	-0.00105	4
Ref. Index		
n_D 20°C	1.50112	2
25	1.49792	2
30	1.49468	4
"C"	0.7500	4
MR (Obs.)	26.1835	2
MR (Calc.)		
(nD-d/2)	1.06162	2
Dielectric	2.283	1
A | 0 to	6.90565	2
B | 160 °C	1211.033	2
C	220.79	2
A* | 15 to	1.19411	4
B* | 150 °C	1127.9	4
K	25.0	4
c	-0.13147	4
t_k | 150 to	155.	4
t_x | 245 °C	345.8	5
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 160 to	7.42912	5
Bc | t_c °C	1628.32	5
Cc	279.56	5
Cryos. A°	0.01523	2
consts. B°	0.0032	2
t_e °C	88.04	5

		Ref.
dt/dP		
°C/mm		
25°C	0.2276	5
BP	0.04272	2
t_e	0.0355	5
30 mm	0.5949	4
ΔHm cal/g	30.09	2
ΔHv cal/g		
25°C	103.57	2
30 mm	108.19	4
BP	94.14	2
t_e	92.65	5
t_e (d, e)	92.71	5
$\Delta Hv/T_e$	20.03	5
d | 25 to	107.85	5
e | 90 °C	0.1711	5
d' | 0 to	108.79	5
e' | 25 °C	0.2088	5
d_c g/ml	0.300	2
v_c ml/g	3.333	2
t_c °C	289.45	2
P_c mm	36936.	2
PV/RT		
25°C	0.9922	4
30 mm	1.0000	5
BP	0.9658	4
t_e	0.9596	5
t_c	0.274	2
ΔHc kcal/m	757.52	2
ΔHf	11.718	2
ΔFf	29.756	2
Viscosity		
centistokes		
η 20 °C	0.7427	1
30	0.6592	1
50	0.5156	1
70	0.4148	1
B^v | 25 to	523.4	4
A^v | 80 °C	2.09290	4
(B^v) | to		
(A^v) | °C		
c_p liq. 300°K	0.4178	3²
320	0.4315	3²
c_p vap. 300°K	0.2516	2
400	0.3424	2
c_v vap.		

		Ref.
f | 270 to	0.2605	4
g | 350 °K	0.0_331	4
h	0.0_669	4
f' | to		
g' | °K		
h'		
m | 300 to	-0.1030	4
n | 700 °K	0.0014	4
o	-0.0_671	4
m' | 700 to	0.445	4
n' | 1100 °K	0.0_394	4
o'	-0.0_634	4
Surface tension		
dynes/cm. 20°C	28.88	2
σ 30	27.49	2
40	26.14	2
Parachor [P]		
20°C	206.06	4
30	206.10	4
40	206.11	4
Sugd.	207.1	5
Exp. L.1.%/wt.	1.8	3¹
u.	7.7	3¹
Dispersion	189.2	2
Flash Point °C ≠	-11.	3²
Fire Point		
M. Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.	Yes	1
Infrared	99.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water #	0.174	1
Water in	7.0	1
#	0.226	3

$T_R = 0.77\,T_c$ ≠ closed cup + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 J.A.C.S. 73, 1573 (1951); 3¹ Chem. Met. Eng. 44-12, 733 (1947); 3² Timmermans

No. 2

NAME	Toluene Methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.999	Ref. 2	Molecular Formula C_7H_8 — Molecular Weight 92.134

		Ref.
F.P. °C	-94.991	2
F.P. 100%		
B.P. °C		
760 mm	110.625	2
100	51.944	4
30	26.04	4
10	6.37	5
1	-26.1 ?	5
Pressure mm 25°C	28.437	4
t_e	1048.2	4
Density g/ml 20°C	0.86694	2
d_4^{25}	0.86230	2
d_4^{30}	0.85757	4
a	0.88547	4
b	-0.0_3924	4
Ref. Index n_D 20°C	1.49693	2
25	1.49414	2
30	1.49129	4
"C"	0.7545	4
MR (Obs.)	31.095	2
MR (Calc.)	30.925	5
(nD-d/2)	1.06346	2
Dielectric	2.379	3
A | 20 to	6.95334	2
B | 200 °C	1343.943	2
C	219.377	2
A* | 20 to	1.27923	4
B* | 175 °C	1252.3	4
K	23.	5
c	-0.11760	5
t_k | 175 to	175.	5
t_x | 270 °C	380.0	5
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 200 to	7.45657	4
Bc | t_c °C	1796.9	4
Cc	284.62	4
Cryos. A*	0.02508	2
consts. B*	0.0019	2
t_e °C	122.34	5

		Ref.
dt/dP °C/mm		
25°C	0.6808	4
BP	0.0463	2
t_e	0.0360	5
30 mm	0.6487	4
ΔHm cal/g	17.17	2
ΔHv cal/g		
25°C	98.55	2
30 mm	97.9	5
BP	86.80	2
t_e	84.73	5
t_e (d, e)	85.17	5
$\Delta Hv/T_e$	19.74	5
d | 25 to	101.98	5
e | 130 °C	0.1372	5
d' | to		
e' | °C		
d_c g/ml	0.288	2
v_c^c ml/g	3.473	2
t_c^c °C	320.8	2
P_c mm	30400.	2
PV/RT		
25°C	0.9968	4
30 mm	0.9966	4
BP	0.9613	4
t_e	0.9522	5
t_c	0.263	4
ΔHc kcal/m	901.50	2
ΔHf	2.867	2
ΔFf	27.282	2
Viscosity centistokes		
η 20 °C	0.67778	1
40	0.56457	1
60	0.45825	1
80	0.39119	1
B^v | 40 to	440.66	4
A^v | 90 °C	2.34476	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.2708	2
400	0.3609	2
c_v vap.		

		Ref.
f | 5 to	0.3971	4
g | 110 °K	-0.0_359	4
h	0.0_521	4
f' | to		
g' | °K		
h'		
m | 300 to	-0.0654	4
n | 700 °K	0.0013	4
o	-0.0_655	4
m' | 700 to	0.0471	4
n' | 1100 °K	0.0_398	4
o'	-0.0_635	4
Surface tension dynes/cm. 20°C	28.53	2
γ 30	27.32	2
40	26.15	2
Parachor [P] 20°C	245.63	4
30	245.68	4
40	245.71	4
Sugd.	246.1	5
Exp. L.1.%/wt.	1.24	3'
u.	19.3	3'
Dispersion	184.7	2
Flash Point °C ≠	4.44	3'
Fire Point		
M Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	865.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	7.3	1
Water in	0.055	1

≠ closed cup

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

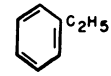
PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Nat. Fire Prot. Assoc. 325 (1949)

TABLE I. ALKYL AND HALO BENZENES

No. 3

NAME	Ethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.995	Ref. 2	Molecular Formula C_8H_{10} — Molecular Weight 106.160



		Ref.
F. P. °C	-94.975	2
F. P. 100%		
B. P. °C 760 mm	136.186	2
100	74.10	2
30	46.69	4
10	25.77	5
1	-9.2	5
Pressure mm 25°C	9.571	5
t_e	1128.	5
Density g/ml 20°C	0.86702	2
d_4^t 25	0.86264	2
30	0.85826	4
a	0.88453	4
b	-0.0387	4
Ref. Index n_D 20°C	1.49588	2
25	1.49320	2
30	1.4904	4
"C"	0.7528	4
MR (Obs.)	35.761	2
MR (Calc.)	35.543	5
(nD-d/2)	1.06237	2
Dielectric	2.238	5
A | 45 to	6.95719	2
B | 190 °C	1424.255	2
C	213.206	2
A* | 45 to	1.32502	5
B* | 160 °C	1331.16	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.32525	5
B' | 45 °C	1622.0	5
C'	230.7	5
A'* 25 to	1.69224	5
B'* 45 °C	1522.4	5
Ac | 190 to	7.3729	5
Bc | t_c °C	1779.0	5
Cc	260.6	5
Cryos. A°	0.03471	2
consts. B°	0.0029	2
t_e °C	151.52	5

		Ref.
dt/dP °C/mm		
25°C	1.8286	5
BP	0.04898	2
t_e	0.0360	5
30 mm	0.6866	4
ΔHm cal/g	20.63	2
ΔHv cal/g		
25°C	95.11	2
30 mm	93.00	4
BP	81.00	2
t_e	78.97	5
t_e (d, e)	78.94	5
$\Delta Hv/T_e$	19.74	5
d | 45 to	99.26	4
e | 160 °C	0.1341	4
d' | 15 to	97.54	4
e' | 45 °C	0.0973	4
d_c g/ml	0.29	2
v_c ml/g	3.448	2
t_c °C	346.4	2
P_c mm	28120.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9652	4
t_e	0.9547	5
t_c	0.266	2
ΔHc kcal/m	1048.53	2
ΔHf	-2.977	2
ΔFf	28.614	2
Viscosity centistokes		
η 20 °C	0.7823	2
40	0.6305	2
60	0.525	2
80	0.447	2
B_v | 20 to	413.1	4
A_v | 90 °C	Σ.48073	4
(B_v) | 90 to	408.5	4
(A_v) | 150 °C	Σ.49428	4
c_p liq. °K		
c_p vap. 300°K	0.29088	2
400	0.38395	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0734	4
n	600 °K	0.0014	4
o		-0.0_661	4
m'	700 to	0.0675	4
n'	1000 °K	0.0_399	4
o'		-0.0_635	4
Surface tension dynes/cm. 20°C		29.04	2
γ 30		27.93	2
40		26.79	2
Parachor [P] 20°C		284.3	4
30		284.4	4
40		284.3	4
Sugd.		285.1	5
Exp. L. l. %/wt. u.			
Dispersion		174.7	2
Flash Point °C		15.0	3
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		507.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water		0.020	1
Water in		0.114	1

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325 (1949)

No. 4

NAME	o-Xylene 1,2-Dimethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.999	Ref. 2	Molecular Formula C_8H_{10}
Molecular Weight 106.160		

		Ref.
F.P. °C	-25.182	2
F.P. 100%		
B.P. °C		
760 mm	144.411	2
100	81.31	2
30	53.38	4
10	32.0	5
1	-3.7	5
Pressure mm 25°C	6.688	5
t_e	1149.	5
Density g/ml 20°C	0.88020	2
d_4^t 25	0.87596	2
30	0.87172	4
a	0.89715	4
b	-0.0_3846	4
Ref. Index n_D 20°C	1.50545	2
25	1.50295	2
30	1.50025	4
"C"	0.7550	4
MR (Obs.)	35.800	2
MR (Calc.)	35.543	5
(nD-d/2)	1.06535	2
Dielectric	2.266	5
A | 50 to	6.99891	2
B |200 °C	1474.679	2
C	213.686	2
A* | 50 to	1.36031	5
B* |170 °C	1380.0	5
K		
c		
t_x | to		
t_x | °C		
A' | 25 to	7.35638	5
B' | 55 °C	1671.8	5
C'	231.0	5
A'* 25 to	1.71752	5
B'* 55 °C	1570.59	5
Ac |200 to	7.4175	5
Bc | t_c °C	1842.1	5
Cc	262.4	5
Cryos. A°	0.02659	2
consts. B°	0.0030	2
t_e °C	160.74	5

		Ref.
dt/dP °C/mm		
25°C	2.545	5
BP	0.0497	2
t_e	0.0359	5
30 mm	0.7002	4
ΔHm cal/g	30.61	2
ΔHv cal/g		
25°C	97.79	2
30 mm	95.05	4
BP	82.90	2
t_e	80.75	5
t_e (d, e)	80.72	5
ΔHv/T_e	19.75	5
d | 50 to	102.17	4
e | 160 °C	0.1334	4
d' | 10 to	100.21	4
e' | 50 °C	0.0967	4
d_c g/ml	0.28	2
v_c ml/g	3.58	2
t_c °C	359.0	2
P_c mm	27360.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9630	4
t_e	0.9518	5
t_c	0.26	2
ΔHc kcal/m	1045.94	2
ΔHf	-5.841	2
ΔFf	26.370	2
Viscosity centistokes		
η 20 °C	0.919	2
40	0.724	2
60	0.592	2
80	0.497	2
B^v | 25 to	449.07	4
A^v | 90 °C	Σ.42593	4
(B^v) | 90 to	436.36	4
(A^v) |150 °C	Σ.45900	4
c_p liq. °K		
c_p vap. 300°K	0.30162	2
400	0.38649	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0055	4
n	700 °K	0.0012	4
o		-0.0_644	4
m'	700 to	0.0701	4
n'	1100 °K	0.0_397	4
o'		-0.0_634	4
Surface tension dynes/cm. 20°C		30.03	2
30		28.93	2
40		27.84	2
Parachor [P] 20°C		282.4	4
30		282.5	4
40		282.5	4
Sugd.		285.1	5
Exp. L.1.%/wt.		3.66	3
u.		17.0	3
Dispersion		180.1	2
Flash Point °C		27.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water		∞	
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325 (1949)

TABLE I. ALKYL AND HALO BENZENES

No. 5

NAME	m-Xylene 1,3-Dimethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.997	Ref. 2	Molecular Formula C_8H_{10} — Molecular Weight 106.160

		Ref.
F.P. °C	-47.872	2
F.P. 100%		
B.P. °C		
760 mm	139.103	2
100	76.82	2
30	49.23	4
10	28.14	5
1	-7.2	5
Pressure		
mm 25°C	8.363	5
t_e	1135.	5
Density		
g/ml 20°C	0.86417	2
d_4^t 25	0.85990	2
30	0.85563	4
a	0.88124	4
b	-0.0_385	4
Ref. Index		
n_D 20°C	1.49722	2
25	1.49464	2
30	1.49200	4
"C"	0.7573	4
MR (Obs.)	35.961	2
MR (Calc.)	35.543	5
(nD-d/2)	1.06514	2
Dielectric	2.242	5
A | 45 to	7.00908	2
B | 195 °C	1462.266	2
C	215.105	2
A* | 45 to	1.37298	5
B* | 165 °C	1367.45	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.36810	5
B' | 50 °C	1658.23	5
C'	232.3	5
A'* 25 to	1.73078	5
B'* 50 °C	1556.9	5
Ac | 195 to	7.4281	5
Bc | t_c °C	1824.1	5
Cc	262.8	5
Cryos. A*	0.02741	2
consts. B*	0.0027	2
t_e °C	154.72	5

		Ref.
dt/dP		
°C/mm		
25°C	2.0725	5
BP	0.04903	2
t_e	0.0358	5
30 mm	0.6917	4
ΔHm cal/g	26.04	2
ΔHv cal/g		
25°C	96.03	2
30 mm	93.77	4
BP	82.0	2
t_e	79.96	5
t_e (d, e)	79.95	5
ΔHv/T_e	19.84	5
d | 50 to	100.22	4
e | 150 °C	0.1310	4
d' | 15 to	98.35	4
e' | 50 °C	0.0931	4
d_c g/ml	0.27	2
v_c ml/g	3.67	2
t_c °C	346.0	2
P_c mm	26600.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9643	4
t_e	0.9537	5
t_c	0.27	2
ΔHc kcal/m	1045.52	2
ΔHf	-6.075	2
ΔFf	25.730	2
Viscosity centistokes		
η 20 °C	0.714	2
40	0.581	2
60	0.488	2
80	0.419	2
B^v | 20 to	392.6	4
A^v | 90 °C	Σ.51059	4
(B^v) | 90 to	396.7	4
(A^v) | 150 °C	Σ.49933	4
c_p liq. °K		
c_p vap. 300°K	0.28881	2
400	0.37707	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0307	4
n	600 °K	0.0012	4
o		-0.0_646	4
m'	700 to	0.0489	4
n'	1000 °K	0.0010	4
o'		-0.0_636	4
Surface tension			
dynes/cm. 20°C		28.63	2
γ 30		27.54	2
40		26.44	2
Parachor [P]			
20°C		284.2	4
30		284.2	4
40		284.2	4
Sugd.		285.1	5
Exp. L.1.%/vol.		1.1	3
u.		7.0	3
Dispersion		180.6	2
Flash Point °C		23.2	5
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		943.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325

No. 6

NAME	p-Xylene 1,4-Dimethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.999	Ref. 2	Molecular Formula C_8H_{10}	Molecular Weight 106.160

		Ref.
F.P. °C	13.263	2
F.P. 100%		
B.P. °C 760 mm	138.351	2
100	75.931	2
30	48.31	4
10	27.2	5
1	-8.1	5
Pressure mm 25°C	8.816	5
t_e	1129.	5
Density g/ml 20°C	0.86105	2
d_4^t 25	0.85669	2
30	0.85233	4
a	0.87848	4
b	-0.0_387	4
Ref. Index n_D 20°C	1.49581	2
25	1.49325	2
30	1.49037	4
"C"	0.7580	4
MR (Obs.)	36.005	2
MR (Calc.)	35.543	5
(nD-d/2)	1.06530	2
Dielectric	2.237	5
A | 45 to	6.99052	2
B | 190 °C	1453.430	2
C	215.307	2
A* | 45 to	1.36044	5
B* | 165 °C	1360.12	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.32611	5
B' | 50 °C	1635.74	5
C'	231.4	5
A'* 25 to	1.69080	5
B'* 50 °C	1535.29	5
Ac | 190 to	7.4096	5
Bc | t_c °C	1814.3	5
Cc	263.0	5
Cryos. A°	0.02509	2
consts. B°	0.0028	2
t_e °C	153.79	5

		Ref.
dt/dP °C/mm		
25°C	1.979	5
BP	0.04917	2
t_e	0.036	5
30 mm	0.6922	4
ΔHm cal/g	38.53	2
ΔHv cal/g		
25°C	95.40	2
30 mm	93.18	4
BP	81.20	2
t_e	79.17	5
t_e (d, e)	79.15	5
$\Delta Hv/T_e$	19.68	5
d | 50 to	99.61	4
e | 150 °C	0.1330	4
d' | 15 to	97.78	4
e' | 50 °C	0.0952	4
d_c g/ml	0.29	2
v_c ml/g	3.48	2
t_c °C	345.0	2
P_c mm	25840.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9613	4
t_e	0.9504	5
t_c	0.25	2
ΔHc kcal/m	1045.69	2
ΔHf	-5.838	2
ΔFf	26.310	2
Viscosity centistokes		
η 20 °C	0.748	2
40	0.602	2
60	0.502	2
80	0.428	2
B^v | 20 to	409.7	4
A^v | 90 °C	Σ.47135	4
(B^v) | 90 to	419.5	4
(A^v) | 150 °C	Σ.44420	4
c_p liq. °K		
c_p vap. 300 °K	0.28721	2
400	0.37396	2
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| 300 to | 600 °K	-0.0210 0.0011 -0.0_640	4 4 4
m' n' o'	| 700 to | 1000 °K	0.0417 0.0010 -0.0_636	4 4 4
Surface tension dynes/cm. 20°C		28.31	2
γ 30		27.22	2
40		26.13	2
Parachor [P] 20°C		284.4	4
30		284.5	4
40		284.6	4
Sugd.		285.1	5
Exp. L.1.%/vol.		1.1	3
u.		7.0	3
Dispersion		182.1	2
Flash Point °C		23.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		944.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325 (1949)

TABLE I. ALKYL AND HALO BENZENES

No. 7

NAME	n-Propylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.72	Ref. 2	Molecular Formula C_9H_{12}
		Molecular Weight 120.186

		Ref.
F. P. °C	-99.50	2
F. P. 100%		
B. P. °C 760 mm	159.217	2
100	94.056	2
30	65.28	4
10	43.34	5
1	6.7	5
Pressure mm 25°C	3.438	5
t_e	1196.	5
Density g/ml 20°C	0.86204	2
d_4^t 25	0.85780	2
30	0.85356	4
a	0.87899	4
b	-0.0_3847	4
Ref. Index n_D 20°C	1.49202	2
25	1.48951	2
30	1.48683	4
"C"	0.7520	4
MR (Obs.)	40.450	2
MR (Calc.)	40.161	5
(nD-d/2)	1.061	2
Dielectric	2.226	5
A | 65 to	6.95142	2
B |205 °C	1491.297	2
C	207.140	2
A* | 65 to	1.35159	5
B* |190 °C	1394.52	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.26890	5
B' | 65 °C	1669.28	5
C'	222.9	5
A'* 25 to	1.68569	5
B'* 65 °C	1571.68	5
Ac |205 to	7.3599	5
Bc | t_c °C	1847.0	5
Cc	253.7	5
Cryos. A*	0.034	2
consts. B*	0.003	2
t_e °C	177.85	5

		Ref.
dt/dP °C/mm		
25°C	4.652	5
BP	0.05143	2
t_e	0.036	5
30 mm	0.7204	4
ΔHm cal/g	16.97	2
ΔHv cal/g		
25°C	91.93	2
30 mm	87.65	4
BP	76.00	2
t_e	73.73	5
t_e (d, e)	73.69	5
$\Delta Hv/T_e$	19.65	5
d | 60 to	95.74	4
e | 180 °C	0.1240	4
d' | 15 to	94.59	4
e' | 60 °C	0.1063	4
d_c g/ml	0.28	2
v_c ml/g	3.66	2
t_c °C	365.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9654	4
t_e	0.9532	5
t_c	0.26	2
ΔHc kcal/m	1195.12	2
ΔHf	-9.178	2
ΔFf	29.600	2
Viscosity centistokes		
η 20 °C	0.9944	2
40	0.7770	2
60	0.633	2
80	0.529	2
B^v | 25 to	461.7	4
A^v | 90 °C	Σ.41616	4
(B^v) |100 to	428.8	4
(A^v) |160 °C	Σ.50526	4
c_p liq. °K		
c_p vap. 300°K	0.30777	2
400	0.39938	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0433	4
n	600 °K	0.0013	4
o		-0.0_657	4
m'	700 to	0.0713	4
n'	1000 °K	0.0010	4
o'		-0.0_636	4
Surface tension dynes/cm. 20°C		28.99	2
30		27.91	2
40		26.81	2
Parachor [P] 20°C		323.5	4
30		323.6	4
40		323.6	4
Sugd.		324.1	5
Exp. L. l. %/wt. u.			
Dispersion		166.4	2
Flash Point °C		39.0	5
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		781.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	Isopropylbenzene Cumene	STRUCTURAL FORMULA
Mole % Pur. 99.9996 (Ref. 2)	Molecular Formula C_9H_{12}	Molecular Weight 120.186

		Ref.
F. P. °C	-96.035	2
F. P. 100%		
B. P. °C 760 mm	152.392	2
100	88.13	2
30	59.79	4
10	38.19	5
1	2.1	5
Pressure mm 25°C	4.655	5
t_e	1176.	5
Density g/ml 20°C	0.86179	2
d_4^t 25	0.85751	2
30	0.85323	4
a	0.87890	4
b	-0.0_3854	4
Ref. Index n_D 20°C	1.49146	2
25	1.48892	2
30	1.48628	4
"C"	0.7512	4
MR (Obs.)	40.422	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06055	2
Dielectric	2.224	5
A (60 to 200 °C)	6.93666	2
B	1460.793	2
C	207.777	2
A* (60 to 180 °C)	1.34442	5
B*	1365.87	5
K		
c		
t_k to		
t_x °C		
A' (25 to 60 °C)	7.25827	5
B'	1637.97	5
C'	223.5	5
A'* 25 to	1.67854	5
B'* 60 °C	1541.00	5
Ac (200 to	7.3445	5
Bc t_c °C	1809.9	5
Cc	253.6	5
Cryos. A°	0.028	2
consts. B°	0.003	2
t_e °C	170.05	5

		Ref.
dt/dP °C/mm		
25°C	3.5187	5
BP	0.05074	2
t_e	0.0361	5
30 mm	0.7095	4
ΔHm cal/g	14.15	2
ΔHv cal/g		
25°C	89.77	2
30 mm	86.14	4
BP	74.60	2
t_e	72.44	5
t_e (d, e)	72.40	5
$\Delta Hv/T_e$	19.64	5
d (60 to	93.58	4
e (170 °C	0.1246	4
d' (15 to	92.38	4
e' 60 °C	0.1045	4
d_c g/ml	0.28	2
v_c ml/g	3.66	2
t_c °C	363.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9653	4
t_e	0.9535	5
t_c	0.26	2
ΔHc kcal/m	1194.19	2
ΔHf	-9.848	2
ΔFf	29.708	2
Viscosity centistokes		
η 10 °C	1.054	2
20	0.918	2
40	0.724	2
60	0.591	2
B^v (10 to	467.1	4
A^v 70 °C)	2.36973	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.30345	2
400	0.39938	2
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to	-0.0657	4
n	600°K	0.0014	4
o		-0.0_668	4
m'	700 to	0.0403	4
n'	1000°K	0.0011	4
o'		-0.0_642	4
Surface tension dynes/cm. 20°C		28.20	2
γ 30		27.17	2
40		26.09	2
Parachor [P] 20°C		321.4	4
30		321.6	4
40		321.6	4
Sugd.		324.1	5
Exp. L. 1. %/wt. u.			
Dispersion		165.4	2
Flash Point °C		39.	3
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		782.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325 (1949)

TABLE I. ALKYL AND HALO BENZENES

No. 9

NAME	1,2,3-Trimethylbenzene Hemimellitene	STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 2	Molecular Formula C_9H_{12} — Molecular Weight 120.186

		Ref.
F.P. °C	-25.375	2
F.P. 100%		
B.P. °C		
760 mm	176.084	2
100	109.13	2
30	79.41	4
10	56.68	5
1	18.6	5
Pressure mm 25°C	1.548	5
t_e	1234.	5
Density g/ml 20°C	0.89438	2
d_4^t 25	0.89044	2
30	0.88650	4
a	0.91014	4
b	-0.0_3787	4
Ref. Index n_D 20°C	1.51393	2
25	1.51150	2
30	1.50900	4
"C"	0.7546	4
MR (Obs.)	40.451	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06674	2
Dielectric	2.292	5
A | 75 to	7.04082	2
B | 230 °C	1593.958	2
C	207.078	2
A* | 75 to	1.43482	5
B* | 205 °C	1495.51	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.37775	5
B' | 80 °C	1792.86	5
C'	224.4	5
A'* 25 to	1.78176	5
B'* 80 °C	1691.49	5
Ac | 230 to	7.4536	5
Bc | t_c °C	1973.5	5
Cc	256.1	5
Cryos. A*	0.0164	2
consts. B*	0.003	2
t_e °C	196.51	5

		Ref.
dt/dP °C/mm		
25°C	9.734	5
BP	0.05263	2
t_e	0.0360	5
30 mm	0.7454	4
ΔHm cal/g	16.64	2
ΔHv cal/g		
25°C	97.56	2
30 mm	91.93	4
BP	79.60	2
t_e	77.07	5
t_e (d, e)	77.99	5
ΔHv/T_e	19.72	5
d | 80 to	102.06	4
e | 200 °C	0.1275	4
d' | 15 to	100.15	4
e' | 80 °C	0.1035	4
d_c g/ml	0.28	2
v_c ml/g	3.66	2
t_c °C	395.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9583	4
t_e	0.9444	5
t_c	0.26	2
ΔHc kcal/m	1190.96	2
ΔHf	-14.013	2
ΔFf	25.679	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.30819	2
400	0.39023	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		0.0291	4
n | 600 °K		0.0010	4
o		-0.0_627	4
m' | 700 to		0.0424	4
n' | 1000 °K		0.0010	4
o'		-0.0_637	4
Surface tension dynes/cm. 20°C		31.27	2
σ 30		30.25	2
40		29.20	2
Parachor [P] 20°C		317.8	4
30		318.0	4
40		318.0	4
Sugd.		324.1	5
Exp. L.1, %/wt. u.			
Dispersion		175.7	2
Flash Point °C		51.0	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		1310.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1, 2, 4-Trimethylbenzene Pseudocumene	STRUCTURAL FORMULA
Mole % Pur. 99.70	Ref. 2	Molecular Formula C_9H_{12}	Molecular Weight 120.186

		Ref.
F.P. °C	-43.80	2
F.P. 100%		
B.P. °C		
760 mm	169.351	2
100	103.36	2
30	74.056	4
10	51.64	5
1	14.1	5
Pressure mm 25°C	2.0980	5
t_e	1208.	5
Density g/ml 20°C	0.87582	2
d_4^t 25	0.87180	2
30	0.86778	4
a	0.89190	4
b	-0.0_3803	4
Ref. Index n_D 20°C	1.50484	2
25	1.50237	2
30	1.49988	4
"C"	0.7580	4
MR (Obs.)	40.691	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06693	2
Dielectric	2.264	5
A | 70 to	7.04383	2
B | 220 °C	1573.267	2
C	208.564	2
A* | 70 to	1.45156	5
B* | 200 °C	1478.15	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38166	5
B' | 75 °C	1770.01	5
C'	225.7	5
A'* 25 to	1.78795	5
B'* 75 °C	1668.69	5
Ac | 220 to	7.4565	5
Bc | t_c °C	1944.8	5
Cc	256.2	5
Cryos. A°	0.0282	2
consts. B°	0.0028	2
t_e °C	188.55	5

		Ref.
dt/dP °C/mm		
25°C	7.351	5
BP	0.0519	2
t_e	0.0360	5
30 mm	0.7350	4
ΔHm cal/g	24.54	2
ΔHv cal/g		
25°C	95.33	2
30 mm	90.43	4
BP	78.00	2
t_e	75.59	5
t_e (d, e)	75.50	5
ΔHv/T_e	19.68	5
d | 70 to	100.08	4
e | 190 °C	0.1304	4
d' | 15 to	97.83	4
e' | 70 °C	0.1000	4
d_c g/ml	0.28	2
v_c ml/g	3.57	2
t_c °C	381.5	2
P_c mm	24320.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9540	4
t_e	0.9403	5
t_c	0.255	2
ΔHc kcal/m	1189.92	2
ΔHf	-14.785	2
ΔFf	24.462	2
Viscosity centistokes		
η 20 °C	1.154	2
30	0.936	2
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.31018	2
400	0.39189	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	0.0292	4
n | 600 °K	0.0010	4
o |	-0.0_630	4
m' | 700 to	0.0432	4
n' | 1000 °K	0.0010	4
o' |	-0.0_637	4
Surface tension dynes/cm. 20°C	29.71	2
γ 30	28.67	2
40	27.66	2
Parachor [P] 20°C	320.4	4
30	320.5	4
40	320.6	4
Sugd.	324.1	5
Exp. L.1.%/wt. u. Dispersion	177.9	2
Flash Point °C	46.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	897.	1
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 11

NAME	1, 3, 5-Trimethylbenzene Mesitylene	STRUCTURAL FORMULA
Mole % Pur. 99.96	Ref. 2	Molecular Formula C_9H_{12}	Molecular Weight 120.186

		Ref.
F.P. °C	-44.720	2
F.P. 100%		
B.P. °C 760 mm	164.716	2
100	99.75	2
30	70.85	4
10	48.72	5
1	11.6	5
Pressure mm 25°C	2.486	5
t_e	1193.	5
Density g/ml 20°C	0.86518	2
d_4^t 25	0.86111	2
30	0.85704	4
a	0.88145	4
b	-0.0_3813	4
Ref. Index n_D 20°C	1.49937	2
25	1.49684	2
30	1.49429	4
"C"	0.7595	4
MR (Obs.)	40.813	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06678	2
Dielectric	2.248	5
A | 70 to	7.07436	2
B | 210 °C	1569.622	2
C	209.578	2
A* | 70 to	1.48804	5
B* | 200 °C	1475.78	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.42169	5
B' | 70 °C	1770.47	5
C'	227.0	5
A'* 25 to	1.82870	5
B'* 70 °C	1668.82	5
Ac | 210 to	7.4868	5
Bc | t_c °C	1935.7	5
Cc	256.0	5
Cryos. A°	0.022	2
consts. B°	0.003	2
t_e °C	183.05	5

		Ref.
dt/dP °C/mm		
25°C	6.266	5
BP	0.05100	2
t_e	0.0357	5
30 mm	0.7253	4
ΔHm cal/g	19.14	2
ΔHv cal/g		
25°C	94.40	2
30 mm	89.95	4
BP	77.60	2
t_e	75.28	5
t_e (d, e)	75.19	5
$\Delta Hv/T_e$	19.83	5
d | 70 to	99.27	4
e | 185 °C	0.1316	4
d' | 15 to	96.83	4
e' | 70 °C	0.0971	4
d_c g/ml	0.28	2
v_c ml/g	3.57	2
t_c °C	369.	2
P_c mm	24320.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9531	4
t_e	0.9398	5
t_c	0.260	2
ΔHc kcal/m	1189.41	2
ΔHf	-15.184	2
ΔFf	24.832	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.30037	2
400	0.38615	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		0.0031	4
n | 600 °K		0.0011	4
o		-0.0_633	4
m' | 700 to		0.0450	4
n' | 1000 °K		0.0010	4
o'		-0.0_637	4
Surface tension dynes/cm. 20°C		28.83	2
γ 30		27.79	2
40		26.75	2
Parachor [P] 20°C		321.9	4
30		322.0	4
40		322.0	4
Sugd.		324.1	5
Exp. L. l. %/wt. u.			
Dispersion		177.5	2
Flash Point °C		43.0	5
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		898.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	o-Ethyltoluene 2-Ethyl-1-methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.76	Ref. 2	Molecular Formula C_9H_{12}	Molecular Weight 120.186

		Ref.
F. P. °C	-80.833	2
F. P. 100%		
B. P. °C		
760 mm	165.150	2
100	99.58	2
30	70.54	4
10	48.39	5
1	11.5	5
Pressure mm 25°C	2.522	5
t_e	1203.	5
Density g/ml 20°C	0.88069	2
d_4^t 25	0.87657	2
30	0.87245	4
a	0.89716	4
b	-0.0$_3$823	4
Ref. Index n_D 20°C	1.50456	2
25	1.50208	2
30	1.49951	4
"C"	0.75339	4
MR (Obs.)	40.447	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06422	2
Dielectric	2.265	5
A | 70 to	7.00314	2
B | 215 °C	1535.374	2
C	207.3	2
A* | 70 to	1.40772	5
B* | 195 °C	1439.76	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.22202	5
B' | 70 °C	1659.41	5
C'	218.3	5
A'* 25 to	1.64102	5
B'* 70 °C	1564.17	5
Ac | 215 to	7.4134	5
Bc | t_c °C	1900.3	5
Cc	254.7	5
Cryos. A*	0.0346	2
consts. B*	0.003	2
t_e °C	184.11	5

		Ref.
dt/dP °C/mm		
25°C	6.143	5
BP	0.05163	2
t_e	0.0360	5
30 mm	0.7279	4
ΔHm cal/g	21.13	2
ΔHv cal/g		
25°C	94.90	2
30 mm	89.47	4
BP	77.30	2
t_e	74.93	5
t_e (d, e)	74.86	5
ΔHv/T_e	19.69	5
d | 70 to	98.55	4
e | 180 °C	0.1286	4
d' | 15 to	97.88	4
e' | 70 °C	0.1192	4
d_c g/ml	0.28	2
v_c ml/g	3.66	2
t_c °C	380.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9591	4
t_e	0.9459	5
t_c	0.26	2
ΔHc kcal/m	1193.54	2
ΔHf	-11.110	2
ΔFf	27.973	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.31568	2
400	0.40354	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0058	4
n | 600 °K		0.0012	4
o		-0.0$_6$48	4
m' | 700 to		0.0670	4
n' | 1000 °K		0.0010	4
o'		-0.0$_6$37	4
Surface tension			
dynes/cm. 20°C		30.20	2
γ 30		29.13	2
40		28.11	2
Parachor [P]			
20°C		319.9	4
30		320.0	4
40		320.2	4
Sugd.		324.1	5
Exp. L. 1. %/wt. u.			
Dispersion		172.1	2
Flash Point °C		43.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		550.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

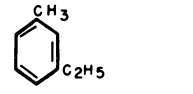
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 13

NAME	m-Ethyltoluene 3-Ethyl-1-methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.77	Ref. 2	Molecular Formula C_9H_{12}	Molecular Weight 120.186	

		Ref.
F.P. °C	-95.55	2
F.P. 100%		
B.P. °C		
760 mm	161.305	2
100	96.36	2
30	67.58	4
10	45.60	5
1	8.9	5
Pressure mm 25°C	2.991	5
t_e	1190.	5
Density g/ml 20°C	0.86452	2
d_4^t 25	0.86040	2
30	0.85628	4
a	0.88099	4
b	-0.0_3823	4
Ref. Index n_D 20°C	1.49661	2
25	1.49408	2
30	1.49145	4
"C"	0.7561	4
MR (Obs.)	40.652	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06434	2
Dielectric	2.240	5
A 65 to	7.01582	2
B 210 °C	1529.184	2
C	208.509	2
A* 65 to	1.42613	5
B* 190 °C	1434.72	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.29569	5
B' 70 °C	1687.63	5
C'	222.5	5
A'* 25 to	1.71135	5
B'* 70 °C	1589.9	5
Ac 210 to	7.4264	5
Bc t_c °C	1889.8	5
Cc	254.9	5
Cryos. A°	0.029	2
consts. B°	0.003	2
t_e °C	179.59	5

		Ref.
dt/dP °C/mm		
25°C	5.268	5
BP	0.05111	2
t_e	0.0359	5
30 mm	0.7216	4
ΔHm cal/g	15.14	2
ΔHv cal/g		
25°C	93.30	2
30 mm	88.70	4
BP	76.60	2
t_e	74.32	5
t_e (d, e)	74.24	5
$\Delta Hv/T_e$	19.73	5
d 65 to	97.42	4
e 180 °C	0.1291	4
d' 15 to	96.00	4
e' 65 °C	0.1081	4
d_c g/ml	0.28	2
v_c ml/g	3.66	2
t_c °C	363.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9576	4
t_e	0.9448	5
t_c	0.26	2
ΔHc kcal/m	1192.80	2
ΔHf	-11.670	2
ΔFf	26.977	2
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap 300°K	0.30444	2
400	0.39522	2
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m 300 to	-0.0283	4
n 600 °K	0.0013	4
o	$-0.0_6$50	4
m' 700 to	0.0814	4
n' 1000 °K	0.0_397	4
o'	-0.0_633	4
Surface tension dynes/cm. 20°C	29.07	2
30	27.97	2
40	26.89	2
Parachor [P] 20°C	322.8	4
30	322.8	4
40	322.7	4
Sugd.	324.1	5
Exp. L.1.%/wt. u.		
Dispersion	173.1	2
Flash Point °C	41.0	5
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	551.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	p-Ethyltoluene 4-Ethyl-1-methylbenzene	STRUCTURAL FORMULA

Mole % Pur. 99.94	Ref. 2	Molecular Formula C_9H_{12}	Molecular Weight 120.186

		Ref.
F.P. °C	-62.350	2
F.P. 100%		
B.P. °C		
760 mm	161.989	2
100	96.62	2
30	67.68	4
10	45.59	5
1	8.6	5
Pressure		
mm 25°C	3.015	5
t_e	1195.	5
Density		
g/ml 20°C	0.86118	2
d_4^t 25	0.85702	2
30	0.85286	4
a	0.87781	4
b	-0.0$_3$831	4
Ref. Index		
n_D 20°C	1.49500	2
25	1.49244	2
30	1.48981	4
"C"	0.7567	4
MR (Obs.)	40.699	2
MR (Calc.)	40.161	5
(nD-d/2)	1.06440	2
Dielectric	2.235	5
A | 65 to	6.99802	2
B |210 °C	1527.113	2
C	208.921	2
A* | 65 to	1.40451	5
B* |190 °C	1431.45	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.30339	5
B' |270 °C	1700.72	5
C'	224.2	5
A'* 25 to	1.71657	5
B'* 70 °C	1601.72	5
Ac |210 to	7.4095	5
Bc | t_c °C	1889.3	5
Cc	255.7	5
Cryos. A°	0.0344	2
consts. B°	0.003	2
t_e °C	180.57	5

		Ref.
dt/dP		
°C/mm		
25°C	5.261	5
BP	0.0515	2
t_e	0.0361	5
30 mm	0.7253	4
ΔHm cal/g	25.29	2
ΔHv cal/g		
25°C	92.70	2
30 mm	88.30	4
BP	76.40	2
t_e	74.12	5
t_e (d, e)	74.06	5
$\Delta Hv/T_e$	19.63	5
d | 65 to	96.84	4
e | 185 °C	0.1262	4
d' | 15 to	95.28	4
e' | 65 °C	0.1031	4
d_c g/ml	0.28	2
v_c^c ml/g	3.66	2
t_c^c °C	363.	2
P_c mm	23560.	2
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9591	4
t_e	0.9462	5
t_c	0.26	2
ΔHc kcal/m	1192.47	2
ΔHf	-11.920	2
ΔFf	27.041	2
Viscosity centistokes		
η 20 °C	0.819	2
40	0.658	2
60	0.548	2
80	0.470	2
B^V | 25 to	404.1	4
A^V | 90 °C	2.52790	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. 300°K	0.30303	2
400	0.39272	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0199	4
n | 600 °K		0.0012	4
o |		-0.$0_6$45	4
m' | 700 to		0.0269	4
n' |1000 °K		0.0011	4
o' |		-0.$0_6$42	4
Surface tension			
dynes/cm. 20°C		28.84	2
30		27.73	2
40		26.69	2
Parachor [P]			
20°C		323.4	4
30		323.4	4
40		323.5	4
Sugd.		324.1	5
Exp. L.1.%/wt. u.			
Dispersion		173.6	2
Flash Point °C		42.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		552.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 15

NAME	n-Butylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.91	Ref. 2	Molecular Formula $C_{10}H_{14}$ — Molecular Weight 134.212

		Ref.
F.P. °C	-87.970	2
F.P. 100%		
B.P. °C		
760 mm	183.270	2
100	115.28	2
30	85.21	4
10	62.2	5
1	23.8	5
Pressure mm 25°C	1.0849	5
t_e	1245.	5
Density g/ml 20°C	0.86013	2
d_4^t 25	0.85607	2
30	0.85201	4
a	0.87637	4
b	-0.0_3812	4
Ref. Index n_D 20°C	1.48979	2
25	1.48742	2
30	1.48502	4
"C"	0.7502	4
MR (Obs.)	45.096	2
MR (Calc.)	44.779	5
(nD-d/2)	1.05972	2
Dielectric	2.220	5
A | 85 to	6.98317	2
B | 220 °C	1577.965	2
C	201.378	2
A* | 85 to	1.43384	5
B* | 215 °C	1484.01	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.33005	5
B' | 85 °C	1783.05	5
C'	219.4	5
A'* 25 to	1.78452	5
B'* 85 °C	1684.34	5
Ac | 220 to	7.38707	5
Bc | t_c °C	1937.9	5
Cc	247.1	5
Cryos. A°	0.0385	2
consts. B°		
t_e °C F	204.47	5

		Ref.
dt/dP °C/mm		
25°C	13.413	5
BP	0.05358	2
t_e	0.0364	5
30 mm	0.7535	4
ΔHm cal/g	19.55	2
ΔHv cal/g		
25°C	90.47	5
30 mm	84.14	4
BP	71.82	5
t_e	69.24	5
t_e (d, e)	69.16	5
$\Delta Hv/T_e$	19.45	5
d | 85 to	94.84	5
e | 205 °C	0.1256	5
d' | 10 to	93.10	5
e' | 85 °C	0.1052	5
d_c g/ml	0.268	5
v_c ml/g	3.735	5
t_c °C	386.1	5
P_c mm	21210.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9529	5
t_e	0.9367	5
t_c	0.258	5
ΔHc kcal/m	1341.80	2
ΔHf	-15.28	2
ΔFf	34.62	2
Viscosity centistokes		
η 20 °C	1.203	2
40	0.925	2
60	0.741	2
80	0.611	2
B^v | 25 to	498.1	4
A^v | 90 °C	2.37586	4
(B^v) | 100 to	458.3	4
(A^v) | 160 °C	2.48529	4
c_p liq. °K		
c_p vap. 300°K	0.3136	2
400	0.4079	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0373	4
n | 600 °K		0.0013	4
o		-0.0_657	4
m' | 700 to		0.0738	4
n' | 1000 °K		0.0010	4
o'		-0.0_637	4
Surface tension dynes/cm. 20°C		29.19	5
30		28.10	5
40		27.05	5
Parachor [P] 20°C			
30			
40			
Sugd.		362.7	5
Exp. L.1.%/wt. u. Dispersion		159.3	2
Flash Point °C		57.0	5
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		168.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	Isobutylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.87	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F. P. °C	-51.48	2
F. P. 100%		
B. P. °C		
760 mm	172.759	2
100	105.42	2
30	75.73	4
10	53.11	5
1	15.3	5
Pressure		
mm 25°C	1.930	5
t_e	1197.	5
Density		
g/ml 20°C	0.85321	2
d_4^t 25	0.84907	2
30	0.84492	4
a	0.86978	4
b	-0.03828	4
Ref. Index		
n_D 20°C	1.48646	2
25	1.48400	2
30	1.48456	4
"C"	0.7515	4
MR (Obs.)	45.198	2
MR (Calc.)	44.779	5
(nD-d/2)	1.05986	2
Dielectric	2.209	5
A | 75 to	6.93033	2
B | 210 °C	1526.384	2
C	204.171	2
A* | 75 to	1.41008	5
B* | 210 °C	1439.51	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.27388	5
B' | 75 °C	1724.77	5
C'	221.8	5
A'* 25 to	1.73207	5
B'* 75 °C	1626.00	5
Ac | 210 to	7.3324	5
Bc | t_c °C	1876.1	5
Cc	249.0	5
Cryos. A* consts. B*	0.0306	2
t_e °C F	192.08	5

		Ref.
dt/dP		
°C/mm		
25°C	7.948	5
BP	0.05319	2
t_e	0.0373	5
30 mm	0.7431	4
ΔHm cal/g	22.28	2
ΔHv cal/g		
25°C	85.84	5
30 mm	80.87	4
BP	68.08	5
t_e	65.82	5
t_e (d, e)	65.53	5
$\Delta Hv/T_e$	18.99	5
d | 75 to	90.85	5
e | 190 °C	0.1318	5
d' | 10 to	88.29	5
e' | 75 °C	0.0980	5
d_c g/ml	0.274	5
v_c^c ml/g	3.651	5
t_c^c °C	368.8	5
P_c mm	19757.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9397	5
t_e	0.9250	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf	-16.70	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		28.26	5
γ 30		27.18	5
40		26.12	5
Parachor [P]			
20°C			
30			
40			
Sugd.		362.7	5
Exp. L. 1. %/wt. u.			
Dispersion		160.5	2
Flash Point °C		49.0	5
Fire Point			
M Spec.		Yes	2
Ultra V.		Yes	2
X-Ray Dif.			
Infrared		169.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 17

NAME	sec-Butylbenzene 2-Phenylbutane	STRUCTURAL FORMULA 
Mole % Pur. 99.93	Ref. 2	Molecular Formula $C_{10}H_{14}$ — Molecular Weight 134.212

		Ref.
F. P. °C	-75.470	2
F. P. 100%		
B. P. °C 760 mm	173.305	2
100	105.98	2
30	76.27	4
10	53.6	5
1	15.7	5
Pressure mm 25°C	1.877	5
t_e	1215.	5
Density g/ml 20°C	0.86207	2
d_4^t 25	0.85797	2
30	0.85387	4
a	0.87848	4
b	-0.0_382	4
Ref. Index n_D 20°C	1.49020	2
25	1.48779	2
30	1.48539	4
"C"	0.7492	4
MR (Obs.)	45.027	2
MR (Calc.)	44.779	5
(nD-d/2)	1.05916	2
Dielectric	2.221	5
A | 75 to	6.95097	2
B | 210 °C	1540.174	2
C	205.101	2
A* | 75 to	1.41125	5
B* | 210 °C	1447.55	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.29582	5
B' | 75 °C	1740.35	5
C'	222.8	5
A'* 25 to	1.75224	5
B'* 75 °C	1640.73	5
Ac | 210 to	7.3566	5
Bc | t_c °C	1896.0	5
Cc	250.6	5
Cryos. A*	0.0303	2
consts. B*		
t_e °C F	193.236	5

		Ref.
dt/dP °C/mm		
25°C	8.167	5
BP	0.05313	2
t_e	0.0368	5
30 mm	0.7441	4
ΔHm cal/g	17.51	2
ΔHv cal/g		
25°C	85.90	5
30 mm	81.00	4
BP	69.11	5
t_e	66.89	5
t_e (d, e)	66.67	5
$\Delta Hv/T_e$	19.25	5
d | 75 to	90.35	5
e | 200 °C	0.1225	5
d' | 10 to	88.29	5
e' | 75 °C	0.0956	5
d_c g/ml	0.263	5
v_c ml/g	3.805	5
t_c °C	372.0	5
P_c mm	20480.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9503	5
t_e	0.9360	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf	-15.89	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		29.46	5
30		28.35	5
40		27.27	5
Parachor [P] 20°C			
30			
40			
Sugd.		362.7	5
Exp. L. 1. %/wt. u.			
Dispersion		158.7	2
Flash Point °C		49.0	5
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		Yes	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	tert-Butylbenzene 2-Phenyl-2-methylpropane	STRUCTURAL FORMULA 
Mole % Pur. 99.94	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F. P. °C	-57.850	2
F. P. 100%		
B. P. °C 760 mm	169.119	2
100	102.45	2
30	73.08	4
10	50.7	5
1	13.3	5
Pressure mm 25°C	2.214	5
t_e	1204.	5
Density g/ml 20°C	0.86650	2
d_4^t t 25	0.86240	2
30	0.85826	4
a	0.88291	4
b	-0.03821	4
Ref. Index n_D 20°C	1.49266	2
25	1.49024	2
30	1.48784	4
"C"	0.7488	4
MR (Obs.)	44.988	2
MR (Calc.)	44.779	5
(nD-d/2)	1.05941	2
Dielectric	2.228	5
A | 70 to	6.92050	2
B |205 °C	1504.572	2
C	203.328	2
A* | 70 to	1.38485	5
B* |205 °C	1413.60	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.26343	5
B' | 75 °C	1700.12	5
C'	220.7	5
A'* 25 to	1.72508	5
B'* 75 °C	1602.63	5
Ac |205 to	7.3229	5
Bc | t_c °C	1852.7	5
Cc	248.3	5
Cryos. A*	0.02175	2
consts. B*		
t_e °C F	188.52	5

		Ref.
dt/dP °C/mm		
25°C	6.969	5
BP	0.05269	2
t_e	0.0368	5
30 mm	0.7351	4
ΔHm cal/g	14.93	2
ΔHv cal/g		
25°C	85.35	5
30 mm	80.51	4
BP	68.61	5
t_e	66.22	5
t_e (d, e)	66.21	5
$\Delta Hv/T_e$	19.25	5
d | 75 to	89.55	5
e |190 °C	0.1238	5
d' | 10 to	87.86	5
e' | 75 °C	0.1007	5
d_c g/ml	0.274	5
v_c ml/g	3.651	5
t_c °C	366.6	5
P_c mm	20423.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9534	5
t_e	0.9376	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to °K		
f' g' h'	| to °K		
m n o	| to °K		
m' n' o'	| to °K		
Surface tension dynes/cm. 20°C		30.07	5
γ 30		28.94	5
40		27.84	5
Parachor [P] 20°C			
30			
40			
Sugd.		362.7	5
Exp. L. 1. %/wt. u.			
Dispersion		159.0	2
Flash Point °C		46.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	o-Propyltoluene 1-Methyl-2-propylbenzene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F. P. °C	-60.2	2
F. P. 100%		
B. P. °C		
760 mm	184.80	2
100	116.7	4
30	86.5	4
10	63.5	5
1	24.9	5
Pressure mm 25°C	1.006	5
t_e	1251.	5
Density g/ml 20°C	0.8744	2
d_4^t 25	0.8705	2
30	0.8666	4
a	0.8900	4
b	-0.0$_1$78	4
Ref. Index n_D 20°C	1.4998	2
25	1.4974	2
30	1.4952	4
"C"	0.7524	4
MR (Obs.)	45.13	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0626	2
Dielectric	2.249	5
A | 85 to	7.0023	2
B | 225 °C	1594.00	2
C	201.95	2
A* | 85 to	1.44886	5
B* | 215 °C	1498.70	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3504	5
B' | 85 °C	1801.2	5
C'	220.1	5
A'* 25 to	1.8028	5
B'* 85 °C	1701.7	5
Ac | 225 to	7.4062	5
Bc | t_c °C	1957.8	5
Cc	248.2	5
Cryos. A° consts. B°		
t_e °C	206.24	5

		Ref.
dt/dP °C/mm		
25°C	14.407	5
BP	0.0536	2
t_e	0.0363	5
30 mm	0.7559	4
ΔHm cal/g		
ΔHv cal/g		
25°C	90.88	5
30 mm	84.50	4
BP	72.16	5
t_e	69.73	5
t_e (d, e)	69.46	5
ΔHv/T_e	19.52	5
d | 85 to	95.38	5
e | 210 °C	0.1256	5
d' | 20 to	93.47	5
e' | 85 °C	0.1036	5
d_c g/ml	0.274	5
v_c ml/g	3.651	5
t_c °C	391.5	5
P_c mm	22164.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9516	5
t_e	0.9378	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension dynes/cm. 20°C		31.18	5
σ 30		30.08	5
40		29.01	5
Parachor [P] 20°C			
30			
40			
Sugd.		362.7	5
Exp. L. 1. %/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	m-Propyltoluene 1-Methyl-3-propylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$ — Molecular Weight 134.212

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	181.80	2
100	114.24	2
30	84.3	4
10	61.4	5
1	23.1	5
Pressure mm 25°C	1.144	5
t_e	1245.	5
Density g/ml 20°C	0.8610	2
d_4^t 25	0.8570	2
30	0.8530	4
a	0.8770	4
b	-0.0380	4
Ref. Index n_D 20°C	1.4936	2
25	1.4912	2
30	1.4887	4
"C"	0.7549	4
MR (Obs.)	45.35	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0631	2
Dielectric	2.231	5
A | 85 to	7.0160	2
B | 220 °C	1591.00	2
C	202.95	2
A* | 85 to	1.46228	5
B* | 215 °C	1495.25	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.36495	5
B' | 85 °C	1797.78	5
C'	221.0	5
A'* 25 to	1.81809	5
B'* 85 °C	1698.10	5
Ac | 220 to	7.4200	5
Bc | t_c °C	1951.1	5
Cc	248.4	5
Cryos. A°		
consts. B°		
t_e °C F	202.82	5

		Ref.
dt/dP °C/mm		
25°C	12.788	5
BP	0.0530	2
t_e	0.0361	5
30 mm	0.7507	4
ΔHm cal/g		
ΔHv cal/g		
25°C	90.03	5
30 mm	84.02	4
BP	71.98	5
t_e	69.56	5
t_e (d, e)	69.39	5
$\Delta Hv/T_e$	19.61	5
d | 85 to	94.42	5
e | 210 °C	0.1234	5
d' | 10 to	92.56	5
e' | 85 °C	0.1014	5
d_c g/ml	0.285	5
v_c ml/g	3.509	5
t_c °C	384.4	5
P_c mm	21715.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9538	5
t_e	0.9397	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-18.02	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension			
dynes/cm. 20°C		29.31	5
γ 30		28.23	5
40		27.19	5
Parachor [P]			
20°C			
30			
40			
Sugd.		362.7	5
Exp. L.1.%/wt. u.			
Dispersion		166.	2
Flash Point °C		56.0	5
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

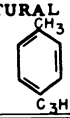
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 21

NAME	p-Propyltoluene 1-Methyl-4-propylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$
		Molecular Weight 134.212



		Ref.
F. P. °C	-63.6	2
F. P. 100%		
B. P. °C		
760 mm	183.30	2
100	115.12	2
30	84.9	4
10	61.9	5
1	23.3	5
Pressure mm 25°C	1.122	5
t_e	1244.	5
Density g/ml 20°C	0.8584	2
d_4^t 25	0.8544	2
30	0.8504	4
a	0.8744	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4919	2
25	1.4895	2
30	1.4870	4
"C"	0.7548	4
MR (Obs.)	45.35	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0627	2
Dielectric	2.226	5
A | 85 to	6.9926	2
B | 220 °C	1589.00	2
C	203.15	2
A* | 85 to	1.44319	5
B* | 215 °C	1494.44	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.34008	5
B' | 85 °C	1795.52	5
C'	221.3	5
A'* 25 to	1.7923	5
B'* 85 °C	1695.51	5
Ac | 220 to	7.39734	5
Bc | t_c °C	1951.2	5
Cc	249.0	5
Cryos. A°		
consts. B°		
t_e °C F	204.51	5

		Ref.
dt/dP °C/mm		
25°C	13.0743	5
BP	0.0535	2
t_e	0.0365	5
30 mm	0.7562	4
ΔHm cal/g		
ΔHv cal/g		
25°C	89.73	5
30 mm	83.72	4
BP	71.47	5
t_e	69.02	5
t_e (d, e)	68.83	5
$\Delta Hv/T_e$	19.39	5
d | 85 to	94.30	5
e | 210 °C	0.1245	5
d' | 10 to	92.23	5
e' | 85 °C	0.1002	5
d_c g/ml	0.274	5
v_c ml/g	3.651	5
t_c °C	386.1	5
P_c mm	21162.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9505	5
t_e	0.9358	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-18.06	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	28.96	5
30	27.89	5
40	26.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C	57.0	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 22

NAME	o-Isopropyltoluene (o-Cymene)	STRUCTURAL FORMULA
	1-Methyl-2-isopropylbenzene	

Mole % Pur. 99.94	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F. P. °C	-71.540	2
F. P. 100%		
B. P. °C		
760 mm	178.15	2
100	110.19	2
30	80.2	4
10	57.3	5
1	19.1	5
Pressure		
mm 25°C	1.491	5
t_e	1226.	5
Density		
g/ml 20°C	0.8766	2
d_4^t 25	0.8726	2
30	0.8684	4
a	0.8930	4
b	-0.0_382	4
Ref. Index		
n_D 20°C	1.5006	2
25	1.4982	2
30	1.4957	4
"C"	0.7514	4
MR (Obs.)	45.08	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0623	2
Dielectric	2.252	5
A | 80 to	6.9427	2
B | 220 °C	1549.00	2
C	203.20	2
A* | 80 to	1.40222	5
B* | 210 °C	1456.87	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.28703	5
B' | 80 °C	1750.32	5
C'	221.1	5
A'* 25 to	1.74286	5
B'* 80 °C	1651.27	5
Ac | 220 to	7.3473	5
Bc | t_c °C	1908.2	5
Cc	249.4	5
Cryos. A°	0.0296	2
consts. B°		
t_e °C F	198.7	5

		Ref.
dt/dP		
°C/mm		
25°C	10.0750	5
BP	0.0529	2
t_e	0.0369	5
30 mm	0.7507	4
ΔHm cal/g	17.81	2
ΔHv cal/g		
25°C	87.64	5
30 mm	82.12	4
BP	69.83	5
t_e	67.43	5
t_e (d, e)	67.26	5
$\Delta Hv/T_e$	19.18	5
d | 80 to	92.18	5
e | 200 °C	0.1254	5
d' | 10 to	90.15	5
e' | 80 °C	0.1001	5
d_c g/ml	0.274	5
v_c^c ml/g	3.651	5
t_c^c °C	381.2	5
P_c mm	20964.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9489	5
t_e	0.9338	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-18.19	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.49	5
30	30.33	5
40	29.19	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L. 1. %/wt. u.		
Dispersion	166.	2
Flash Point °C	53.0	5
Fire Point		
M Spec.		
Ultra V.	Yes	2
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	m-Isopropyltoluene (m-Cymene) 1-Methyl-3-isopropylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F.P. °C	-63.745	2
F.P. 100%		
B.P. °C 760 mm	175.14	2
100	107.58	2
30	77.8	4
10	55.0	5
1	17.1	5
Pressure mm 25°C	1.715	5
t_e	1219.	5
Density g/ml 20°C	0.8610	2
d_4^t 25	0.8570	2
30	0.8530	4
a	0.8770	4
b	-0.0$_3$80	4
Ref. Index n_D 20°C	1.4930	2
25	1.4906	2
30	1.4881	4
"C"	0.7541	4
MR (Obs.)	45.30	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0625	2
Dielectric	2.229	5
A | 75 to	6.9428	2
B | 215 °C	1540.00	2
C	203.98	2
A* | 75 to	1.40344	5
B* | 205 °C	1447.88	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2871	5
B' | 80 °C	1740.2	5
C'	221.7	5
A'* 25 to	1.7439	5
B'* 80 °C	1641.1	5
Ac | 215 to	7.3474	5
Bc | t_c °C	1895.8	5
Cc	249.6	5
Cryos. A* consts. B*	0.0375	2
t_e °C F	195.31	5

		Ref.
dt/dP °C/mm		
25°C	8.858	5
BP	0.0533	2
t_e	0.0369	5
30 mm	0.7463	4
ΔHm cal/g	24.36	2
ΔHv cal/g		
25°C	86.66	5
30 mm	81.47	4
BP	69.31	5
t_e	67.01	5
t_e (d, e)	66.79	5
$\Delta Hv/T_e$	19.20	5
d | 80 to	91.18	5
e | 200 °C	0.1249	5
d' | 10 to	89.12	5
e' | 80 °C	0.0983	5
d_c g/ml	0.274	5
v_c ml/g	3.651	5
t_c °C	374.9	5
P_c mm	20504.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9350	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-18.69	2
ΔFf		
Viscosity centistokes		
η 25 °C	1.0210	1
40	0.8454	1
60	0.6826	1
80	0.5688	1
B^v | 30 to	475.95	4
A^v | 90 °C	2.40742	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	29.31	5
σ 30	28.23	5
40	27.18	5
Parachor [P] 20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C	50.0	5
Fire Point		
M. Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	∞	
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	p-Isopropyltoluene (p-Cymene) 1-Methyl-4-isopropylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 2	Molecular Formula $C_{10}H_{14}$
Molecular Weight 134.212		

		Ref.
F.P. °C	-67.935	2
F.P. 100%		
B.P. °C		
760 mm	177.10	2
100	109.12	4
30	79.16	4
10	56.3	5
1	18.2	5
Pressure		
mm 25°C	1.590	5
t_e	1222.	5
Density		
g/ml 20°C	0.8573	2
d_4^{25}	0.8533	2
d_4^{30}	0.8493	4
a	0.8733	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4909	2
25	1.4885	2
30	1.4859	4
"C"	0.7543	4
MR (Obs.)	45.33	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0623	2
Dielectric	2.243	3'
A | 80 to	6.9260	2
B | 215 °C	1538.00	2
C	203.10	2
A* | 80 to	1.38851	5
B* | 215 °C	1446.72	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2693	5
B' | 80 °C	1737.9	5
C'	220.9	5
A'* 25 to	1.7261	5
B'* 80 °C	1639.2	5
Ac | 215 to	7.3297	5
Bc | t_c °C	1893.7	5
Cc	248.9	5
Cryos. A*	0.02758	2
consts. B*		
t_e °C F	197.52	5

		Ref.
dt/dP		
°C/mm		
25°C	9.504	5
BP	0.0537	5
t_e	0.0371	5
30 mm	0.7499	4
ΔHm cal/g	17.20	2
ΔHv cal/g		
25°C	87.14	5
30 mm	81.71	4
BP	69.31	5
t_e	66.95	5
t_e (d, e)	66.72	5
$\Delta Hv/T_e$	19.09	5
d | 80 to	91.74	5
e | 200 °C	0.1266	5
d' | 15 to	89.65	5
e' | 80 °C	0.1003	5
d_c g/ml	0.266	5
v_c ml/g	3.762	5
t_c °C	377.1	5
P_c mm	20165.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9473	5
t_e	0.9327	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-18.73	2
ΔFf		
Viscosity centistokes		
η 25 °C	0.9296	1
40	0.7777	1
60	0.6352	1
80	0.5335	1
B^v | 30 to	452.67	4
A^v | 90 °C	2.44552	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	28.81	5
γ 30	27.74	5
40	26.71	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L.l.%/wt. u.		
Dispersion	166.	2
Flash Point °C	47.	3
Fire Point		
M Spec.	Yes	1
Ultra V.	Yes	2
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

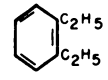
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Nat. Fire Prot. Assoc. 325 (1949); 3' NBS 514

No. 25

NAME	1,2-Diethylbenzene o-Diethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212	

		Ref.
F. P. °C	-31.240	2
F. P. 100%		
B. P. °C		
760 mm	183.423	2
100	115.65	4
30	85.66	4
10	62.8	5
1	24.4	5
Pressure mm 25°C	1.042	5
t_e	1248.	5
Density g/ml 20°C	0.87996	2
d^t_4 25	0.87592	2
30	0.87186	4
a	0.89612	4
b	-0.0_3808	4
Ref. Index n_D 20°C	1.50346	2
25	1.50106	2
30	1.49846	4
"C"	0.7524	4
MR (Obs.)	45.122	2
MR (Calc.)	44.779	5
(nD-d/2)	1.06348	2
Dielectric	2.260	5
A | 85 to	6.99016	2
B | 225 °C	1577.894	2
C	200.554	2
A* | 85 to	1.43869	5
B* | 215 °C	1483.61	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.3375	5
B' | 85 °C	1783.0	5
C'	218.6	5
A'* 20 to	1.7927	5
B'* 85 °C	1684.8	5
Ac | 225 to	7.3918	5
Bc | t_c °C	1937.3	5
Cc	246.4	5
Cryos. A* consts. B*	0.0299	2
t_e °C	204.65	5

		Ref.
dt/dP °C/mm		
25°C	13.873	5
BP	0.05340	2
t_e	0.0362	5
30 mm	0.7516	4
ΔHm cal/g	25.93	2
ΔHv cal/g		
25°C	91.10	5
30 mm	84.57	4
BP	72.21	5
t_e	69.62	5
t_e (d, e)	69.53	5
$\Delta Hv/T_e$	19.55	5
d | 85 to	95.39	5
e | 210 °C	0.1264	5
d' | 20 to	93.79	5
e' | 85 °C	0.1077	5
d_c g/ml	0.274	5
v_c ml/g	3.65	5
t_c °C	389.6	5
P_c mm	22177.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9384	5
t_c		
ΔHc kcal/m		
ΔHf	-16.94	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | to			
n | °K			
o |			
m' | to			
n' | °K			
o' |			
Surface tension dynes/cm. 20°C		31.98	5
γ 30		30.82	5
40		29.69	5
Parachor [P] 20°C			
30			
40			
Sugd.		362.7	5
Exp. L. 1. %/wt. u.			
Dispersion		165.9	2
Flash Point °C		57.0	5
Fire Point			
M. Spec.		Yes	2
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

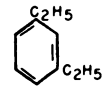
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 26

NAME	1, 3-Diethylbenzene m-Diethylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.93	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F. P. °C	-83.920	2
F. P. 100%		
B. P. °C		
760 mm	181.102	2
100	113.87	2
30	84.09	4
10	61.3	5
1	23.2	5
Pressure		
mm 25°C	1.131	5
t_e	1245.	5
Density		
g/ml 20°C	0.86394	2
d_4^{25}	0.85993	2
d_4^{30}	0.85590	4
a	0.87998	4
b	-0.03802	4
Ref. Index		
n_D 20°C	1.49552	2
25	1.49310	2
30	1.49050	4
"C"	0.7550	4
MR (Obs.)	45.344	2
MR (Calc.)	44.779	5
(nD-d/2)	1.06355	2
Dielectric	2.236	5
A | 85 to	7.00601	2
B | 220 °C	1576.261	2
C	201.004	2
A* | 85 to	1.45233	5
B* | 215 °C	1481.17	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.35433	5
B' | 85 °C	1781.13	5
C'	219.0	5
A'* 25 to	1.81036	5
B'* 85 °C	1682.99	5
Ac | 220 to	7.4071	5
Bc | t_c °C	1931.7	5
Cc	246.0	5
Cryos. A*	0.0369	2
consts. B*		
t_e °C F	202.03	5

		Ref.
dt/dP		
°C/mm		
25°C	12.828	5
BP	0.05293	2
t_e	0.0360	5
30 mm	0.7465	4
ΔHm cal/g	19.59	2
ΔHv cal/g		
25°C	90.72	5
30 mm	84.40	4
BP	72.23	5
t_e	69.74	5
t_e (d, e)	69.60	5
$\Delta Hv/T_e$	19.69	5
d | 85 to	94.96	5
e | 210 °C	0.1255	5
d' | 10 to	93.40	5
e' | 85 °C	0.1069	5
d_c g/ml	0.287	5
v_c ml/g	3.485	5
t_c °C	383.9	5
P_c mm	21894.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9557	5
t_e	0.9413	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-17.44	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	29.71	5
γ 30	28.62	5
40	27.56	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L. 1. %/wt. u.		
Dispersion	166.6	2
Flash Point °C	56.0	5
Fire Point		
M Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	1,4-Diethylbenzene p-Diethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 2	Molecular Formula $C_{10}H_{14}$
Molecular Weight 134.212		

		Ref.
F. P. °C	-42.850	2
F. P. 100%		
B. P. °C		
760 mm	183.752	2
100	115.80	2
30	85.71	4
10	62.7	5
1	24.2	5
Pressure mm 25°C	1.054	5
t_e	1247.	5
Density g/ml 20°C	0.86196	2
d_4^t 25	0.85794	2
30	0.85390	4
a	0.87804	4
b	-0.03804	4
Ref. Index n_D 20°C	1.49483	2
25	1.49245	2
30	1.48981	4
"C"	0.7556	4
MR (Obs.)	45.394	2
MR (Calc.)	44.779	5
(nD-d/2)	1.06385	2
Dielectric	2.235	5
A | 85 to	7.00054	2
B | 225 °C	1589.273	2
C	202.019	2
A* | 85 to	1.44865	5
B* | 215 °C	1494.38	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.34852	5
B' | 85 °C	1795.83	5
C'	220.1	5
A'* 25 to	1.80161	5
B'* 85 °C	1696.49	5
Ac | 225 to	7.4037	5
Bc | t_c °C	1949.7	5
Cc	247.7	5
Cryos. A*	0.0240	2
consts. B*		
t_e °C F	205.02	5

		Ref.
dt/dP °C/mm		
25°C	13.785	5
BP	0.05351	2
t_e	0.0363	5
30 mm	0.7541	4
ΔHm cal/g	18.85	2
ΔHv cal/g		
25°C	90.59	5
30 mm	84.31	4
BP	71.98	5
t_e	69.53	5
t_e (d, e)	69.31	5
ΔHv/T_e	19.51	5
d | 85 to	95.08	5
e | 210 °C	0.1257	5
d' | 10 to	93.18	5
e' | 85 °C	0.1035	5
d_c g/ml	0.281	5
v_c ml/g	3.563	5
t_c °C	387.3	5
P_c mm	21528.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9518	5
t_e	0.9376	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf	-17.47	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.44	5
30	28.36	5
40	27.30	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	167.9	2
Flash Point °C	57.0	5
Fire Point		
M. Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	2-Ethyl-1, 3-dimethylbenzene 2-Ethyl-m-xylene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F.P. °C	-16.28	2
F.P. 100%		
B.P. °C		
760 mm	190.01	2
100	121.55	2
30	91.16	4
10	67.9	5
1	28.9	5
Pressure		
mm 25°C	0.762	5
t_e	1267.	5
Density		
g/ml 20°C	0.8904	2
d_4^t 25	0.8864	2
30	0.8824	4
a	0.9064	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5107	2
25	1.5085	2
30	1.5054	4
"C"	0.7536	4
MR (Obs.)	45.13	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0655	2
Dielectric	2.282	5
A | 90 to	7.0440	2
B | 235 °C	1632.0	2
C	202.0	2
A* | 90 to	1.4840	5
B* | 220 °C	1534.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3947	5
B' | 90 °C	1844.1	5
C'	220.5	5
A'* 25 to	1.8432	5
B'* 90 °C	1743.5	5
Ac | 235 to	7.4493	5
Bc | t_c °C	2003.1	5
Cc	248.9	5
Cryos. A°		
consts. B°		
t_e °C F	212.07	5

		Ref.
dt/dP		
°C/mm		
25°C	18.615	5
BP	0.0561	2
t_e	0.0360	5
30 mm	0.7624	4
ΔHm cal/g		
ΔHv cal/g		
25°C	92.78	5
30 mm	85.95	4
BP	73.72	5
t_e	71.11	5
t_e (d, e)	70.99	5
$\Delta Hv/T_e$	19.67	5
d | 90 to	97.23	5
e | 210 °C	0.1237	5
d' | 10 to	95.36	5
e' | 90 °C	0.1033	5
d_c g/ml	0.301	5
v_c ml/g	3.324	5
t_c °C	401.0	5
P_c mm	23271.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9536	5
t_e	0.9382	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-19.84	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		33.52	5
γ 30		32.33	5
40		31.17	5
Parachor [P]			
20°C			
30			
40			
Sugd.		362.7	5
Exp. L.1.%/wt. u.			
Dispersion		170.	2
Flash Point °C		62.0	5
Fire Point			
M Spec.		Yes	2
Ultra V.		Yes	2
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 29

NAME	2-Ethyl-1,4-dimethylbenzene 2-Ethyl-p-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$
		Molecular Weight 134.212

		Ref.
F.P. °C	-53.68	2
F.P. 100%		
B.P. °C 760 mm	186.91	2
100	118.46	2
30	88.10	4
10	64.9	5
1	25.9	5
Pressure mm 25°C	0.937	5
t_e	1255.	5
Density g/ml 20°C	0.8772	2
d_4^t 25	0.8732	2
30	0.8692	4
a	0.8932	4
b	-0.0380	4
Ref. Index n_D 20°C	1.5043	2
25	1.5020	2
30	1.4994	4
"C"	0.7560	4
MR (Obs.)	45.33	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0657	2
Dielectric	2.263	5
A | 90 to	7.0301	2
B | 230 °C	1622.0	2
C	204.0	2
A* | 90 to	1.4748	5
B* | 220 °C	1525.51	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3799	5
B' | 90 °C	1832.8	5
C'	222.4	5
A'* 25 to	1.8282	5
B'* 90 °C	1731.3	5
Ac | 230 to	7.4373	5
Bc | t_c °C	1992.4	5
Cc	250.7	5
Cryos. A° consts. B°		
t_e °C F	208.58	5

		Ref.
dt/dP °C/mm 25°C	15.480	5
BP	0.0533	2
t_e	0.0363	5
30 mm	0.7615	4
ΔHm cal/g		
ΔHv cal/g 25°C	90.78	5
30 mm	84.60	4
BP	72.46	5
t_e	70.02	5
t_e (d, e)	69.79	5
$\Delta Hv/T_e$	19.51	5
d | 90 to	95.43	5
e | 210 °C	0.1229	5
d' | 10 to	93.23	5
e' | 90 °C	0.0979	5
d_c g/ml	0.291	5
v_c ml/g	3.431	5
t_c °C	394.4	5
P_c mm	22328.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9506	5
t_e	0.9364	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-20.38	2
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	31.58	5
30	30.44	5
40	29.33	5
Parachor [P] 20°C		
30		
40		
Sugd.	362.7	5
Exp. L. 1. %/wt. u.		
Dispersion	171.	2
Flash Point °C	60.0	5
Fire Point		
M. Spec.	Yes	2
Ultra V.	Yes	2
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	3-Ethyl-1,2-dimethylbenzene 3-Ethyl-o-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$ — Molecular Weight 134.212

		Ref.
F.P. °C	-49.5	2
F.P. 100%		
B.P. °C 760 mm	193.91	2
100	125.02	2
30	94.42	4
10	71.0	5
1	31.7	5
Pressure mm 25°C	0.625	5
t_e	1276.	5
Density g/ml 20°C	0.8921	2
d_4^t 25	0.8881	2
30	0.8841	4
a	0.9081	4
b	-0.0380	4
Ref. Index n_D 20°C	1.5117	2
25	1.5095	2
30	1.5068	4
"C"	0.7535	4
MR (Obs.)	45.12	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0656	2
Dielectric	2.285	5
A | 95 to	7.0488	2
B | 235 °C	1646.0	2
C	201.0	2
A* | 95 to	1.4871	5
B* | 225 °C	1548.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3998	5
B' | 95 °C	1859.9	5
C'	219.6	5
A'* 25 to	1.8470	5
B'* 95 °C	1759.4	5
Ac | 235 to	7.4535	5
Bc | t_c °C	2019.5	5
Cc	248.1	5
Cryos. A* consts. B*		
t_e °C F	216.47	5

		Ref.
dt/dP °C/mm		
25°C	22.337	5
BP	0.0554	2
t_e	0.0360	5
30 mm	0.7676	4
ΔHm cal/g		
ΔHv cal/g		
25°C	94.24	5
30 mm	86.90	4
BP	74.42	5
t_e	71.74	5
t_e (d,e)	71.59	5
$\Delta Hv/T_e$	19.66	5
d | 95 to	98.74	5
e | 220 °C	0.1254	5
d' | 10 to	96.88	5
e' | 95 °C	0.1057	5
d_c g/ml	0.301	5
v_c ml/g	3.326	5
t_c °C	406.9	5
P_c mm	23460.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9526	5
t_e	0.9370	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-19.84	2
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	33.78	5
γ 30	32.58	5
40	31.42	5
Parachor [P] 20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	170.	2
Flash Point °C	65.0	5
Fire Point		
M Spec.	Yes	1
Ultra V.	Yes	2
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 31

NAME	4-Ethyl-1,2-dimethylbenzene 4-Ethyl-o-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$
		Molecular Weight 134.212

		Ref.
F. P. °C	-67.0	2
F. P. 100%		
B. P. °C		
760 mm	189.75	2
100	121.4	2
30	91.06	4
10	67.8	5
1	28.9	5
Pressure		
mm 25°C	0.764	5
t_e	1267.	5
Density		
g/ml 20°C	0.8745	2
d_4^t 25	0.8706	2
30	0.8667	4
a	0.8901	4
b	-0.03778	4
Ref. Index		
n_D 20°C	1.5031	2
25	1.5009	2
30	1.4983	4
"C"	0.7567	4
MR (Obs.)	45.38	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0658	2
Dielectric	2.259	5
A | 90 to	7.0493	2
B | 230 °C	1633.0	2
C	202.0	2
A* | 90 to	1.48840	5
B* | 220 °C	1535.60	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.40035	5
B' | 90 °C	1845.24	5
C'	220.5	5
A'* 25 to	1.84891	5
B'* 90 °C	1744.65	5
Ac | 230 to	7.4540	5
Bc | t_c °C	2002.0	5
Cc	248.4	5
Cryos. A*		
consts. B*		
t_e °C F	211.78	5

		Ref.
dt/dP		
°C/mm		
25°C	18.567	5
BP	0.0563	2
t_e	0.0359	5
30 mm	0.7614	4
ΔHm cal/g		
ΔHv cal/g		
25°C	92.84	5
30 mm	86.01	4
BP	73.77	5
t_e	71.22	5
t_e (d, e)	71.03	5
ΔHv/T_e	19.71	5
d | 90 to	97.31	5
e | 220 °C	0.1241	5
d' | 10 to	95.43	5
e' | 90 °C	0.1034	5
d_c g/ml	0.297	5
v_c ml/g	3.368	5
t_c °C	398.6	5
P_c mm	22888.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9536	5
t_e	0.9390	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-20.38	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		31.19	5
ϑ 30		30.09	5
40		29.02	5
Parachor [P]			
20°C			
30			
40			
Sugd.		362.7	5
Exp. L.l.%/wt. u.			
Dispersion		171.	2
Flash Point °C		71.0	5
Fire Point			
M. Spec.		Yes	2
Ultra V.		Yes	2
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

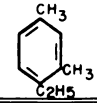
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 32

NAME	4-Ethyl-1, 3-dimethylbenzene 4-Ethyl-m-xylene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F.P. °C	-62.90	2
F.P. 100%		
B.P. °C		
760 mm	188.41	2
100	120.04	2
30	89.69	4
10	66.5	5
1	27.5	5
Pressure		
mm 25°C	0.840	5
t_e	1262.	5
Density		
g/ml 20°C	0.8763	2
d_4^t 25	0.8723	2
30	0.8683	4
a	0.8923	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5038	2
25	1.5016	2
30	1.4990	4
"C"	0.7562	4
MR (Obs.)	45.34	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0656	2
Dielectric	2.261	5
A | 90 to	7.0427	2
B | 230 °C	1629.0	2
C	203.0	2
A* | 90 to	1.4840	5
B* | 220 °C	1531.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3933	5
B' | 90 °C	1840.7	5
C'	221.4	5
A'* 25 to	1.8416	5
B'* 90 °C	1739.7	5
Ac | 230 to	7.4486	5
Bc | t_c °C	1998.6	5
Cc	249.5	5
Cryos. A°		
consts. B°		
t_e °C F	210.27	5

		Ref.
dt/dP		
°C/mm		
25°C	17.066	5
BP	0.0555	2
t_e	0.0361	5
30 mm	0.7613	4
ΔHm cal/g		
ΔHv cal/g		
25°C	91.88	5
30 mm	85.37	4
BP	73.21	5
t_e	70.70	5
t_e (d, e)	70.52	5
ΔHv/T_e	19.63	5
d | 90 to	96.42	5
e | 210 °C	0.1232	5
d' | 10 to	94.40	5
e' | 90 °C	0.1007	5
d_c g/ml	0.294	5
v_c ml/g	3.398	5
t_c °C	396.4	5
P_c mm	22611.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9526	5
t_e	0.9380	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-20.38	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.45	5
30	30.31	5
40	29.21	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	171.	2
Flash Point °C	61.0	5
Fire Point		
M Spec.	Yes	2
Ultra V.	Yes	2
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

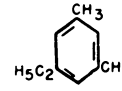
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 33

NAME	5-Ethyl-1, 3-dimethylbenzene 5-Ethyl-m-xylene	STRUCTURAL FORMULA
Mole % Pur. 99.89	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212	

		Ref.
F. P. °C	-84.325	2
F. P. 100%		
B. P. °C		
760 mm	183.75	2
100	116.06	2
30	86.01	4
10	63.0	5
1	24.4	5
Pressure mm 25°C	1.0389	5
t_e	1251.	5
Density g/ml 20°C	0.8648	2
d_4^t 25	0.8608	2
30	0.8568	4
a	0.8808	4
b	$-0.0_3$80	4
Ref. Index n_D 20°C	1.4981	2
25	1.4958	2
30	1.4931	4
"C"	0.7579	4
MR (Obs.)	45.50	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0657	2
Dielectric	2.244	5
A | 85 to	7.0459	2
B | 225 °C	1615.0	2
C	204.0	2
A* | 85 to	1.4878	5
B* | 215 °C	1517.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3967	5
B' | 85 °C	1824.9	5
C'	222.3	5
A'* 25 to	1.8468	5
B'* 85 °C	1723.9	5
Ac | 225 to	7.4518	5
Bc | t_c °C	1979.9	5
Cc	249.7	5
Cryos. A°	0.0302	2
consts. B°		
t_e °C F	205.02	5

		Ref.
dt/dP		
°C/mm		
25°C	14.007	5
BP	0.0542	2
t_e	0.0360	5
30 mm	0.7539	4
ΔHm cal/g	15.94	2
ΔHv cal/g		
25°C	90.48	5
30 mm	84.47	4
BP	72.64	5
t_e	70.19	5
t_e (d, e)	70.06	5
$\Delta Hv/T_e$	19.70	5
d | 85 to	94.88	5
e | 205 °C	0.1211	5
d' | 10 to	92.95	5
e' | 85 °C	0.0985	5
d_c g/ml	0.293	5
v_c ml/g	3.416	5
t_c °C	387.8	5
P_c mm	22208.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9548	5
t_e	0.9405	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-20.86	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.83	5
30	28.74	5
40	27.68	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L. 1. %/wt. u.		
Dispersion	172.	2
Flash Point °C	57.0	5
Fire Point		
M. Spec.	Yes	2
Ultra V.	Yes	2
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	1,2,3,4-Tetramethylbenzene Prehnitene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F.P. °C	-6.25	2
F.P. 100%		
B.P. °C		
760 mm	205.04	2
100	134.64	2
30	103.36	4
10	79.4	5
1	39.2	5
Pressure		
mm 25°C	0.369	5
t_e	1302.	5
Density		
g/ml 20°C	0.9052	2
d_4^t 25	0.9015	2
30	0.8978	4
a	0.9200	4
b	-0.0_374	4
Ref. Index		
n_D 20°C	1.5203	2
25	1.5181	2
30	1.5155	4
"C"	0.7540	4
MR (Obs.)	45.10	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0677	2
Dielectric	2.311	5
A | 100 to	7.0584	2
B | 250 °C	1689.10	2
C	199.28	2
A* | 100 to	1.4934	5
B* | 240 °C	1591.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4100	5
B' | 100 °C	1908.6	5
C'	218.3	5
A'* 25 to	1.8524	5
B'* 100 °C	1807.4	5
Ac | 250 to	7.4638	5
Bc | t_c °C	2074.7	5
Cc	248.1	5
Cryos. A*	0.0190	2
consts. B*		
t_e °C F	229.02	5

		Ref.
dt/dP		
°C/mm		
25°C	36.540	5
BP	0.0553	2
t_e	0.0362	5
30 mm	0.7850	4
ΔHm cal/g	19.97	2
ΔHv cal/g		
25°C	97.71	5
30 mm	89.15	4
BP	76.09	5
t_e	73.20	5
t_e (d,e)	73.01	5
$\Delta Hv/T_e$	19.56	5
d | 100 to	102.43	5
e | 230 °C	0.1285	5
d' | 10 to	100.44	5
e' | 100 °C	0.1092	5
d_c g/ml	0.308	5
v_c ml/g	3.246	5
t_c °C	426.9	5
P_c mm	24553.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9489	5
t_e	0.9320	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf	-23.04	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	35.81	5
γ 30	34.65	5
40	33.52	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L. 1. %/wt. u.		
Dispersion	174.	2
Flash Point °C	73.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R \simeq 0.75\,T_c$

+ grams/100 grams solvent

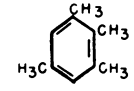
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 35

NAME	1,2,3,5-Tetramethylbenzene Isodurene	STRUCTURAL FORMULA 
Mole % Pur. 99.92	Ref. 2	Molecular Formula $C_{10}H_{14}$ — Molecular Weight 134.212

		Ref.
F.P. °C	-23.685	2
F.P. 100%		
B.P. °C		
760 mm	198.00	2
100	128.79	2
30	98.00	4
10	74.4	5
1	34.8	5
Pressure mm 25°C	0.5033	5
t_e	1289.	5
Density g/ml 20°C	0.8903	2
d_4^t 25	0.8865	2
30	0.8827	4
a	0.9055	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.5130	2
25	1.5107	2
30	1.5074	4
"C"	0.7568	4
MR (Obs.)	45.31	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0678	2
Dielectric	2.289	5
A, B, C (95 to 240 °C)	7.0769 1674.00 200.94	2 2 2
A*, B*, K (95 to °C)	1.50994 1575.28	5 5
t_k, t_x to °C		
A', B', C' (25 to 95 °C)	7.42969 1891.57 219.8	5 5 5
A'* 25 to	1.87408	5
B'* 95 °C	1790.24	5
Ac, Bc, Cc (240 to t_c °C)	7.48236 2052.4 248.4	5 5 5
Cryos. A° consts. B°	0.023	2
t_e °C	221.09	5

		Ref.
dt/dP °C/mm		
25°C	27.330	5
BP	0.055	2
t_e	0.036	5
30 mm	0.7728	4
ΔHm cal/g		
ΔHv cal/g		
25°C	95.71	5
30 mm	88.00	4
BP	75.57	5
t_e	72.79	5
t_e (d, e)	72.70	5
$\Delta Hv/T_e$	19.76	5
d, e (100 to 220 °C)	100.17 0.1243	5 5
d', e' (20 to 100 °C)	98.35 0.1057	5 5
d_c g/ml	0.308	5
v_c ml/g	3.25	5
t_c °C	413.6	5
P_c mm	24119.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9538	5
t_e	0.9374	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-23.54	2
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	33.51	5
30	32.38	5
40	31.28	5
Parachor [P] 20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	174.	2
Flash Point °C	68.0	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 36

NAME	1,2,4,5-Tetramethylbenzene Durene	STRUCTURAL FORMULA

Mole % Pur. 99.86	Ref. 2	Molecular Formula $C_{10}H_{14}$	Molecular Weight 134.212

		Ref.
F.P. °C	79.240	2
F.P. 100%		
B.P. °C		
760 mm	196.80	2
100	127.77	2
30	97.1	4
10	73.5	5
1	34.0	5
Pressure		
mm 25°C	0.532	5
t_e	1287.	5
Density		
g/ml 20°C	0.8875+	2
d_4^t 25	0.8837+	2
30	0.8799	4
a	0.9027	4
b	-0.0_3376	4
Ref. Index		
n_D 20°C	1.5116	2
25	1.5093	2
30	1.5073	4
"C"	0.7579	4
MR (Obs.)	45.35	2
MR (Calc.)	44.779	5
(nD-d/2)	1.0678	2
Dielectric	2.285	5
A | 95 to	7.0790	2
B | 240 °C	1671.0	2
C	201.23	2
A* | 95 to	1.5118	5
B* | 230 °C	1572.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4319	5
B' | 100 °C	1888.21	5
C'	220.0	5
A'* 25 to	1.8767	5
B'* 100 °C	1786.8	5
Ac | 240 to	7.4845	5
Bc | t_c °C	2048.2	5
Cc	248.5	5
Cryos. A°	0.02034	2
consts. B°		
t_e °C F	219.73	5

		Ref.
dt/dP		
°C/mm		
25°C	25.964	5
BP	0.054	2
t_e	0.0358	5
30 mm	0.7709	4
ΔHm cal/g	37.40	2
ΔHv cal/g		
25°C	95.35	5
30 mm	87.78	4
BP	75.34	5
t_e	72.69	5
t_e (d, e)	72.48	5
ΔHv/T_e	19.79	5
d | 95 to	99.88	5
e | 220 °C	0.1247	5
d' | 10 to	97.97	5
e' | 95 °C	0.1051	5
d_c g/ml	0.306	5
v_c ml/g	3.268	5
t_c °C	411.4	5
P_c mm	24037.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9531	5
t_e	0.9383	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf	-23.58	2
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | __ °K		
h |		
f' | | to		
g' | __ °K		
h' |		
m | | to		
n | __ °K		
o |		
m' | | to		
n' | __ °K		
o' |		
Surface tension		
dynes/cm. 20°C	33.09	5
30	31.97	5
40	30.88	5
Parachor [P]		
20°C		
30		
40		
Sugd.	362.7	5
Exp. L.1.%/wt. u.		
Dispersion	174.	2
Flash Point °C	67.0	5
Fire Point		
M Spec.	Yes	2
Ultra V.		
X-Ray Dif.	Yes	1
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

T_R = 0.75 T_c + undercooled liquid + grams/100 grams solvent

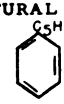
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 37

NAME	n-Pentylbenzene n-Amylbenzene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C	-75.	2
F. P. 100%		
B. P. °C		
760 mm	205.4	2
100	135.42	4
30	104.34	4
10	80.6	5
1	40.7	5
Pressure mm 25°C	0.328	5
t_e	1307.	5
Density g/ml 20°C	0.8585	2
d_4^t 25	0.8546	2
30	0.8507	4
a	0.8741	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4878	2
25	1.4855	2
30	1.4830	4
"C"	0.7487	4
MR (Obs.)	49.73	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0585	2
Dielectric	2.213	5
A | 105 to	7.04709	4
B | 270 °C	1670.68	4
C	195.6	5
A* | 105 to	1.52337	5
B* | 240 °C	1573.86	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.39800	5
B' | 105 °C	1887.82	5
C'	214.5	5
A'* 25 to	1.88781	5
B'* 105 °C	1789.21	5
Ac | 270 to	7.69926	5
Bc | t_c °C	2333.3	5
Cc	280.3	5
Cryos. A°		
consts. B°		
t_e °C F	229.43	5

		Ref.
dt/dP		
°C/mm		
25°C	40.259	5
BP	0.055	2
t_e	0.0359	5
30 mm	0.7796	4
ΔHm cal/g		
ΔHv cal/g		
25°C	90.34	5
30 mm	81.70	5
BP	69.52	5
t_e	66.77	5
t_e (d, e)	66.63	5
$\Delta Hv/T_e$	19.69	5
d | 105 to	94.28	5
e | 230 °C	0.1205	5
d' | 20 to	93.06	5
e' | 105 °C	0.1088	5
d_c g/ml	0.284	5
v_c ml/g	3.518	5
t_c °C	405.9	5
P_c mm	19894.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9518	5
t_e	0.9348	5
t_c	0.245	5
ΔHc kcal/m	1488.72	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.553	2
40	1.157	2
60	0.913	2
80	0.741	2
B^v | 30 to	535.16	4
A^v | 90 °C	Σ.35464	4
(B^v) | 90 to	537.68	4
(A^v) |160 °C	Σ.35272	4
c_p liq. °K		
c_p vap. 300°K	0.3210	2
400	0.4161	2
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | 300 to	-0.0312	4
n | 600 °K	0.0013	4
o	-0.0_656	4
m' | 700 to	0.0804	4
n' | 1000 °K	0.0010	4
o'	-0.0_637	4
Surface tension		
dynes/cm. 20°C	29.41	5
30	28.35	5
40	27.33	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	154.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		
Viscosity centistokes		
100°C	0.617	2
110	0.570	2
150	0.420	2

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 38

NAME	(1-Methylbutyl)benzene 2-Phenylpentane	STRUCTURAL FORMULA $CH_3CH(CH_2)_2CH_3$ 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	193.	2
100	123.9	5
30	93.4	5
10	70.	5
1	31.	5
Pressure		
mm 25°C	0.6636	5
t_e	1271.	5
Density		
g/ml 20°C	0.8585	2
d_4^t 25	0.8546	2
30	0.8507	4
a	0.8741	4
b	-0.03778	4
Ref. Index		
n_D 20°C	1.4876	2
25	1.4853	2
30	1.4829	4
"C"	0.7485	4
MR (Obs.)	49.71	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0584	2
Dielectric	2.213	5
A | 90 to	6.99955	5
B | 230 °C	1614.5	5
C	199.	5
A* | 90 to	1.48726	5
B* | 225 °C	1519.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.34746	5
B' | 90 °C	1824.3	5
C'	217.4	5
A'* 20 to	1.84150	5
B'* 90 °C	1725.6	5
Ac | 230 to	7.37304	5
Bc | t_c °C	1950.6	5
Cc	241.5	5
Cryos. A° consts. B°		
t_e °C	215.45	5

		Ref.
dt/dP °C/mm		
25°C	21.082	5
BP	0.0544	5
t_e	0.0364	5
30 mm	0.7664	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.21	5
30 mm	78.34	5
BP	66.63	5
t_e	64.13	5
t_e (d, e)	64.99	5
$\Delta Hv/T_e$	19.46	5
d | 95 to	89.31	5
e | 215 °C	0.1175	5
d' | 20 to	87.72	5
e' | 95 °C	0.1005	5
d_c g/ml	0.276	5
v_c ml/g	3.618	5
t_c °C	388.6	5
P_c mm	18930.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9507	5
t_e	0.9346	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.41	5
30	28.35	5
40	27.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	151.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	(1-Ethylpropyl)benzene 3-Phenylpentane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	191.	2
100	122.2	5
30	91.7	5
10	68.5	5
1	29.5	5
Pressure		
mm 25°C	0.7282	5
t_e	1265.	5
Density		
g/ml 20°C	0.860	2
d_4^t 25	0.856	2
30	0.852	4
a	0.876	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.4877	2
25	1.4854	2
30	1.4829	4
"C"	0.7473	4
MR (Obs.)	49.6	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0577	2
Dielectric	2.213	5
A | 90 to	6.99268	5
B | 230 °C	1603.6	5
C	199.	5
A* | 90 to	1.48192	5
B* | 220 °C	1509.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.34016	5
B' | 90 °C	1812.0	5
C'	217.3	5
A'* 20 to	1.83553	5
B'* 90 °C	1713.6	5
Ac | 230 to	7.4304	5
Bc | t_c °C	1998.7	5
Cc	248.6	5
Cryos. A* consts. B*		
t_e °C	213.19	5

		Ref.
dt/dP		
°C/mm		
25°C	19.325	5
BP	0.0542	5
t_e	0.0364	5
30 mm	0.7631	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.70	5
30 mm	77.99	5
BP	66.34	5
t_e	63.84	5
t_e (d, e)	63.73	5
$\Delta Hv/T_e$	19.46	5
d | 90 to	88.75	5
e | 215 °C	0.1174	5
d' | 20 to	87.22	5
e' | 90 °C	0.1006	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	385.4	5
P_c mm	18975.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9514	5
t_e	0.9351	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	29.61	5
30	28.52	5
40	27.47	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	149.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 40

NAME	(2-Methylbutyl)benzene 2-Methyl-1-phenylbutane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	197.	2
100	127.4	5
30	96.6	5
10	73.0	5
1	34.	5
Pressure		
mm 25°C	0.5501	5
t_e	1280.	5
Density		
g/ml 20°C	0.859	2
d_4^t 25	0.855	2
30	0.851	4
a	0.875	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.486	2
25	1.484	2
30	1.481	4
"C"	0.7458	4
MR (Obs.)	49.6	2
MR (Calc.)	49.397	5
(nD-d/2)	1.056	2
Dielectric	2.208	5
A | 95 to	7.01336	5
B | 235 °C	1636.5	5
C	199.	5
A* | 95 to	1.49919	5
B* | 230 °C	1541.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36214	5
B' | 95 °C	1849.2	5
C'	217.6	5
A'* 20 to	1.85353	5
B'* 95 °C	1749.7	5
Ac | 235 to	7.4502	5
Bc | t_c °C	2036.3	5
Cc	249.0	5
Cryos. A*		
consts. B*		
t_e °C	219.96	5

		Ref.
dt/dP		
°C/mm		
25°C	25.131	5
BP	0.0548	5
t_e	0.0364	5
30 mm	0.7729	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.22	5
30 mm	79.06	5
BP	67.30	5
t_e	64.67	5
t_e (d, e)	64.61	5
$\Delta Hv/T_e$	19.44	5
d | 95 to	90.37	5
e | 220 °C	0.1171	5
d' | 20 to	88.73	5
e' | 95 °C	0.1001	5
d_c g/ml	0.269	5
v_c^c ml/g	3.722	5
t_c^c °C	393.6	5
P_c mm	19113.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9504	5
t_e	0.9329	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		29.48	5
γ 30		28.39	5
40		27.34	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		153.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 41

NAME	Isopentylbenzene 3-Methyl-1-phenylbutane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	198.9	2
100	129.1	5
30	98.1	5
10	74.5	5
1	35.	5
Pressure		
mm 25°C	0.5036	5
t_e	1285.	5
Density		
g/ml 20°C	0.856	2
d_4^t 25	0.852	2
30	0.848	4
a	0.872	4
b	$-0.0_3 8$	4
Ref. Index		
n_D 20°C	1.484	2
25	1.482	2
30	1.479	4
"C"	0.7455	4
MR (Obs.)	49.6	2
MR (Calc.)	49.397	5
(nD-d/2)	1.056	2
Dielectric	2.202	5
A | 100 to	7.01996	5
B | 235 °C	1646.9	5
C	199.	5
A* | 100 to	1.50402	5
B* | 230 °C	1551.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36916	5
B' | 100 °C	1861.0	5
C'	217.7	5
A'* 20 to	1.85931	5
B'* 100 °C	1761.1	5
Ac | 235 to	7.4574	5
Bc | t_c °C	2048.7	5
Cc	249.1	5
Cryos. A* consts. B*		
t_e °C	222.10	5

		Ref.
dt/dP		
°C/mm		
25°C	27.302	5
BP	0.0549	5
t_e	0.0364	5
30 mm	0.7760	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.70	5
30 mm	79.39	5
BP	67.51	5
t_e	64.96	5
t_e (d, e)	64.77	5
ΔHv/T_e	19.44	5
d | 95 to	90.97	5
e | 225 °C	0.1179	5
d' | 20 to	89.20	5
e' | 25 °C	0.0999	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	395.8	5
P_c mm	19070.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9487	5
t_e	0.9327	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		29.07	5
30		27.99	5
40		26.95	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 42

NAME	(1,1-Dimethylpropyl)benzene 2-Methyl-2-phenylbutane	STRUCTURAL FORMULA $(CH_3)_2C(C_2H_5)$ 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	192.38	2
100	123.39	5
30	92.9	5
10	69.5	5
1	31.	5
Pressure		
mm 25°C	0.6831	5
t_e	1269.	5
Density		
g/ml 20°C	0.8748	2
d_4^t 25	0.8709	2
30	0.8670	4
a	0.8904	4
b	-0.0_3378	4
Ref. Index		
n_D 20°C	1.4958	2
25	1.4935	2
30	1.4910	4
"C"	0.7461	4
MR (Obs.)	49.48	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0584	2
Dielectric	2.237	5
A | 90 to	6.99742	5
B | 230 °C	1611.1	5
C	199.	5
A* | 90 to	1.48553	5
B* | 220 °C	1516.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.34520	5
B' | 90 °C	1820.5	5
C'	217.4	5
A'* 15 to	1.83965	5
B'* 90 °C	1721.8	5
Ac | 230 to	7.43445	5
Bc | t_c °C	2009.0	5
Cc	249.2	5
Cryos. A° consts. B°		
t_e °C	214.75	5

		Ref.
dt/dP		
°C/mm		
25°C	20.517	5
BP	0.0543	5
t_e	0.0364	5
30 mm	0.7654	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.05	5
30 mm	78.23	5
BP	66.61	5
t_e	64.06	5
t_e (d,e)	64.00	5
$\Delta Hv/T_e$	19.46	5
d | 90 to	89.07	5
e | 215 °C	0.1167	5
d' | 25 to	87.56	5
e' | 90 °C	0.1005	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	390.3	5
P_c mm	19639.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9518	5
t_e	0.9348	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.70	5
γ 30	30.59	5
40	29.50	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	151.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 43

NAME	(1,2-Dimethylpropyl)benzene 3-Methyl-2-phenylbutane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	188.	2
100	119.6	5
30	89.3	5
10	66.2	5
1	28.	5
Pressure		
mm 25°C	0.8370	5
t_e	1258.	5
Density		
g/ml 20°C	0.870	2
d_4^{25}	0.866	2
30	0.862	4
a	0.886	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.486	2
25	1.484	2
30	1.481	4
"C"	0.7363	4
MR (Obs.)	48.9	2
MR (Calc.)	49.397	5
(nD-d/2)	1.051	2
Dielectric	2.208	5
A, B 90 to 225 °C	6.98241	5
	1587.3	5
C	199.	5
A*, B* 90 to 220 °C	1.47359	5
	1493.4	5
K		
c		
t_k, t_x to °C		
A', B' 20 to 90 °C	7.32924	5
	1793.6	5
C'	217.2	5
A'*, B'* 20 to 90 °C	1.82664	5
	1695.7	5
Ac, Bc, Cc 225 to t_c °C	7.4181	5
	1978.7	5
	248.4	5
Cryos. A* consts. B*		
t_e °C	209.81	5

		Ref.
dt/dP		
°C/mm		
25°C	16.966	5
BP	0.0539	5
t_e	0.0364	5
30 mm	0.7582	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.95	5
30 mm	77.46	5
BP	65.87	5
t_e	63.43	5
t_e (d, e)	63.31	5
$\Delta Hv/T_e$	19.47	5
d, e 90 to 220 °C	87.94	5
	0.1174	5
d', e' 20 to 90 °C	86.47	5
	0.1009	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	382.9	5
P_c mm	19223.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9361	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f, g, h to °K			
f', g', h' to °K			
m, n, o to °K			
m', n', o' to °K			
Surface tension			
dynes/cm. 20°C		31.01	5
γ 30		29.89	5
40		28.79	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		152.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

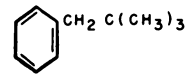
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 44

NAME	(2,2-Dimethylpropyl)benzene Neopentylbenzene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	186.	2
100	117.9	5
30	87.7	5
10	64.7	5
1	26.	5
Pressure mm 25°C	0.9179	5
t_e	1253.	5
Density g/ml 20°C	0.858	2
d_4^t 25	0.854	2
30	0.850	4
a	0.874	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.488	2
25	1.486	2
30	1.483	4
"C"	0.7495	4
MR (Obs.)	49.8	2
MR (Calc.)	49.397	5
(nD-d/2)	1.055	2
Dielectric	2.214	5
A | 85 to	6.97560	5
B | 220 °C	1576.5	5
C	199.	5
A* | 85 to	1.46828	5
B* | 220 °C	1483.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.32200	5
B' | 85 °C	1781.4	5
C'	217.1	5
A'* 20 to	1.82081	5
B'* 85 °C	1683.9	5
Ac | 220 to	7.4101	5
Bc | t_c °C	1963.4	5
Cc	247.8	5
Cryos. A* consts. B*		
t_e °C	207.55	5

		Ref.
dt/dP °C/mm		
25°C	15.563	5
BP	0.0537	5
t_e	0.0363	5
30 mm	0.7549	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.45	5
30 mm	77.11	5
BP	65.54	5
t_e	63.13	5
t_e (d,e)	63.00	5
$\Delta Hv/T_e$	19.47	5
d | 85 to	87.43	5
e | 210 °C	0.1177	5
d' | 20 to	85.97	5
e' | 85 °C	0.1011	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	378.1	5
P_c mm	18762.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9522	5
t_e	0.9366	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 20°C		29.34	5
γ 30		28.26	5
40		27.20	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 45

NAME	1-n-Butyl-2-methylbenzene o-Butyltoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$
		Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	208.	2
100	137.0	5
30	105.52	5
10	81.4	5
1	41.	5
Pressure mm 25°C	0.3274	5
t_e	1307.	5
Density g/ml 20°C	0.871	2
d_4^t 25	0.867	2
30	0.863	4
a	0.887	4
b	-0.038	4
Ref. Index n_D 20°C	1.496	2
25	1.494	2
30	1.491	4
"C"	0.7496	4
MR (Obs.)	49.7	2
MR (Calc.)	49.397	5
(nD-d/2)	1.060	2
Dielectric	2.238	5
A | 105 to	7.05183	5
B | 245 °C	1697.6	5
C	199.	5
A* | 105 to	1.53094	5
B* | 240 °C	1600.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.40304	5
B' | 105 °C	1918.2	5
C'	218.2	5
A'* 25 to	1.88724	5
B'* 105 °C	1816.8	5
Ac | 245 to	7.4916	5
Bc | t_c °C	2112.3	5
Cc	250.5	5
Cryos. A*		
consts. B*		
t_e °C	232.36	5

		Ref.
dt/dP °C/mm		
25°C	40.898	5
BP	0.0558	5
t_e	0.0364	5
30 mm	0.7908	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.03	5
30 mm	81.05	5
BP	69.04	5
t_e	66.26	5
t_e (d, e)	66.18	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.41	5
e | 235 °C	0.1172	5
d' | 25 to	91.51	5
e' | 105 °C	0.0991	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	411.0	5
P_c mm	19867.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9478	5
t_e	0.9294	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	31.16	5
30	30.03	5
40	28.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 46

NAME	1-n-Butyl-3-methylbenzene m-n-Butyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	205.	2
100	134.4	5
30	103.1	5
10	79.1	5
1	39.	5
Pressure		
mm 25°C	0.3775	5
t_e	1300.	5
Density		
g/ml 20°C	0.859	2
d_4^t 25	0.855	2
30	0.851	4
a	0.875	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.491	2
25	1.489	2
30	1.486	4
"C"	0.7530	4
MR (Obs.)	50.0	2
MR (Calc.)	49.397	5
(nD-d/2)	1.062	2
Dielectric	2.223	5
A | 100 to	7.04127	5
B | 240 °C	1680.8	5
C	199.	5
A* | 100 to	1.5220	5
B* | 235 °C	1584.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.3918	5
B' | 100 °C	1899.3	5
C'	218.0	5
A'* 20 to	1.87797	5
B'* 100 °C	1798.3	5
Ac | 240 to	7.4796	5
Bc | t_c °C	2089.6	5
Cc	249.7	5
Cryos. A* consts. B*		
t_e °C	228.98	5

		Ref.
dt/dP °C/mm		
25°C	35.775	5
BP	0.0555	5
t_e	0.0364	5
30 mm	0.7859	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.26	5
30 mm	80.50	5
BP	68.45	5
t_e	65.82	5
t_e (d, e)	65.62	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	92.68	5
e | 230 °C	0.1182	5
d' | 20 to	90.75	5
e' | 105 °C	0.0994	5
d_c g/ml	0.269	5
v_c^c ml/g	3.722	5
t_c^c °C	404.7	5
P_c mm	19350.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9471	5
t_e	0.9305	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		29.48	5
30		28.39	5
40		27.34	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$^1T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

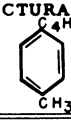
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 47

NAME	1-n-Butyl-4-methylbenzene p-n-Butyltoluene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C 760 mm 100 30 10 1	 207. 136.2 104.7 80.6 40.	 2 5 5 5 5
Pressure mm 25°C t_e	 0.3433 1305.	 5 5
Density g/ml 20°C d_4^t 25 30	 0.857 0.853 0.849	 2 2 4
a b	0.873 $-0.0_3$8	4 4
Ref. Index n_D 20°C 25 30	 1.490 1.488 1.484	 2 2 4
"C"	0.7533	4
MR (Obs.) MR (Calc.) (nD-d/2)	50.0 49.397 1.062	2 5 2
Dielectric	2.220	5
A | 105 to B | 250 °C C	7.04830 1692.0 199.	5 5 5
A* | 105 to B* | 240 °C K c t_k | to t_x | °C	1.52804 1595.1	5 5
A' | 25 to B' | 105 °C C'	7.39928 1911.9 218.1	5 5 5
A'* 25 to B'* 105 °C	1.88414 1810.6	5 5
Ac | 250 to Bc | t_c °C Cc	7.5313 2154.2 256.7	5 5 5
Cryos. A* consts. B*		
t_e °C	231.23	5

		Ref.
dt/dP °C/mm 25°C BP t_e 30 mm	 39.114 0.0557 0.0364 0.7892	 5 5 5 5
ΔHm cal/g		
ΔHv cal/g 25°C 30 mm BP t_e t_e (d, e) $\Delta Hv/T_e$	 88.77 80.86 68.75 66.10 65.88 19.43	 5 5 5 5 5 5
d | 105 to e | 235 °C	93.27 0.1185	5 5
d' | 25 to e' | 105 °C	91.25 0.0992	5 5
d_c g/ml v_c ml/g t_c °C P_c mm	0.269 3.722 407.2 19335.	5 5 5 5
PV/RT 25°C 30 mm BP t_e t_c	1.0000 1.0000 0.9463 0.9297 0.245	5 5 5 5 5
ΔHc kcal/m ΔHf ΔFf		
Viscosity centistokes η °C		
B^v | to A^v | °C (B^v) | to (A^v) | °C		
c_p liq. °K c_p vap. °K c_v vap.		

		Ref.
f | to g | °K h		
f' | to g' | °K h'		
m | to n | °K o		
m' | to n' | °K o'		
Surface tension dynes/cm. 20°C γ 30 40	 29.20 28.13 27.08	 5 5 5
Parachor [P] 20°C 30 40 Sugd.	 402.1	 5
Exp. L.1.%/wt. u. Dispersion		
Flash Point °C Fire Point		
M. Spec. Ultra V. X-Ray Dif. Infrared		
Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		

$T_R = 0.77\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 48

NAME	1-sec-Butyl-2-methylbenzene o-sec-Butyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	196.	2
100	126.6	5
30	95.8	5
10	72.3	5
1	33.	5
Pressure		
mm 25°C	0.5765	5
t_e	1278.	5
Density		
g/ml 20°C	0.873	2
d_4^{25}	0.869	2
d_4^{30}	0.865	4
a	0.889	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.497	2
25	1.495	2
30	1.492	4
"C"	0.7494	4
MR (Obs.)	49.7	2
MR (Calc.)	49.397	5
(nD-d/2)	1.060	2
Dielectric	2.241	5
A | 95 to	7.00990	5
B | 235 °C	1631.0	5
C	199.	5
A* | 95 to	1.49634	5
B* | 225 °C	1535.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35847	5
B' | 95 °C	1843.0	5
C'	217.6	5
A'* 20 to	1.85051	5
B'* 95 °C	1743.7	5
Ac | 235 to	7.4467	5
Bc | t_c °C	2031.5	5
Cc	249.3	5
Cryos. A°		
consts. B°		
t_e °C	218.83	5

		Ref.
dt/dP		
°C/mm		
25°C	24.052	5
BP	0.0547	5
t_e	0.0364	5
30 mm	0.7713	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.97	5
30 mm	78.88	5
BP	66.98	5
t_e	64.54	5
t_e (d, e)	64.27	5
$\Delta Hv/T_e$	19.45	5
d | 95 to	90.25	5
e | 220 °C	0.1187	5
d' | 20 to	88.47	5
e' | 95 °C	0.1002	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	394.6	5
P_c mm	19565.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9333	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.44	5
30	30.31	5
40	29.20	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	160.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

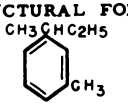
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 49

NAME	1-sec-Butyl-3-methylbenzene m-sec-Butyltoluene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$
		Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	194.	2
100	124.8	5
30	94.2	5
10	70.8	5
1	32.	5
Pressure		
mm 25°C	0.6332	5
t_e	1273.	5
Density		
g/ml 20°C	0.858	2
d_4^t 25	0.854	2
30	0.850	4
a	0.874	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.490	2
25	1.488	2
30	1.485	4
"C"	0.7524	4
MR (Obs.)	50.0	2
MR (Calc.)	49.397	5
(nD-d/2)	1.062	2
Dielectric	2.220	5
A | 95 to	7.00299	5
B | 230 °C	1620.0	5
C	199.	5
A* | 95 to	1.49044	5
B* | 225 °C	1525.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35112	5
B' | 95 °C	1830.6	5
C'	217.5	5
A'* 20 to	1.84449	5
B'* 95 °C	1731.6	5
Ac | 230 to	7.4393	5
Bc | t_c °C	2016.2	5
Cc	248.6	5
Cryos. A°		
consts. B°		
t_e °C	216.57	5

		Ref.
dt/dP		
°C/mm		
25°C	22.030	5
BP	0.0545	5
t_e	0.0364	5
30 mm	0.7680	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.46	5
30 mm	78.52	5
BP	66.73	5
t_e	64.26	5
t_e (d, e)	64.07	5
$\Delta Hv/T_e$	19.45	5
d | 95 to	89.64	5
e | 220 °C	0.1181	5
d' | 20 to	87.97	5
e' | 95 °C	0.1004	5
d_c g/ml	0.269	5
v_c ml/g	3.722	5
t_c °C	389.3	5
P_c mm	18993.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9497	5
t_e	0.9341	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.34	5
30	28.26	5
40	27.21	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	161.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

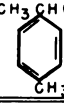
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 50

NAME	1-sec-Butyl-4-methylbenzene p-sec-Butyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	197.	2
100	127.4	5
30	96.6	5
10	73.0	5
1	34.	5
Pressure		
mm 25°C	0.5501	5
t_e	1280.	5
Density		
g/ml 20°C	0.866	2
d_4^t 25	0.862	2
30	0.858	4
a	0.882	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.493	2
25	1.491	2
30	1.488	4
"C"	0.7497	4
MR (Obs.)	49.8	2
MR (Calc.)	49.397	5
(nD-d/2)	1.060	2
Dielectric	2.229	5
A | 95 to	7.01336	5
B | 235 °C	1636.5	5
C	199.	5
A* | 95 to	1.49919	5
B* | 230 °C	1541.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36214	5
B' | 95 °C	1849.2	5
C'	217.6	5
A'* 20 to	1.85353	5
B'* 95 °C	1749.7	5
Ac | 235 to	7.4527	5
Bc | t_c °C	2039.6	5
Cc	249.4	5
Cryos. A°		
consts. B°		
t_e °C	219.96	5

		Ref.
dt/dP		
°C/mm		
25°C	25.131	5
BP	0.0548	5
t_e	0.0364	5
30 mm	0.7729	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.22	5
30 mm	79.06	5
BP	67.30	5
t_e	64.68	5
t_e (d, e)	64.61	5
$\Delta Hv/T_e$	19.44	5
d | 95 to	90.37	5
e | 220 °C	0.1171	5
d' | 25 to	88.73	5
e' | 95 °C	0.1001	5
d_c g/ml	0.269	5
v_c^c ml/g	3 72	5
t_c^c °C	394.8	5
P_c mm	19355.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9504	5
t_e	0.9329	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.45	5
γ 30	29.34	5
40	28.26	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	158.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 51

NAME	o-Isobutyltoluene 1-Isobutyl-2-methylbenzene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	196.	2
100	126.6	5
30	95.8	5
10	72.3	5
1	33.	5
Pressure		
mm 25°C	0.5765	5
t_e	1278.	5
Density		
g/ml 20°C	0.8649	2
d_4^t 25	0.8610	2
30	0.8571	4
a	0.8805	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.4935	2
25	1.4912	2
30	1.4887	4
"C"	0.7514	4
MR (Obs.)	49.85	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0610	2
Dielectric	2.231	5
A | 95 to	7.00990	5
B | 235 °C	1631.0	5
C	199.	5
A* | 95 to	1.49634	5
B* | 230 °C	1535.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35847	5
B' | 95 °C	1843.0	5
C'	217.6	5
A'* 20 to	1.85051	5
B'* 95 °C	1743.6	5
Ac | 235 to	7.4469	5
Bc | t_c °C	2031.1	5
Cc	249.2	5
Cryos. A*		
consts. B*		
t_e °C	218.83	5

		Ref.
dt/dP		
°C/mm		
25°C	24.052	5
BP	0.0547	5
t_e	0.0364	5
30 mm	0.7713	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.97	5
30 mm	78.88	5
BP	66.98	5
t_e	64.54	5
t_e (d, e)	64.27	5
$\Delta Hv/T_e$	19.44	5
d | 95 to	90.25	5
e | 220 °C	0.1187	5
d' | 20 to	88.47	5
e' | 95 °C	0.1002	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	393.8	5
P_c mm	19408.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9333	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		30.29	5
γ 30		29.21	5
40		28.16	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		162.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

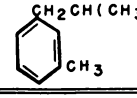
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 52

NAME	1-Isobutyl-3-methylbenzene m-Isobutyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	194.	2
100	124.8	5
30	94.2	5
10	70.8	5
1	32.	5
Pressure mm 25°C	0.6332	5
t_e	1273.	5
Density g/ml 20°C	0.8536	2
d_4^{25}	0.8497	2
d_4^{30}	0.8458	4
a	0.8692	4
b	-0.0378	4
Ref. Index n_D 20°C	1.4888	2
25	1.4865	2
30	1.4840	4
"C"	0.7545	4
MR (Obs.)	50.10	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0620	2
Dielectric	2.217	5
A | 95 to	7.00299	5
B | 230 °C	1620.0	5
C	199.	5
A* | 95 to	1.49044	5
B* | 225 °C	1525.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35112	5
B' | 95 °C	1830.5	5
C'	217.5	5
A'* 20 to	1.84449	5
B'* 95 °C	1731.6	5
Ac | 230 to	7.4392	4
Bc | t_c °C	2016.0	5
Cc	248.6	5
Cryos. A° consts. B°		
t_e °C	216.57	5

		Ref.
dt/dP °C/mm		
25°C	22.030	5
BP	0.0545	5
t_e	0.0364	5
30 mm	0.7680	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.46	5
30 mm	78.52	5
BP	66.73	5
t_e	64.26	5
t_e (d, e)	64.07	5
$\Delta Hv/T_e$	19.45	5
d | 95 to	89.64	5
e | 215 °C	0.1181	5
d' | 20 to	87.97	5
e' | 95 °C	0.1004	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	389.1	5
P_c mm	18962.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9497	5
t_e	0.9341	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	28.74	5
γ 30	27.70	5
40	26.69	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	163.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

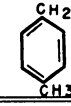
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 53

NAME	1-Isobutyl-4-methylbenzene p-Isobutyltoluene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	196.	2
100	126.6	5
30	95.8	5
10	72.3	5
1	33.	5
Pressure		
mm 25°C	0.5765	5
t_e	1278.	5
Density		
g/ml 20°C	0.8517	2
d_4^t 25	0.8478	2
30	0.8439	4
a	0.8673	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.4874	2
25	1.4851	2
30	1.4829	4
"C"	0.7546	4
MR (Obs.)	50.09	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0616	2
Dielectric	2.212	5
A | 95 to	7.00990	5
B | 230 °C	1631.0	5
C	199.	5
A* | 95 to	1.49634	5
B* | 230 °C	1535.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35847	5
B' | 95 °C	1843.0	5
C'	217.6	5
A'* 20 to	1.85051	5
B'* 95 °C	1743.6	5
Ac | 230 to	7.4463	5
Bc | t_c °C	2028.9	5
Cc	248.7	5
Cryos. A*		
consts. B*		
t_e °C	218.83	5

		Ref.
dt/dP		
°C/mm		
25°C	24.052	5
BP	0.0547	5
t_e	0.0364	5
30 mm	0.7713	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.97	5
30 mm	78.88	5
BP	66.97	5
t_e	64.53	5
t_e (d, e)	64.26	5
ΔHv/T_e	19.44	5
d | 95 to	90.26	5
e | 220 °C	0.1188	5
d' | 20 to	88.47	5
e' | 95 °C	0.1002	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	391.6	5
P_c mm	18953.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9333	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		28.49	5
ϑ 30		27.46	5
40		26.45	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

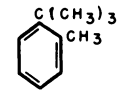
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 54

NAME	1-tert-Butyl-2-methylbenzene o-tert-Butyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C	-50.32	2
F. P. 100%		
B. P. °C		
760 mm	200.45	2
100	130.43	5
30	99.38	5
10	75.6	5
1	35.9	5
Pressure		
mm 25°C	0.4680	5
t_e	1289.	5
Density		
g/ml 20°C	0.8897	2
d_4^t 25	0.8858	2
30	0.8819	4
a	0.9053	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5076	2
25	1.5053	2
30	1.5028	4
"C"	0.7500	4
MR (Obs.)	49.63	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0628	2
Dielectric	2.273	5
A | 100 to	7.02535	5
B | 240 °C	1655.5	5
C	199.	5
A* | 100 to	1.50872	5
B* | 235 °C	1559.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.37489	5
B' | 100 °C	1870.7	5
C'	217.8	5
A'* 25 to	1.86402	5
B'* 100 °C	1770.5	5
Ac | 240 to	7.4646	5
Bc | t_c °C	2065.2	5
Cc	250.5	5
Cryos. A°		
consts. B°		
t_e °C	223.85	5

		Ref.
dt/dP		
°C/mm		
25°C	29.241	5
BP	0.0551	5
t_e	0.0364	5
30 mm	0.7785	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.10	5
30 mm	79.67	5
BP	67.82	5
t_e	65.21	5
t_e (d, e)	65.08	5
$\Delta Hv/T_e$	19.45	5
d | 100 to	91.33	5
e | 225 °C	0.1173	5
d' | 25 to	89.59	5
e' | 100 °C	0.0998	5
d_c g/ml	0.269	5
v_c^c ml/g	3.72	5
t_c^c °C	404.2	5
P_c mm	20417.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9320	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 20°C		33.92	5
γ 30		32.75	5
40		31.60	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

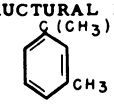
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 55

NAME	1-tert-Butyl-3-methylbenzene m-tert-Butyltoluene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F. P. °C	-41.370	2
F. P. 100%		
B. P. °C 760 mm	189.26	2
100	120.69	5
30	90.35	5
10	67.2	5
1	28.4	5
Pressure mm 25°C	0.7890	5
t_e	1261.	5
Density g/ml 20°C	0.8657	2
d_4^t 25	0.8618	2
30	0.8579	4
a	0.8813	4
b	-0.0$_3$78	4
Ref. Index n_D 20°C	1.4944	2
25	1.4921	2
30	1.4895	4
"C"	0.7516	4
MR (Obs.)	49.88	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0616	2
Dielectric	2.233	5
A | 90 to	6.98672	5
B | 225 °C	1594.2	5
C	199.	5
A* | 90 to	1.47761	5
B* | 220 °C	1500.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.33382	5
B' | 90 °C	1801.4	5
C'	217.2	5
A'* 15 to	1.83036	5
B'* 90 °C	1703.3	5
Ac | 225 to	7.4224	5
Bc | t_c °C	1986.6	5
Cc	248.5	5
Cryos. A* consts. B*		
t_e °C	211.23	5

		Ref.
dt/dP °C/mm		
25°C	17.929	5
BP	0.0540	5
t_e	0.0364	5
30 mm	0.7603	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.27	5
30 mm	77.68	5
BP	66.00	5
t_e	63.58	5
t_e (d, e)	63.40	5
$\Delta Hv/T_e$	19.46	5
d | 90 to	88.36	5
e | 215 °C	0.1181	5
d' | 15 to	86.88	5
e' | 90 °C	0.1008	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	384.5	5
P_c mm	19225.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9507	5
t_e	0.9353	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		30.41	5
σ 30		29.32	5
40		28.27	5
Parachor [P] 20°C			
30			
40			
Sugd.		402.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

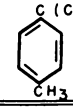
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 56

NAME	1-tert-Butyl-4-methylbenzene p-tert-Butyltoluene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C	-52.515	2
F. P. 100%		
B. P. °C		
760 mm	192.76	2
100	123.72	5
30	93.16	5
10	69.8	5
1	30.7	5
Pressure		
mm 25°C	0.6710	5
t_e	1270.	5
Density		
g/ml 20°C	0.8612	2
d_4^{25}	0.8573	2
d_4^{30}	0.8534	4
a	0.8768	4
b	-0.03778	4
Ref. Index		
n_D 20°C	1.4918	2
25	1.4895	2
30	1.4871	4
"C"	0.7522	4
MR (Obs.)	49.92	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0612	2
Dielectric	2.225	5
A | 90 to	6.99872	5
B | 230 °C	1613.2	5
C	199.	5
A* | 90 to	1.48683	5
B* | 225 °C	1518.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.34658	5
B' | 90 °C	1822.9	5
C'	217.4	5
A'* 15 to	1.84078	5
B'* 90 °C	1724.1	5
Ac | 230 to	7.4344	5
Bc | t_c °C	2008.5	5
Cc	248.7	5
Cryos. A* consts. B*		
t_e °C	215.18	5

		Ref.
dt/dP		
°C/mm		
25°C	20.865	5
BP	0.0544	5
t_e	0.0364	5
30 mm	0.7660	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.15	5
30 mm	78.30	5
BP	66.57	5
t_e	64.09	5
t_e (d, e)	63.93	5
$\Delta Hv/T_e$	19.45	5
d | 90 to	89.27	5
e | 220 °C	0.1178	5
d' | 15 to	87.66	5
e' | 90 °C	0.1005	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	388.7	5
P_c mm	19185.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9503	5
t_e	0.9345	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	29.78	5
γ 30	28.71	5
40	27.67	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	170.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

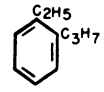
PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 57

NAME	1-Ethyl-2-n-propylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ Molecular Weight 148.238



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	203.	2
100	132.7	5
30	101.5	5
10	77.6	5
1	38.	5
Pressure mm 25°C	0.4148	5
t_e	1295.	5
Density g/ml 20°C	0.8744	2
d_4^t 25	0.8705	2
30	0.8666	4
a	0.8900	4
b	-0.0378	4
Ref. Index n_D 20°C	1.4992	2
25	1.4969	2
30	1.4945	4
"C"	0.7512	4
MR (Obs.)	49.79	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0620	2
Dielectric	2.248	5
A, B, C 100 to 240 °C	7.03426 1669.7 199.	5 5 5
A*, B*, K, c 100 to 235 °C	1.51649 1573.5	5 5
t_k, t_x to °C		
A', B', C' 25 to 100 °C	7.38436 1886.7 217.9	5 5 5
A'* 25 to	1.87181	5
B'* 100 °C	1786.1	5
Ac, Bc, Cc 240 to t_c °C	7.4731 2079.6 250.2	5 5 5
Cryos. A* consts. B*		
t_e °C	226.72	5

		Ref.
dt/dP °C/mm		
25°C	32.748	5
BP	0.0553	5
t_e	0.0364	5
30 mm	0.7827	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.75	5
30 mm	80.14	5
BP	68.17	5
t_e	65.54	5
t_e (d, e)	65.37	5
$\Delta Hv/T_e$	19.44	5
d, e 100 to 230 °C	92.10 0.1179	5 5
d', e' 25 to 100 °C	90.24 0.0996	5 5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	405.2	5
P_c mm	19960.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9478	5
t_e	0.9310	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o to °K		
m', n', o' to °K		
Surface tension dynes/cm. 20°C	31.65	5
30	30.53	5
40	29.45	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

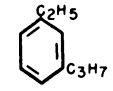
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 58

NAME	1-Ethyl-3-n-propylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238



		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	201.	2
100	130.9	5
30	99.8	5
10	76.1	5
1	36.	5
Pressure		
mm 25°C	0.4558	5
t_e	1290.	5
Density		
g/ml 20°C	0.8607	2
d_4^t 25	0.8568	2
30	0.8529	4
a	0.8763	4
b	-0.0378	4
Ref. Index		
n_D 20°C	1.4930	2
25	1.4907	2
30	1.4882	4
"C"	0.7543	4
MR (Obs.)	50.05	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0626	2
Dielectric	2.229	5
A | 100 to	7.02727	5
B | 240 °C	1658.6	5
C	199.	5
A* | 100 to	1.51071	5
B* | 230 °C	1562.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.37693	5
B' | 100 °C	1874.2	5
C'	217.8	5
A'* 25 to	1.86569	5
B'* 100 °C	1773.9	5
Ac | 240 to	7.4639	5
Bc | t_c °C	2062.6	5
Cc	249.4	5
Cryos. A* consts. B*		
t_e °C	224.47	5

		Ref.
dt/dP		
°C/mm		
25°C	29.975	5
BP	0.0551	5
t_e	0.0364	5
30 mm	0.7795	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.24	5
30 mm	79.78	5
BP	67.88	5
t_e	65.25	5
t_e (d, e)	65.12	5
$\Delta Hv/T_e$	19.43	5
d | 100 to	91.51	5
e | 225 °C	0.1176	5
d' | 25 to	89.73	5
e' | 100 °C	0.0998	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	400.1	5
P_c mm	19415.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9488	5
t_e	0.9316	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		29.71	5
γ 30		28.65	5
40		27.61	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 59

NAME	1-Ethyl-4-n-propylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	205.	2
100	134.4	5
30	103.1	5
10	79.1	5
1	39.	5
Pressure		
mm 25°C	0.3775	5
t_e	1300.	5
Density		
g/ml 20°C	0.8594	2
d_4^{25}	0.8555	2
d_4^{30}	0.8516	4
a	87.50	4
b	-0.03 78	4
Ref. Index		
n_D 20°C	1.4921	2
25	1.4898	2
30	1.4874	4
"C"	0.7542	4
MR (Obs.)	50.05	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0624	2
Dielectric	2.226	5
A | 100 to	7.04127	5
B | 250 °C	1680.8	5
C	199.	5
A* | 100 to	1.52201	5
B* | 240 °C	1584.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.39181	5
B' | 100 °C	1899.3	5
C'	218.0	5
A'* 25 to	1.87797	5
B'* 100 °C	1798.3	5
Ac | 250 to	7.5235	5
Bc | t_c °C	2141.0	5
Cc	256.7	5
Cryos. A*		
consts. B*		
t_e °C	228.98	5

		Ref.
dt/dP		
°C/mm		
25°C	35.774	5
BP	0.0555	5
t_e	0.0364	5
30 mm	0.7859	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.26	5
30 mm	80.50	5
BP	68.46	5
t_e	65.83	5
t_e (d, e)	65.62	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	92.68	5
e | 230 °C	0.1182	5
d' | 25 to	90.75	5
e' | 105 °C	0.0994	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	405.4	5
P_c mm	19495.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9471	5
t_e	0.9305	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.53	5
30	28.47	5
40	27.44	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.77\,T_c$

+ grams/100 grams solvent

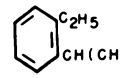
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 60

NAME	1-Ethyl-2-isopropylbenzene o-Ethylcumene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{11}H_{16}$ Molecular Weight 148.238	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	193.	2
100	123.9	5
30	93.4	5
10	70.0	5
1	31.	5
Pressure mm 25°C	0.6636	5
t_e	1271.	5
Density g/ml 20°C	0.888	2
d_4^{t} 25	0.884	2
30	0.880	4
a	0.904	4
b	-0.038	4
Ref. Index n_D 20°C	1.508	2
25	1.506	2
30	1.503	4
"C"	0.7519	4
MR (Obs.)	49.8	2
MR (Calc.)	49.397	5
(nD-d/2)	1.064	2
Dielectric	2.274	5
A | 90 to	6.99955	5
B | 235 °C	1614.5	5
C	199.	5
A* | 90 to	1.48738	5
B* | 225 °C	1519.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.34746	5
B' | 90 °C	1824.3	5
C'	217.4	5
A'* 15 to	1.84150	5
B'* 90 °C	1725.5	5
Ac | 235 to	7.2793	5
Bc | t_c °C	1865.3	5
Cc	231.3	5
Cryos. A*		
consts. B*		
t_e °C	215.45	5

		Ref.
dt/dP °C/mm		
25°C	21.082	5
BP	0.0544	5
t_e	0.0364	5
30 mm	0.7664	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.21	5
30 mm	78.34	5
BP	66.64	5
t_e	64.15	5
t_e (d, e)	64.01	5
$\Delta Hv/T_e$	19.46	5
d | 95 to	89.30	5
e | 220 °C	0.1174	5
d' | 20 to	87.72	5
e' | 95 °C	0.1005	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	392.8	5
P_c mm	19989.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9506	5
t_e	0.9345	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	33.66	5
γ 30	32.46	5
40	31.30	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	160.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

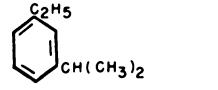
PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 61

NAME	1-Ethyl-3-isopropylbenzene m-Ethylcumene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	192.0	2
100	123.1	5
30	92.6	5
10	69.2	5
1	30.	5
Pressure		
mm 25°C	0.6948	5
t_e	1268.	5
Density		
g/ml 20°C	0.859	2
d_4^t 25	0.855	2
30	0.851	4
a	0.875	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.492	2
25	1.490	2
30	1.487	4
"C"	0.7544	4
MR (Obs.)	50.1	2
MR (Calc.)	49.397	5
(nD-d/2)	1.062	2
Dielectric	2.226	5
A | 90 to	6.99611	5
B | 230 °C	1609.1	5
C	199.	5
A* | 90 to	1.48510	5
B* | 220 °C	1514.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.34381	5
B' | 90 °C	1818.2	5
C'	217.4	5
A'* 20 to	1.83850	5
B'* 90 °C	1719.6	5
Ac | 230 to	7.4329	5
Bc | t_c °C	2003.0	5
Cc	248.4	5
Cryos. A*		
consts. B*		
t_e °C	214.32	5

		Ref.
dt/dP		
°C/mm		
25°C	20.194	5
BP	0.0543	5
t_e	0.0364	5
30 mm	0.7648	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.96	5
30 mm	78.17	5
BP	66.46	5
t_e	63.97	5
t_e (d, e)	63.83	5
ΔHv/T_e	19.45	5
d | 90 to	89.06	5
e | 215 °C	0.1177	5
d' | 15 to	87.47	5
e' | 90 °C	0.1005	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	386.7	5
P_c mm	18967.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9507	5
t_e	0.9345	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.48	5
30	28.39	5
40	27.34	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.l.%/wt. u.		
Dispersion	161.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\ T_c$

+ grams/100 grams solvent

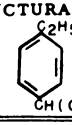
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 62

NAME	1-Ethyl-4-isopropylbenzene p-Ethylcumene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	196.6	2
100	127.1	5
30	96.3	5
10	72.7	5
1	33.	5
Pressure		
mm 25°C	0.5605	5
t_e	1279.	5
Density		
g/ml 20°C	0.8585	2
d_4^t 25	0.8546	2
30	0.8507	4
a	0.8741	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.4923	2
25	1.4900	2
30	1.4875	4
"C"	0.7553	4
MR (Obs.)	50.12	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0630	2
Dielectric	2.227	5
A | 95 to	7.01198	5
B |235 °C	1634.3	5
C	199.	5
A* | 95 to	1.49804	5
B* |230 °C	1539.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36068	5
B' |95 °C	1846.7	5
C'	217.6	5
A'* 20 to	1.85233	5
B'* 95 °C	1747.3	5
Ac |235 to	7.4491	5
Bc | t_c °C	2034.4	5
Cc	249.0	5
Cryos. A° consts. B°		
t_e °C	219.51	5

		Ref.
dt/dP		
°C/mm		
25°C	24.693	5
BP	0.0547	5
t_e	0.0364	5
30 mm	0.7723	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.12	5
30 mm	78.98	5
BP	67.19	5
t_e	64.62	5
t_e (d, e)	64.49	5
$\Delta Hv/T_e$	19.44	5
d | 95 to	90.30	5
e | 220 °C	0.1176	5
d' | 15 to	88.63	5
e' | 95 °C	0.1001	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	393.6	5
P_c mm	19206.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9498	5
t_e	0.9331	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	29.41	5
γ 30	28.35	5
40	27.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	163.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 63

NAME	1,2-Dimethyl-3-n-propylbenzene 3-Propyl-o-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$
		Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	210.7	2
100	139.4	5
30	107.7	5
10	83.5	5
1	43.	5
Pressure		
mm 25°C	0.2878	5
t_e	1314.	5
Density		
g/ml 20°C	0.8864	2
d_4^t 25	0.8825	2
30	0.8786	4
a	0.9020	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5075	2
25	1.5053	2
30	1.5027	4
"C"	0.7526	4
MR (Obs.)	49.81	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0643	2
Dielectric	2.273	5
A | 105 to	7.06138	5
B | 250 °C	1712.8	5
C	199.	5
A* | 105 to	1.53914	5
B* | 245 °C	1615.4	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.41319	5
B' | 105 °C	1935.4	5
C'	218.3	5
A'* 20 to	1.89564	5
B'* 105 °C	1833.4	5
Ac | 250 to	7.5021	5
Bc | t_c °C	2133.5	5
Cc	251.4	5
Cryos. A*		
consts. B*		
t_e °C	235.41	5

		Ref.
dt/dP		
°C/mm		
25°C	46.159	5
BP	0.0560	5
t_e	0.0364	5
30 mm	0.7951	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.72	5
30 mm	81.54	5
BP	69.44	5
t_e	66.66	5
t_e (d, e)	66.54	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	94.20	5
e | 235 °C	0.1175	5
d' | 20 to	92.20	5
e' | 105 °C	0.0989	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	418.0	5
P_c mm	20645.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9467	5
t_e	0.9284	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		33.42	5
γ 30		32.26	5
40		31.13	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.l.%/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

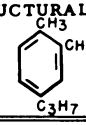
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 64

NAME	1,2-Dimethyl-4-n-propylbenzene 4-Propyl-o-xylene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	208.9	2
100	137.8	5
30	106.2	5
10	82.1	5
1	42.	5
Pressure		
mm 25°C	0.3138	5
t_e	1310.	5
Density		
g/ml 20°C	0.8715	2
d_4^t 25	0.8676	2
30	0.8637	4
a	0.8871	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5000	2
25	1.4978	2
30	1.4953	4
"C"	0.7549	4
MR (Obs.)	50.03	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0642	2
Dielectric	2.250	5
A | 105 to	7.05501	5
B | 250 °C	1702.6	5
C	199.	5
A* | 105 to	1.53322	5
B* | 240 °C	1605.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.40642	5
B' | 105 °C	1923.9	5
C'	218.3	5
A'* 20 to	1.89005	5
B'* 105 °C	1822.2	5
Ac | 250 to	7.4947	5
Bc | t_c °C	2118.7	5
Cc	250.7	5
Cryos. A*		
consts. B*		
t_e °C	233.38	5

		Ref.
dt/dP		
°C/mm		
25°C	42.555	5
BP	0.0558	5
t_e	0.0364	5
30 mm	0.7922	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.26	5
30 mm	81.21	5
BP	69.11	5
t_e	66.41	5
t_e (d, e)	66.23	5
ΔHv/T_e	19.43	5
d | 105 to	93.73	5
e | 235 °C	0.1178	5
d' | 20 to	91.74	5
e' | 105 °C	0.0991	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	413.0	5
P_c mm	20053.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9466	5
t_e	0.9294	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.23	5
γ 30	30.13	5
40	29.05	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	168.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 65

NAME	1,3-Dimethyl-2-n-propylbenzene 2-Propyl-m-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	207.6	2
100	136.7	5
30	105.2	5
10	81.1	5
1	41.	5
Pressure mm 25°C	0.3335	5
t_e	1306.	5
Density g/ml 20°C	0.8856	2
d_4^t 25	0.8817	2
30	0.8778	4
a	0.9012	4
b	-0.0$_3$78	4
Ref. Index n_D 20°C	1.5063	2
25	1.5041	2
30	1.5015	4
"C"	0.7516	4
MR (Obs.)	49.76	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0635	2
Dielectric	2.269	5
A | 105 to	7.05042	5
B | 250 °C	1695.4	5
C	199.	5
A* | 105 to	1.53012	5
B* | 240 °C	1598.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.40154	5
B' | 105 °C	1915.7	5
C'	218.2	5
A'* 20 to	1.88600	5
B'* 105 °C	1814.3	5
Ac | 250 to	7.4908	5
Bc | t_c °C	2112.7	5
Cc	251.1	5
Cryos. A* consts. B*		
t_e °C	231.91	5

		Ref.
dt/dP °C/mm		
25°C	40.190	5
BP	0.0557	5
t_e	0.0364	5
30 mm	0.7902	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.93	5
30 mm	80.97	5
BP	68.92	5
t_e	66.21	5
t_e (d, e)	66.06	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.36	5
e | 235 °C	0.1177	5
d' | 20 to	91.41	5
e' | 105 °C	0.0992	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	413.5	5
P_c mm	20509.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9293	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		33.30	5
30		32.14	5
40		31.01	5
Parachor [P] 20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 66

NAME	1, 3-Dimethyl-4-n-propylbenzene 4-Propyl-m-xylene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	206.6	2
100	135.8	5
30	104.4	5
10	80.3	5
1	40.	5
Pressure		
mm 25°C	0.3497	5
t_e	1304.	5
Density		
g/ml 20°C	0.8723	2
d_4^{25}	0.8684	2
d_4^{30}	0.8645	4
a	0.8879	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.4998	2
25	1.4976	2
30	1.4950	4
"C"	0.7539	4
MR (Obs.)	49.97	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0637	2
Dielectric	2.249	5
A | 105 to	7.04689	5
B | 245 °C	1689.8	5
C	199.	5
A* | 105 to	1.52717	5
B* | 240 °C	1593.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.39779	5
B' | 105 °C	1909.4	5
C'	218.1	5
A'* 20 to	1.88289	5
B'* 105 °C	1808.2	5
Ac | 245 to	7.4867	5
Bc | t_c °C	2103.8	5
Cc	250.5	5
Cryos. A°		
consts. B°		
t_e °C	230.78	5

		Ref.
dt/dP		
°C/mm		
25°C	38.437	5
BP	0.0556	5
t_e	0.0364	5
30 mm	0.7885	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.67	5
30 mm	80.79	5
BP	68.77	5
t_e	66.05	5
t_e (d, e)	65.93	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.07	5
e | 230 °C	0.1176	5
d' | 20 to	91.15	5
e' | 105 °C	0.0993	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	409.9	5
P_c mm	20000.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9297	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.34	5
30	30.24	5
40	29.16	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

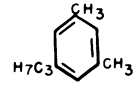
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 67

NAME	1,3-Dimethyl-5-n-propylbenzene 5-propyl-m-xylene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C	-59.1	2
F.P. 100%		
B.P. °C		
760 mm	202.24	2
100	132.0	5
30	100.8	5
10	77.0	5
1	37.	5
Pressure mm 25°C	0.4299	5
t_e	1293.	5
Density g/ml 20°C	0.8607	2
d_4^t 25	0.8568	2
30	0.8529	4
a	0.8763	4
b	-0.0_378	4
Ref. Index n_D 20°C	1.4952	2
25	1.4930	2
30	1.4904	4
"C"	0.7575	4
MR (Obs.)	50.24	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0648	2
Dielectric	2.236	5
A | 100 to	7.03160	5
B | 240 °C	1665.5	5
C	199.	5
A* | 100 to	1.51448	5
B* | 235 °C	1569.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.38153	5
B' | 100 °C	1882.0	5
C'	217.9	5
A'* 20 to	1.86948	5
B'* 100 °C	1781.5	5
Ac | 240 to	7.4686	5
Bc | t_c °C	2071.0	5
Cc	249.5	5
Cryos. A° consts. B°		
t_e °C	225.87	5

		Ref.
dt/dP		
°C/mm		
25°C	31.671	5
BP	0.0552	5
t_e	0.0364	5
30 mm	0.7815	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.56	5
30 mm	80.00	5
BP	68.17	5
t_e	65.41	5
t_e (d, e)	65.42	5
$\Delta Hv/T_e$	19.43	5
d | 100 to	91.76	5
e | 230 °C	0.1166	5
d' | 20 to	90.05	5
e' | 100 °C	0.0996	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	401.8	5
P_c mm	19452.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9499	5
t_e	0.9311	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension dynes/cm.	20°C	29.71	5
σ	30	28.65	5
	40	27.61	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	402.1	5
Exp. L.1.%/wt. u.			
Dispersion		168.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

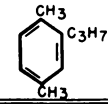
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 68

NAME	1,4-Dimethyl-2-n-propylbenzene 2-Propyl-p-xylene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	204.3	2
100	133.8	5
30	102.5	5
10	78.6	5
1	38.	5
Pressure		
mm 25°C	0.3902	5
t_e	1298.	5
Density		
g/ml 20°C	0.8717	2
d_4^{25}	0.8678	2
d_4^{30}	0.8639	4
a	0.8873	4
b	-0.0378	4
Ref. Index		
n_D 20°C	1.4999	2
25	1.4977	2
30	1.4951	4
"C"	0.7546	4
MR (Obs.)	50.03	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0640	2
Dielectric	2.250	5
A | 100 to	7.03881	5
B | 245 °C	1676.9	5
C	199.	5
A* | 100 to	1.51999	5
B* | 235 °C	1580.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.38920	5
B' | 100 °C	1894.8	5
C'	218.0	5
A'* 20 to	1.87581	5
B'* 100 °C	1794.0	5
Ac | 245 to	7.4776	5
Bc | t_c °C	2087.7	5
Cc	250.2	5
Cryos. A*		
consts. B*		
t_e °C	228.19	5

		Ref.
dt/dP		
°C/mm		
25°C	34.680	5
BP	0.0554	5
t_e	0.0364	5
30 mm	0.7848	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.08	5
30 mm	80.37	5
BP	68.42	5
t_e	65.74	5
t_e (d, e)	65.61	5
$\Delta Hv/T_e$	19.44	5
d | 100 to	92.41	5
e | 230 °C	0.1174	5
d' | 20 to	90.57	5
e' | 100 °C	0.0995	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	406.6	5
P_c mm	19909.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9481	5
t_e	0.9307	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension			
dynes/cm.	20°C	31.26	5
γ	30	30.15	5
	40	29.08	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	402.1	5
Exp. L.I. %/wt. u.			
Dispersion		168.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 69

NAME	1,2-Dimethyl-3-isopropylbenzene 2,3-Dimethylcumene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	202.6	2
100	132.3	5
30	101.1	5
10	77.3	5
1	37.	5
Pressure		
mm 25°C	0.4226	5
t_e	1294.	5
Density		
g/ml 20°C	0.888	2
d_4^t 25	0.884	2
30	0.880	4
a	0.904	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.508	2
25	1.506	2
30	1.503	4
"C"	0.7519	4
MR (Obs.)	49.8	2
MR (Calc.)	49.397	5
(nD-d/2)	1.064	2
Dielectric	2.274	5
A, B: 100 to 245 °C	7.03286	5
B	1667.5	5
C	199.	5
A*, B*: 100 to 235 °C	1.51552	5
B*	1571.4	5
K		
c		
t_k, t_x: to °C		
A', B': 20 to 100 °C	7.38287	5
B'	1884.2	5
C'	217.9	5
A'*, B'*: 20 to 100 °C	1.87058	5
B'*	1783.7	5
Ac, Bc: 245 to t_c °C	7.4704	5
Bc	2076.8	5
Cc	250.3	5
Cryos. A* consts. B*		
t_e °C	226.27	5

		Ref.
dt/dP		
°C/mm		
25°C	32.180	5
BP	0.0553	5
t_e	0.0364	5
30 mm	0.7821	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.65	5
30 mm	80.07	5
BP	68.07	5
t_e	65.49	5
t_e (d, e)	65.28	5
ΔHv/T_e	19.44	5
d: 100 to e: 230 °C	92.02	5
e	0.1182	5
d': 20 to e': 100 °C	90.14	5
e'	0.0996	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	406.3	5
P_c mm	20296.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9474	5
t_e	0.9310	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v, A^v: to °C		
(B^v), (A^v): to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h: to °K		
f', g', h': to °K		
m, n, o: to °K		
m', n', o': to °K		
Surface tension		
dynes/cm. 20°C	33.66	5
30	32.46	5
40	31.30	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = -0.76\ T_c$

+ grams/100 grams solvent

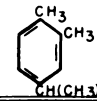
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 70

NAME	1,2-Dimethyl-4-isopropylbenzene 3,4-Dimethylcumene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	201.8	2
100	131.6	5
30	100.5	5
10	76.7	5
1	37.	5
Pressure		
mm 25°C	0.4391	5
t_e	1292.	5
Density		
g/ml 20°C	0.8699	2
d_4^t 25	0.8660	2
30	0.8621	4
a	0.8855	4
b	-0.0_3378	4
Ref. Index		
n_D 20°C	1.4993	2
25	1.4971	2
30	1.4945	4
"C"	0.7553	4
MR (Obs.)	50.06	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0644	2
Dielectric	2.248	5
A | 100 to	7.03006	5
B | 240 °C	1663.	5
C	199.	5
A* | 100 to	1.51274	5
B* | 235 °C	1566.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.37990	5
B' | 100 °C	1879.1	5
C'	217.9	5
A'* 20 to	1.86814	5
B'* 100 °C	1778.8	5
Ac | 240 to	7.4665	5
Bc | t_c °C	2068.8	5
Cc	249.7	5
Cryos. A°		
consts. B°		
t_e °C	225.37	5

		Ref.
dt/dP		
°C/mm		
25°C	31.044	5
BP	0.0552	5
t_e	0.0364	5
30 mm	0.7807	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.44	5
30 mm	79.92	5
BP	68.00	5
t_e	65.38	5
t_e (d, e)	65.23	5
$\Delta Hv/T_e$	19.44	5
d | 100 to	91.74	5
e | 225 °C	0.1176	5
d' | 20 to	89.94	5
e' | 100 °C	0.0997	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	402.8	5
P_c mm	19765.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9484	5
t_e	0.9315	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.00	5
γ 30	29.90	5
40	28.83	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	167.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 71

NAME	1,3-Dimethyl-2-isopropylbenzene 2,6-Dimethylcumene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ — Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	199.	2
100	129.2	5
30	98.2	5
10	75.	5
1	35.	5
Pressure		
mm 25°C	0.5010	5
t_e	1285.	5
Density		
g/ml 20°C	0.890	2
d_4^t 25	0.886	2
30	0.882	4
a	0.906	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.509	2
25	1.507	2
30	1.504	4
"C"	0.7516	4
MR (Obs.)	49.7	2
MR (Calc.)	49.397	5
(nD-d/2)	1.064	2
Dielectric	2.277	5
A | 100 to	7.02030	5
B | 240 °C	1647.5	5
C	199.	5
A* | 100 to	1.50470	5
B* | 235 °C	1551.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36952	5
B' | 100 °C	1861.6	5
C'	217.7	5
A'* 20 to	1.85960	5
B'* 100 °C	1761.8	5
Ac | 240 to	7.4588	5
Bc | t_c °C	2054.6	5
Cc	250.2	5
Cryos. A°		
consts. B°		
t_e °C	222.21	5

		Ref.
dt/dP		
°C/mm		
25°C	27.435	5
BP	0.0549	5
t_e	0.0364	5
30 mm	0.7762	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.73	5
30 mm	79.41	5
BP	67.51	5
t_e	64.99	5
t_e (d, e)	64.77	5
$\Delta Hv/T_e$	19.45	5
d | 100 to	91.01	5
e | 225 °C	0.1181	5
d' | 20 to	89.23	5
e' | 100 °C	0.0999	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	401.6	5
P_c mm	20251.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9483	5
t_e	0.9324	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	33.97	5
30	32.76	5
40	31.59	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.l.%/wt. u.		
Dispersion	165.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

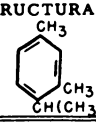
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 72

NAME	1,3-Dimethyl-4-isopropylbenzene 2,4-Dimethylcumene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	199.1	2
100	129.3	5
30	98.3	5
10	75.	5
1	35.	5
Pressure		
mm 25°C	0.4984	5
t_e	1285.	5
Density		
g/ml 20°C	0.873	2
d_4^{25}	0.869	2
d_4^{30}	0.865	4
a	0.889	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.500	2
25	1.498	2
30	1.495	4
"C"	0.7536	4
MR (Obs.)	49.9	2
MR (Calc.)	49.397	5
(nD-d/2)	1.064	2
Dielectric	2.250	5
A | 100 to	7.02065	5
B | 240 °C	1648.1	5
C	199.	5
A* | 100 to	1.50536	5
B* | 235 °C	1552.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36989	5
B' | 100 °C	1862.3	5
C'	217.7	5
A'* 20 to	1.85990	5
B'* 100 °C	1762.4	5
Ac | 240 to	7.4587	5
Bc | t_c °C	2052.8	5
Cc	249.7	5
Cryos. A*		
consts. B*		
t_e °C	222.33	5

		Ref.
dt/dP		
°C/mm		
25°C	27.568	5
BP	0.0549	5
t_e	0.0364	5
30 mm	0.7764	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.76	5
30 mm	79.43	5
BP	67.57	5
t_e	64.98	5
t_e (d,e)	64.84	5
$\Delta Hv/T_e$	19.44	5
d | 100 to	91.00	5
e | 225 °C	0.1177	5
d' | 20 to	89.26	5
e' | 100 °C	0.0999	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	398.9	5
P_c mm	19659.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9321	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.44	5
γ 30	30.31	5
40	29.20	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

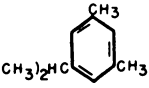
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 73

NAME	1,3-Dimethyl-5-isopropylbenzene 3,5-Dimethylcumene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	194.5	2
100	125.5	5
30	94.9	5
10	71.5	5
1	32.	5
Pressure		
mm 25°C	0.6023	5
t_e	1276.	5
Density		
g/ml 20°C	0.862	2
d_4^t 25	0.858	2
30	0.854	4
a	0.878	4
b	$-0.0_3 8$	4
Ref. Index		
n_D 20°C	1.495	2
25	1.493	2
30	1.490	4
"C"	0.7560	4
MR (Obs.)	50.2	2
MR (Calc.)	49.397	5
(nD-d/2)	1.064	2
Dielectric	2.235	5
A | 95 to	7.02030	5
B | 230 °C	1628.9	5
C	199.	5
A* | 95 to	1.50482	5
B* | 225 °C	1533.2	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.36952	5
B' | 95 °C	1840.6	5
C'	217.5	5
A'* 20 to	1.86233	5
B'* 95 °C	1741.5	5
Ac | 230 to	7.4568	5
Bc | t_c °C	2026.3	5
Cc	248.6	5
Cryos. A*		
consts. B*		
t_e °C	217.14	5

		Ref.
dt/dP		
°C/mm		
25°C	23.041	5
BP	0.0543	5
t_e	0.0362	5
30 mm	0.7674	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.90	5
30 mm	78.88	5
BP	67.19	5
t_e	64.69	5
t_e (d, e)	64.53	5
$\Delta Hv/T_e$	19.56	5
d | 95 to	90.00	5
e | 220 °C	0.1173	5
d' | 20 to	88.41	5
e' | 95 °C	0.1006	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	390.7	5
P_c mm	19373.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9513	5
t_e	0.9356	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.89	5
30	28.79	5
40	27.73	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	168.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

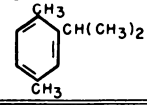
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 74

NAME	1,4-Dimethyl-2-isopropylbenzene 2,5-Dimethylcumene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	196.2	2
100	126.7	5
30	96.0	5
10	72.	5
1	33.	5
Pressure		
mm 25°C	0.5711	5
t_e	1278.	5
Density		
g/ml 20°C	0.8738	2
d_4^t 25	0.8699	2
30	0.8660	4
a	0.8894	4
b	-0.0_3378	4
Ref. Index		
n_D 20°C	1.5010	2
25	1.4988	2
30	1.4963	4
"C"	0.7543	4
MR (Obs.)	49.98	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0641	2
Dielectric	2.253	5
A | 95 to	7.01059	5
B | 235 °C	1632.1	5
C	199.	5
A* | 95 to	1.49691	5
B* | 230 °C	1537.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.35920	5
B' | 95 °C	1844.2	5
C'	217.6	5
A'* 20 to	1.85111	5
B'* 95 °C	1744.9	5
Ac | 235 to	7.4483	5
Bc | t_c °C	2034.2	5
Cc	249.5	5
Cryos. A*		
consts. B*		
t_e °C	219.06	5

		Ref.
dt/dP		
°C/mm		
25°C	24.264	5
BP	0.0547	5
t_e	0.0364	5
30 mm	0.7716	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.02	5
30 mm	78.91	5
BP	67.14	5
t_e	64.58	5
t_e (d, e)	64.45	5
$\Delta Hv/T_e$	19.45	5
d | 95 to	90.18	5
e | 220 °C	0.1175	5
d' | 20 to	88.52	5
e' | 95 °C	0.1002	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	395.6	5
P_c mm	19721.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9499	5
t_e	0.9332	5
t_c	0.246	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.56	5
30	30.45	5
40	29.36	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	168.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 75

NAME	2,3-Diethyl-1-methylbenzene 2,3-Diethyltoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	206.6	2
100	135.8	5
30	104.4	5
10	80.	5
1	40.	5
Pressure		
mm 25°C	0.3497	5
t_e	1304.	5
Density		
g/ml 20°C	0.8910	2
d_4^t 25	0.8871	2
30	0.8832	4
a	0.9066	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5105	2
25	1.5083	2
30	1.5057	4
"C"	0.7528	4
MR (Obs.)	49.80	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0650	2
Dielectric	2.282	5
A | 105 to	7.04689	5
B | 250 °C	1689.8	5
C	199.	5
A* | 105 to	1.52717	5
B* | 240 °C	1593.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.39779	5
B' | 105 °C	1909.4	5
C'	218.1	5
A'* 20 to	1.88289	5
B'* 105 °C	1808.2	5
Ac | 250 to	7.4868	5
Bc | t_c °C	2106.3	5
Cc	251.1	5
Cryos. A°		
consts. B°		
t_e °C	230.78	5

		Ref.
dt/dP		
°C/mm		
25°C	38.437	5
BP	0.0556	5
t_e	0.0364	5
30 mm	0.7885	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.67	5
30 mm	80.79	5
BP	68.78	5
t_e	66.07	5
t_e (d, e)	65.94	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.06	5
e | 230 °C	0.1175	5
d' | 20 to	91.15	5
e' | 105 °C	0.0993	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	413.0	5
P_c mm	20668.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9297	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	34.12	5
30	32.94	5
40	31.79	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 76

NAME	2,4-Diethyl-1-methylbenzene 2,4-Diethyltoluene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	205.0	2
100	134.4	5
30	103.1	5
10	79.	5
1	39.	5
Pressure		
mm 25°C	0.3775	5
t_e	1300.	5
Density		
g/ml 20°C	0.8748	2
d_4^t 25	0.8709	2
30	0.8670	4
a	0.8904	4
b	-0.03 78	4
Ref. Index		
n_D 20°C	1.5027	2
25	1.5005	2
30	1.4979	4
"C"	0.7558	4
MR (Obs.)	50.07	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0653	2
Dielectric	2.258	5
A | 100 to	7.04127	5
B | 245 °C	1680.8	5
C	199.	5
A* | 100 to	1.52201	5
B* | 240 °C	1584.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.39181	5
B' | 100 °C	1899.3	5
C'	218.0	5
A'* 20 to	1.87797	5
B'* 100 °C	1798.3	5
Ac | 245 to	7.48035	5
Bc | t_c °C	2092.9	5
Cc	250.4	5
Cryos. A° consts. B°		
t_e °C	228.98	5

		Ref.
dt/dP		
°C/mm		
25°C	35.774	5
BP	0.0555	5
t_e	0.0364	5
30 mm	0.7859	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.26	5
30 mm	80.50	5
BP	68.46	5
t_e	65.84	5
t_e (d, e)	65.63	5
$\Delta Hv/T_e$	19.44	5
d | 105 to	92.67	5
e | 230 °C	0.1181	5
d' | 20 to	90.75	5
e' | 105 °C	0.0994	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	408.1	5
P_c mm	20042.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9471	5
t_e	0.9305	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	31.71	5
30	30.59	5
40	29.50	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	168.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

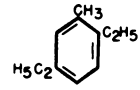
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 77

NAME	2,5-Diethyl-1-methylbenzene 2,5-Diethyltoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{11}H_{16}$ Molecular Weight 148.238	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	207.1	2
100	136.3	5
30	104.8	5
10	81.	5
1	40.	5
Pressure		
mm 25°C	0.3415	5
t_e	1305.	5
Density		
g/ml 20°C	0.8758	2
d_4^t 25	0.8719	2
30	0.8680	4
a	0.8914	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5034	2
25	1.5012	2
30	1.4912	4
"C"	0.7560	4
MR (Obs.)	50.07	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0655	2
Dielectric	2.260	5
A | 105 to	7.04866	5
B | 245 °C	1692.6	5
C	199.	5
A* | 105 to	1.52863	5
B* | 240 °C	1595.8	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.39967	5
B' | 105 °C	1912.6	5
C'	218.1	5
A'* 20 to	1.88445	5
B'* 105 °C	1811.3	5
Ac | 245 to	7.4881	5
Bc | t_c °C	2107.2	5
Cc	250.6	5
Cryos. A*		
consts. B*		
t_e °C	231.35	5

		Ref.
dt/dP		
°C/mm		
25°C	39.303	5
BP	0.0557	5
t_e	0.0364	5
30 mm	0.7893	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.80	5
30 mm	80.88	5
BP	68.78	5
t_e	66.13	5
t_e (d, e)	65.91	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.29	5
e | 230 °C	0.1183	5
d' | 20 to	91.28	5
e' | 105 °C	0.0992	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	411.2	5
P_c mm	20141.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9463	5
t_e	0.9295	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		31.85	5
γ 30		30.73	5
40		29.64	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		169.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 78

NAME	2,6-Diethyl-1-methylbenzene 2,6-Diethyltoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$ Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	208.8	2
100	137.7	5
30	106.2	5
10	82.	5
1	41.	5
Pressure		
mm 25°C	0.3151	5
t_e	1309.	5
Density		
g/ml 20°C	0.8907	2
d_4^t 25	0.8868	2
30	0.8829	4
a	0.9063	4
b	-0.0378	4
Ref. Index		
n_D 20°C	1.5106	2
25	1.5084	2
30	1.5058	4
"C"	0.7532	4
MR (Obs.)	49.83	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0652	2
Dielectric	2.282	5
A | 105 to	7.05466	5
B | 250 °C	1702.1	5
C	199.	5
A* | 105 to	1.53338	5
B* | 245 °C	1605.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.40605	5
B' | 105 °C	1923.3	5
C'	218.2	5
A'* 20 to	1.88973	5
B'* 105 °C	1821.7	5
Ac | 250 to	7.4950	5
Bc | t_c °C	2121.1	5
Cc	251.3	5
Cryos. A*		
consts. B*		
t_e °C	233.26	5

		Ref.
dt/dP		
°C/mm		
25°C	42.390	5
BP	0.0558	5
t_e	0.0364	5
30 mm	0.7921	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.24	5
30 mm	81.19	5
BP	69.15	5
t_e	66.39	5
t_e (d, e)	66.28	5
$\Delta Hv/T_e$	19.43	5
d | 105 to	93.65	5
e | 235 °C	0.1173	5
d' | 20 to	91.71	5
e' | 105 °C	0.0991	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	416.1	5
P_c mm	20737.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9472	5
t_e	0.9291	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		34.07	5
γ 30		32.89	5
40		31.75	5
Parachor [P]			
20°C		34.07	5
30		32.89	5
40		31.75	5
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 79

NAME	3,4-Diethyl-1-methylbenzene 3,4-Diethyltoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$
		Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	203.6	2
100	133.2	5
30	101.9	5
10	78.	5
1	38.	5
Pressure		
mm 25°C	0.4034	5
t_e	1297.	5
Density		
g/ml 20°C	0.8762	2
d_4^t 25	0.8723	2
30	0.8684	4
a	0.8918	4
b	-0.0_3378	4
Ref. Index		
n_D 20°C	1.5039	2
25	1.5017	2
30	1.4991	4
"C"	0.7563	4
MR (Obs.)	49.83	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0652	2
Dielectric	2.262	5
A 100 to	7.03636	5
B 245 °C	1673.	5
C	199.	5
A* 100 to	1.51792	5
B* 235 °C	1576.6	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.38659	5
B' 100 °C	1890.4	5
C'	218.0	5
A'* 20 to	1.87366	5
B'* 100 °C	1789.7	5
Ac 245 to	7.4757	5
Bc t_c °C	2084.2	5
Cc	250.4	5
Cryos. A*		
consts. B*		
t_e °C F	227.4	5

		Ref.
dt/dP		
°C/mm		
25°C	33.619	5
BP	0.0554	5
t_e	0.0364	5
30 mm	0.7837	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.90	5
30 mm	80.24	5
BP	68.34	5
t_e	65.64	5
t_e (d, e)	65.55	5
$\Delta Hv/T_e$	19.44	5
d 100 to	92.18	5
e 230 °C	0.1171	5
d' 20 to	90.39	5
e' 100 °C	0.0995	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	406.3	5
P_c mm	20046.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9487	5
t_e	0.9310	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		31.91	5
30		30.79	5
40		29.69	5
Parachor [P]			
20°C			
30			
40			
Sugd.		402.1	5
Exp. L.1.%/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 80

NAME	3,5-Diethyl-1-methylbenzene 3,5-Diethyltoluene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C	-74.12	2
F.P. 100%		
B.P. °C		
760 mm	200.70	2
100	130.7	5
30	100.0	5
10	76.	5
1	36.	5
Pressure		
mm 25°C	0.4625	5
t_e	1289.	5
Density		
g/ml 20°C	0.8630	2
d_4^t 25	0.8591	2
30	0.8552	4
a	0.8786	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.4969	2
25	1.4947	2
30	1.4921	4
"C"	0.7579	4
MR (Obs.)	50.26	2
MR (Calc.)	49.357	5
(nD-d/2)	1.0654	2
Dielectric	2.241	5
A | 100 to	7.02622	5
B | 240 °C	1656.9	5
C	199.	5
A* | 100 to	1.50957	5
B* | 235 °C	1561.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.37581	5
B' | 100 °C	1872.2	5
C'	217.8	5
A'* 20 to	1.86478	5
B'* 100 °C	1772.1	5
Ac | 240 to	7.4640	5
Bc | t_c °C	2062.1	5
Cc	249.6	5
Cryos. A°		
consts. B°		
t_e °C F	224.13	5

		Ref.
dt/dP		
°C/mm		
25°C	29.570	5
BP	0.0551	5
t_e	0.0364	5
30 mm	0.7790	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.16	5
30 mm	79.72	5
BP	67.84	5
t_e	65.21	5
t_e (d,e)	65.09	5
$\Delta Hv/T_e$	19.44	5
d | 100 to	91.42	5
e | 225 °C	0.1175	5
d' | 20 to	89.66	5
e' | 100 °C	0.0998	5
d_c g/ml	0.269	5
v_c^c ml/g	3.72	5
t_c^c °C	400.1	5
P_c mm	19489.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9489	5
t_e	0.9319	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.03	5
γ 30	28.96	5
40	27.91	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	168.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

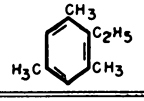
PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 81

NAME	2-Ethyl-1, 3, 5-trimethylbenzene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238



		Ref.
F. P. °C	-15.5	2
F. P. 100%		
B. P. °C		
760 mm	212.4	2
100	140.9	5
30	109.1	5
10	85.	5
1	44.	5
Pressure		
mm 25°C	0.2654	5
t_e	1318.	5
Density		
g/ml 20°C	0.883	2
d_4^{25}	0.879	2
d_4^{30}	0.875	4
a	0.899	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.5074	2
25	1.5052	2
30	1.5025	4
"C"	0.7554	4
MR (Obs.)	50.0	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0659	2
Dielectric	2.272	5
A | 110 to	7.06742	5
B | 255 °C	1722.4	5
C	199.	5
A* | 110 to	1.54426	5
B* | 245 °C	1624.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.41961	5
B' | 110 °C	1946.3	5
C'	218.4	5
A'* 20 to	1.90096	5
B'* 110 °C	1844.0	5
Ac | 255 to	7.5078	5
Bc | t_c °C	2143.4	5
Cc	251.2	5
Cryos. A°		
consts. B°		
t_e °C F	237.32	5

		Ref.
dt/dP		
°C/mm		
25°C	49.824	5
BP	0.0562	5
t_e	0.0364	5
30 mm	0.7979	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.16	5
30 mm	81.86	5
BP	69.60	5
t_e	66.90	5
t_e (d, e)	66.64	5
ΔHv/T_e	19.42	5
d | 110 to	94.80	5
e | 240 °C	0.1187	5
d' | 20 to	92.63	5
e' | 110 °C	0.0988	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	419.2	5
P_c mm	20438.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9447	5
t_e	0.9278	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.91	5
30	31.73	5
40	30.59	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L. 1. %/wt. u.		
Dispersion	171.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 82

NAME	3-Ethyl-1, 2, 4-trimethylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	216.6	2
100	144.6	5
30	112.5	5
10	88.	5
1	47.	5
Pressure mm 25°C	0.2170	5
t_e	1328.	5
Density g/ml 20°C	0.895	2
d_4^t 25	0.891	2
30	0.887	4
a	0.911	4
b	-0.038	4
Ref. Index n_D 20°C	1.5133	2
25	1.5111	2
30	1.5083	4
"C"	0.7533	4
MR (Obs.)	49.8	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0658	2
Dielectric	2.290	5
A | 110 to	7.08241	5
B | 260 °C	1746.2	5
C	199.	5
A* | 110 to	1.55670	5
B* | 250 °C	1647.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.43554	5
B' | 110 °C	1973.1	5
C'	218.6	5
A'* 20 to	1.91420	5
B'* 110 °C	1870.1	5
Ac | 260 to	7.5241	5
Bc | t_c °C	2174.2	5
Cc	252.1	5
Cryos. A* consts. B*		
t_e °C F	242.06	5

		Ref.
dt/dP °C/mm		
25°C	60.204	5
BP	0.0565	5
t_e	0.0364	5
30 mm	0.8046	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.25	5
30 mm	82.63	5
BP	70.26	5
t_e	67.53	5
t_e (d, e)	67.24	5
$\Delta Hv/T_e$	19.43	5
d | 110 to	96.01	5
e | 240 °C	0.1189	5
d' | 20 to	93.71	5
e' | 110 °C	0.0984	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	427.1	5
P_c mm	21022.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9436	5
t_e	0.9266	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	34.74	5
γ 30	33.51	5
40	32.32	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L.1.%/wt. u.		
Dispersion	171.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 83

NAME	4-Ethyl-1, 2, 3-trimethylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	220.4	2
100	147.9	5
30	115.6	5
10	91.	5
1	49.	5
Pressure mm 25°C	0.1807	5
t_e	1338.	5
Density g/ml 20°C	0.9019	2
d_4^t 25	0.8980	2
30	0.8941	4
a	0.9175	5
b	-0.0378	5
Ref. Index n_D 20°C	1.5180	2
25	1.5158	2
30	1.5133	4
"C"	0.7540	4
MR (Obs.)	49.81	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0670	2
Dielectric	2.304	5
A | 115 to	7.09606	5
B | 265 °C	1767.9	5
C	199.	5
A* | 115 to	1.56826	5
B* | 255 °C	1669.1	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.45005	5
B' | 115 °C	1997.7	5
C'	218.8	5
A'* 20 to	1.92628	5
B'* 115 °C	1894.0	5
Ac | 265 to	7.5397	5
Bc | t_c °C	2203.0	5
Cc	252.9	5
Cryos. A° consts. B°		
t_e °C F	246.35	5

		Ref.
dt/dP °C/mm		
25°C	71.535	5
BP	0.0569	5
t_e	0.0364	5
30 mm	0.8106	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.23	5
30 mm	83.34	5
BP	71.01	5
t_e	68.09	5
t_e (d, e)	67.95	5
$\Delta Hv/T_e$	19.43	5
d | 115 to	96.96	5
e | 245 °C	0.1177	5
d' | 20 to	94.68	5
e' | 115 °C	0.0981	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	434.3	5
P_c mm	21563.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9444	5
t_e	0.9254	5
t_c	0.242	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		35.82	5
γ 30		34.60	5
40		33.40	5
Parachor [P] 20°C			
30			
40			
Sugd.		402.1	5
Exp. L.l.%/wt. u.			
Dispersion		171.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

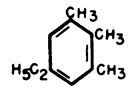
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 84

NAME	5-Ethyl-1, 2, 3-trimethylbenzene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238



		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	215.8	2
100	143.9	5
30	111.9	5
10	87.	5
1	46.	5
Pressure		
mm 25°C	0.2256	5
t_e	1327.	5
Density		
g/ml 20°C	0.8863	2
d_4^t 25	0.8824	2
30	0.8785	4
a	0.9019	4
b	$-0.0_3$78	4
Ref. Index		
n_D 20°C	1.5101	2
25	1.5079	2
30	1.5053	4
"C"	0.7563	4
MR (Obs.)	50.03	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0670	2
Dielectric	2.280	5
A | 110 to	7.07954	5
B | 260 °C	1741.6	5
C	199.	5
A* | 110 to	1.55391	5
B* | 250 °C	1643.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.43249	5
B' | 110 °C	1968.0	5
C'	218.6	5
A'* 20 to	1.91167	5
B'* 110 °C	1865.1	5
Ac | 260 to	7.5215	5
Bc | t_c °C	2168.6	5
Cc	251.9	5
Cryos. A* consts. B*		
t_e °C F	241.16	5

		Ref.
dt/dP		
°C/mm		
25°C	58.039	5
BP	0.0565	5
t_e	0.0364	5
30 mm	0.8033	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.04	5
30 mm	82.48	5
BP	70.20	5
t_e	67.42	5
t_e (d, e)	67.20	5
$\Delta Hv/T_e$	19.43	5
d | 110 to	95.70	5
e | 240 °C	0.1182	5
d' | 20 to	93.50	5
e' | 110 °C	0.0985	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	425.1	5
P_c mm	20822.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9447	5
t_e	0.9271	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	33.41	5
30	32.24	5
40	31.11	5
Parachor [P]		
20°C		
30		
40		
Sugd.	402.1	5
Exp. L. 1. %/wt. u.		
Dispersion	172.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 85

NAME	5-Ethyl-1, 2, 4-trimethylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C	-13.5	2
F. P. 100%		
B. P. °C 760 mm	213.0	2
100	141.4	5
30	109.6	5
10	85.	5
1	44.	5
Pressure mm 25°C	0.2578	5
t_e	1319.	5
Density g/ml 20°C	0.883	2
d_4^{t} 25	0.879	2
30	0.875	4
a	0.899	4
b	$-0.0_3 8$	4
Ref. Index n_D 20°C	1.5075	2
25	1.5053	2
30	1.5026	4
"C"	0.7555	4
MR (Obs.)	50.0	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0660	2
Dielectric	2.273	5
A | 110 to	7.06955	5
B | 255 °C	1725.8	5
C	199.	5
A* | 110 to	1.54611	5
B* | 250 °C	1628.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.42187	5
B' | 110 °C	1950.1	5
C'	218.4	5
A'* 20 to	1.90284	5
B'* 110 °C	1847.7	5
Ac | 255 to	7.5107	5
Bc | t_c °C	2148.3	5
Cc	251.4	5
Cryos. A*		
consts. B*		
t_e °C F	238.0	5

		Ref.
dt/dP °C/mm		
25°C	51.191	5
BP	0.0562	5
t_e	0.0364	5
30 mm	0.7988	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.32	5
30 mm	81.97	5
BP	69.76	5
t_e	66.98	5
t_e (d, e)	66.81	5
$\Delta Hv/T_e$	19.42	5
d | 110 to	94.90	5
e | 240 °C	0.1180	5
d' | 20 to	92.79	5
e' | 110 °C	0.0987	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	420.0	5
P_c mm	20458.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9456	5
t_e	0.9276	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	32.91	5
σ 30	31.73	5
40	30.59	5
Parachor [P] 20°C		
30		
40		
Sugd.	402.1	5
Exp. L. l. %/wt. u.		
Dispersion	173.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

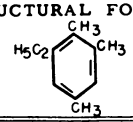
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 86

NAME	6-Ethyl-1, 2, 4-trimethylbenzene	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	213.0	2
100	141.4	5
30	109.6	5
10	85.	5
1	44.	5
Pressure		
mm 25°C	0.2578	5
t_e	1319.	5
Density		
g/ml 20°C	0.8897	2
d_4^{25}	0.8858	2
d_4^{30}	0.8819	4
a	0.9053	4
b	-0.0_378	4
Ref. Index		
n_D 20°C	1.5118	2
25	1.5096	2
30	1.5070	4
"C"	0.7557	4
MR (Obs.)	49.98	2
MR (Calc.)	49.397	5
(nD-d/2)	1.0670	2
Dielectric	2.286	5
A | 110 to	7.06955	5
B | 255 °C	1725.8	5
C	199.	5
A* | 110 to	1.54611	5
B* | 250 °C	1628.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.42187	5
B' | 110 °C	1950.1	5
C'	218.4	5
A'* 20 to	1.90284	5
B'* 110 °C	1847.7	5
Ac | 255 to	7.51125	5
Bc | t_c °C	2150.2	5
Cc	251.8	5
Cryos. A°		
consts. B°		
t_e °C F	238.0	5

		Ref.
dt/dP		
°C/mm		
25°C	51.191	5
BP	0.0562	5
t_e	0.0364	5
30 mm	0.7988	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.32	5
30 mm	81.97	5
BP	69.77	5
t_e	66.99	5
t_e (d, e)	66.82	5
$\Delta Hv/T_e$	19.43	5
d | 110 to	94.89	5
e | 240 °C	0.1180	5
d' | 20 to	92.79	5
e' | 110 °C	0.0987	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	421.8	5
P_c mm	20844.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9456	5
t_e	0.9276	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm.	20°C	33.92	5
γ	30	32.75	5
	40	31.60	5
Parachor [P]			
	20°C		
	30		
	40		
	Sugd.	402.1	5
Exp. L.1.%/wt. u.			
Dispersion		172.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

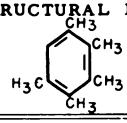
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 87

NAME	Pentamethylbenzene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}$	Molecular Weight 148.238	

		Ref.			Ref.			Ref.
F.P. °C	54.3	2	dt/dP °C/mm			f | to		
F.P. 100%			25°C	120.66	5	g | °K		
B.P. °C			BP	0.0578	5	h		
760 mm	231.8	2	t_e	0.0364	5	f' | to		
100	157.9	5	30 mm	0.8285	5	g' | °K		
30	125.0	5	ΔHm cal/g			h'		
10	100.	5	ΔHv cal/g			m | to		
1	57.	5	25°C	95.21	5	n | °K		
Pressure			30 mm	85.50	5	o		
mm 25°C	0.1038	5	BP	72.85	5	m' | to		
t_e	1366.	5	t_e	69.82	5	n' | °K		
Density			t_e (d, e)	69.60	5	o'		
g/ml 20°C	0.917 ≠	2	ΔHv/T_e	19.44	5	Surface tension		
d_4^t 25	0.913 ≠	2	d | 125 to	100.30	5	dynes/cm. 20°C	38.28	5
30	0.909	4	e | 260 °C	0.1184	5	σ 30	36.96	5
a	0.933	4	d' | 20 to	97.64	5	40	35.68	5
b	$-0.0_3$8	4	e' | 125 °C	0.0971	5	Parachor [P]		
Ref. Index			d_c g/ml	0.269	5	20°C		
n_D 20°C	1.527 ≠	2	v_c ml/g	3.72	5	30		
25	1.525 ≠	2	t_c °C	452.1	5	40		
30	1.522	4	P_c mm	22419.	5	Sugd.	402.1	5
"C"	0.7536	4	PV/RT			Exp. L.1.%/wt. u.		
MR (Obs.)	49.8 ≠	2	25°C	1.0000	5	Dispersion	174.	2
MR (Calc.)	49.397	5	30 mm	1.0000	5	Flash Point °C		
(nD-d/2)	1.068 ≠	2	BP	0.9414	5	Fire Point		
Dielectric	2.332	5	t_e	0.9220	5	M. Spec.		
A | 125 to	7.13756	5	t_c	0.241	5	Ultra V.		
B | 280 °C	1833.8	5	ΔHc kcal/m			X-Ray Dif.		
C	199.	5	ΔHf			Infrared		
A* | 125 to	1.60312	5	ΔFf			Solubility in +		
B* | 270 °C	1733.2	5	Viscosity centistokes			Acetone		
K			η °C			Carbon tet.		
c						Benzene		
t_k | to						Ether		
t_x | °C			B^v | to			n-Heptane		
A' | 20 to	7.49417	5	A^v | °C			Ethanol		
B' | 125 °C	2072.1	5	(B^v) | to			Water		
C'	219.4	5	(A^v) | °C			Water in		
A'* 20 to	1.96339	5	c_p liq. °K					
B'* 125 °C	1966.5	5	c_p vap. °K					
Ac | 280 to	7.5838	5	c_v vap.					
Bc | t_c °C	2284.2	5						
Cc	254.4	5						
Cryos. A° consts. B°								
t_e °C	259.20	5						

$T_R = 0.76\,T_c$ ≠ for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 88

NAME	n-Hexylbenzene 1-Phenylhexane	STRUCTURAL FORMULA 
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{18}$	Molecular Weight 162.264

		Ref.
F. P. °C	-61.0	2
F. P. 100%		
B. P. °C		
760 mm	226.1	2
100	154.5	5
30	122.4	4
10	97.7	5
1	56.2	5
Pressure mm 25°C	0.1051	5
t_e	1370.	5
Density g/ml 20°C	0.8575	2
d_4^t 25	0.8537	2
30	0.8499	4
a	0.8727	4
b	-0.0_376	4
Ref. Index n_D 20°C	1.4864	2
25	1.4842	2
30	1.4820	4
"C"	0.7480	4
MR (Obs.)	54.37	2
MR (Calc.)	54.015	5
(nD-d/2)	1.0577	2
Dielectric	2.209	5
A | 120 to	7.18284	5
B | 290 °C	1813.74	5
C	195.5	5
A* | 120 to	1.67370	5
B* | 265 °C	1709.72	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.54230	5
B' | 125 °C	2049.47	5
C'	215.5	5
A'* 20 to	2.05771	5
B'* 125 °C	1947.20	5
Ac | 290 to	7.88933	5
Bc | t_c °C	2561.8	5
Cc	286.7	5
Cryos. A°		
consts. B°		
t_e °C F	252.77	5

		Ref.
dt/dP °C/mm		
25°C	116.663	5
BP	0.056	2
t_e	0.0351	5
30 mm	0.8065	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.83	5
30 mm	79.20	5
BP	68.00	5
t_e	65.22	5
t_e (d, e)	65.12	5
$\Delta Hv/T_e$	20.12	5
d | 122 to	92.42	5
e | 250 °C	0.1080	5
d' | 20 to	91.30	5
e' | 122 °C	0.0988	5
d_c g/ml	0.278	5
v_c ml/g	3.59	5
t_c °C	423.6	5
P_c mm	19160.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9536	5
t_e	0.9363	5
t_c	0.245	5
ΔHc kcal/m	1635.65	2
ΔHf gas	-13.15	2
ΔFf		
Viscosity centistokes		
η 20 °C	1.953	2
40	1.419	2
60	1.098	2
80	0.876	2
B^v | 30 to	579.33	4
A^v | 90 °C	2.21362	4
(B^v) | 90 to	597.74	4
(A^v) | 160 °C	2.25968	4
c_p liq. °K		
c_p vap. 300 °K	0.32712	2
400	0.42295	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0265	4
n	600 °K	0.0013	4
o		-0.0_655	4
m'	700 to	0.0839	4
n'	1000 °K	0.0011	4
o'		-0.0_637	4
Surface tension dynes/cm. 20°C		29.53	5
γ 30		28.49	5
40		27.49	5
Parachor [P] 20°C			
30			
40			
Sugd.		441.1	5
Exp. L. 1. %/wt. u.			
Dispersion		149.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		0.72	2
110		0.66	2
150		0.47	2

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 89

NAME	o-Diisopropylbenzene 1,2-Diisopropylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.6 | Ref. 3 | Molecular Formula $C_{12}H_{18}$ | Molecular Weight 162.264

		Ref.
F.P. °C	-56.68	3'
F.P. 100%		
B.P. °C		
760 mm	203.75	3
100	133.73	3
30	102.6	4
10	78.7	5
1	38.6	5
Pressure		
mm 25°C	0.384	5
t_e	1302.	5
Density		
g/ml 20°C	0.87707	3
d_4^t 25	0.87320	5
30	0.86932	5
a	0.89255	5
b	-0.0_377	5
Ref. Index		
n_D 20°C	1.49603	3
25	1.4940	5
30	1.4916	5
"C"	0.7449	4
MR (Obs.)	54.229	4
MR (Calc.)	54.015	5
(nD-d/2)	1.0575	4
Dielectric	2.238	5
A | 100 to	7.07875	4
B | 260 °C	1694.92	4
C	200.0	4
A* | 100 to	1.59289	5
B* | 240 °C	1596.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.43165	5
B' | 100 °C	1915.2	5
C'	219.1	5
A'* 20 to	1.9561	5
B'* 100 °C	1813.6	5
Ac | 260 to	7.73507	5
Bc | t_c °C	2354.6	5
Cc	282.4	5
Cryos. A*	0.0221	3
consts. B*		
t_e °C F	227.57	5

		Ref.
dt/dP		
°C/mm		
25°C	35.166	5
BP	0.05496	4
t_e	0.0360	5
30 mm	0.7820	4
ΔHm cal/g		
ΔHv cal/g		
25°C	80.62	5
30 mm	73.72	4
BP	63.05	5
t_e	60.65	5
t_e (d, e)	60.54	5
$\Delta Hv/T_e$	19.65	5
d | 100 to	84.53	5
e | 230 °C	0.1054	5
d' | 20 to	82.85	5
e' | 100 °C	0.0890	5
d_c g/ml	0.278	5
v_c ml/g	3.592	5
t_c °C	395.8	5
P_c mm	18348.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9346	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.31	5
30	31.19	5
40	30.09	5
Parachor [P]		
20°C		
30		
40		
Sugd.	441.1	5
Exp. L.l.%/wt. u.		
Dispersion	157.	3
Flash Point °C	77.	3
Fire Point		
M. Spec.	Yes	3
Ultra V.	Yes	3
X-Ray Dif.		
Infrared	Yes	3

Solubility in +

Acetone	∞
Carbon tet.	∞
Benzene	∞
Ether	∞
n-Heptane	∞
Ethanol	∞
Water	
Water in	

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

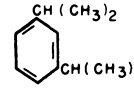
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: LIT.

PURIFICATION: LIT.

LITERATURE REFERENCES: 3 JACS 70, 935 (1948) Melpolder, Woodbridge, Headington; 3' NFPA 325

No. 90

NAME	m-Diisopropylbenzene 1,3-Diisopropylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.6	Ref. 3	Molecular Formula $C_{12}H_{18}$	Molecular Weight 162.264

		Ref.
F.P. °C	-63.13	3
F.P. 100%		
B.P. °C		
760 mm	203.18	3
100	133.29	3
30	102.20	4
10	78.4	5
1	38.4	5
Pressure mm 25°C	0.3915	5
t_e	1302.	5
Density g/ml 20°C	0.85593	3
d_4^t 25	0.85200	5
30	0.84806	5
a	0.87165	5
b	-0.0379	5
Ref. Index n_D 20°C	1.4883	3
25	1.4854	5
30	1.4830	5
"C"	0.7510	4
MR (Obs.)	54.616	4
MR (Calc.)	54.015	5
(nD-d/2)	1.06086	4
Dielectric	2.215	5
A | 100 to	7.08134	4
B | 260 °C	1693.57	4
C	200.0	4
A* | 100 to	1.59497	5
B* | 240 °C	1594.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.43441	5
B' | 100 °C	1913.7	5
C'	219.0	5
A'* 20 to	1.95916	5
B'* 100 °C	1812.1	5
Ac | 260 to	7.49727	5
Bc | t_c °C	2062.4	5
Cc	241.3	5
Cryos. A*	0.0385	3
consts. B*		
t_e °C F	226.93	5

		Ref.
dt/dP		
°C/mm		
25°C	34.526	5
BP	0.0548	4
t_e	0.0359	5
30 mm	0.7806	4
ΔHm cal/g		
ΔHv cal/g		
25°C	80.57	5
30 mm	73.69	4
BP	63.12	5
t_e	60.65	5
t_e (d,e)	60.64	5
$\Delta Hv/T_e$	19.68	5
d | 100 to	84.39	5
e | 230 °C	0.1047	5
d' | 20 to	82.80	5
e' | 100 °C	0.0891	5
d_c g/ml	0.278	5
v_c ml/g	3.592	5
t_c °C	391.2	5
P_c mm	17617.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9526	5
t_e	0.9353	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	29.31	5
30	28.25	5
40	27.21	5
Parachor [P]		
20°C		
30		
40		
Sugd.	441.1	5
Exp. L.1.%/wt. u.		
Dispersion	155.	3
Flash Point °C		
Fire Point		
M Spec.	Yes	3
Ultra V.	Yes	3
X-Ray Dif.		
Infrared	Yes	3
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: LIT.

PURIFICATION: LIT.

LITERATURE REFERENCES: 3 JACS 70, 935 (1948) Melpolder, Woodbridge, Headington

No. 91

NAME	p-Diisopropylbenzene 1,4-Diisopropylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.8	Ref. 3	Molecular Formula $C_{12}H_{18}$	Molecular Weight 162.264

		Ref.
F.P. °C	-17.07	3
F.P. 100%		
B.P. °C 760 mm	210.37	3
100	139.43	4
30	107.87	5
10	83.7	5
1	43.	5
Pressure mm 25°C	0.2798	5
t_e	1317.	5
Density g/ml 20°C	0.85676	3
d_4^t 25	0.85290	5
30	0.84903	5
a	0.87220	5
b	-0.03377	5
Ref. Index n_D 20°C	1.48983	3
25	1.4875	5
30	1.4851	5
"C"	0.7533	4
MR (Obs.)	54.772	4
MR (Calc.)	54.015	5
(nD-d/2)	1.06145	4
Dielectric	2.219	5
A | 105 to	7.08043	4
B | 270 °C	1718.36	4
C	198.8	4
A* | 105 to	1.59339	5
B* | 245 °C	1619.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.43344	5
B' | 105 °C	1941.7	5
C'	218.1	5
A'* 15 to	1.95531	5
B'* 105 °C	1839.8	5
Ac | 270 to	7.66556	5
Bc | t_c °C	2311.7	5
Cc	273.9	5
Cryos. A° consts. B°	0.0292	3
t_e °C F	235.03	5

		Ref.
dt/dP °C/mm		
25°C	47.246	5
BP	0.0557	4
t_e	0.0361	5
30 mm	0.7923	4
ΔHm cal/g		
ΔHv cal/g		
25°C	82.37	5
30 mm	74.82	4
BP	63.79	5
t_e	61.28	5
t_e (d, e)	61.13	5
$\Delta Hv/T_e$	19.56	5
d | 105 to	86.43	5
e | 240 °C	0.1076	5
d' | 20 to	84.65	5
e' | 105 °C	0.0911	5
d_c g/ml	0.278	5
v_c ml/g	3.60	5
t_c °C	401.6	5
P_c mm	17688.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9483	5
t_e	0.9313	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.42	5
30	28.38	5
40	27.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	441.1	5
Exp. L.1.%/wt. u.		
Dispersion	157.	3
Flash Point °C	81.0	5
Fire Point		
M. Spec.	Yes	3
Ultra V.	Yes	3
X-Ray Dif.		
Infrared	Yes	3
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: LIT.

PURIFICATION: LIT.

LITERATURE REFERENCES: 3 JACS 70, 935 (1948) Melpolder, Woodbridge, Headington

No. 92

NAME	n-Heptylbenzene 1-Phenylheptane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{13}H_{20}$	Molecular Weight 176.290

		Ref.
F.P. °C	-48.	2
F.P. 100%		
B.P. °C		
760 mm	245.5	2
100	171.27	5
30	138.03	4
10	112.5	5
1	69.4	5
Pressure		
mm 25°C	0.0389	5
t_e	1413.	5
Density		
g/ml 20°C	0.8567	2
d_4^t 25	0.8530	2
$d_4^{}$ 30	0.8493	4
a	0.8715	4
b	-0.0_3374	4
Ref. Index		
n_D 20°C	1.4854	2
25	1.4832	2
30	1.4810	4
"C"	0.7469	4
MR (Obs.)	59.01	2
MR (Calc.)	58.633	5
(nD-d/2)	1.0570	2
Dielectric	2.1987	5
A | 135 to	7.19114	5
B | 305 °C	1885.77	5
C	192.0	5
A* | 135 to	1.71535	5
B* | 285 °C	1782.46	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.55112	5
B' | 140 °C	2130.86	5
C'	212.8	5
A'* 15 to	2.09472	5
B'* 140 °C	2027.85	5
Ac | 305 to	7.79109	5
Bc | t_c °C	2528.2	5
Cc	270.4	5
Cryos. A*		
consts. B*		
t_e °C F	274.65	5

		Ref.
dt/dP		
°C/mm		
25°C	296.174	5
BP	0.0580	2
t_e	0.0355	5
30 mm	0.8361	4
ΔHm cal/g		
ΔHv cal/g		
25°C	86.98	5
30 mm	75.99	5
BP	64.68	5
t_e	61.78	5
t_e (d,e)	61.61	5
$\Delta Hv/T_e$	19.88	5
d | 140 to	90.52	5
e | 270 °C	0.1053	5
d' | 15 to	89.41	5
e' | 140 °C	0.09717	5
d_c g/ml	0.274	5
v_c ml/g	3.647	5
t_c °C	439.7	5
P_c mm	17191.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9462	5
t_e	0.9268	5
t_c	0.246	5
ΔHc kcal/m	1782.58	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.43	2
40	1.722	2
60	1.305	2
80	1.025	2
B^v | 30 to	623.11	4
A^v | 90 °C	2.24654	4
(B^v) | 100 to	611.17	4
(A^v) | 160 °C	2.28011	4
c_p liq. °K		
c_p vap. 300°K	0.33229	2
400	0.42867	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0225	4
n	600 °K	0.0013	4
o		-0.0_655	4
m'	700 to	0.0865	4
n'	1000 °K	0.0011	4
o'		-0.0_637	4
Surface tension			
dynes/cm. 20°C		29.63	5
30		28.62	5
40		27.63	5
Parachor [P]			
20°C			
30			
40			
Sugd.		480.1	5
Exp. L.1.%/wt. u.			
Dispersion		145.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether			
n-Heptane			
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		0.831	2
110		0.750	2
150		0.530	2

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 93

NAME	n-Octylbenzene 1-Phenyloctane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{22}$ — Molecular Weight 190.316

		Ref.
F. P. °C	-36.	2
F. P. 100%		
B. P. °C 760 mm	264.5	2
100	187.9	5
30	153.8	5
10	127.6	5
1	84.	5
Pressure mm 25°C	0.0115	5
t_e	1427.	5
Density g/ml 20°C	0.8562	2
d_4^{25}	0.8525	2
d_4^{30}	0.8488	4
a	0.8710	4
b	-0.0_374	4
Ref. Index n_D 20°C	1.4845	2
25	1.4824	2
30	1.4800	4
"C"	0.7460	4
MR (Obs.)	63.65	2
MR (Calc.)	63.251	5
(nD-d/2)	1.0564	2
Dielectric	2.204	5
A | 155 to	7.11415	5
B | 320 °C	1881.7	5
C	180.	5
A* | 155 to	1.7001	5
B* | 300 °C	1792.2	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.4693	5
B' | 155 °C	2126.3	5
C'	201.	5
A'* 25 to	2.0498	5
B'* 155 °C	2029.2	5
Ac | 320 to	7.85374	5
Bc | t_c °C	2690.	5
Cc	277.	5
Cryos. A*		
consts. B*		
t_e °C F	295.22	5

		Ref.
dt/dP °C/mm		
25°C	904.1	5
BP	0.060	5
t_e	0.0365	5
30 mm	0.8572	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.98	5
30 mm	74.03	5
BP	60.92	5
t_e	57.64	5
t_e (d, e)	57.29	5
ΔHv/T_e	19.30	5
d | 155 to	92.24	5
e | 295 °C	0.1184	5
d' | 20 to	91.88	5
e' | 155 °C	0.1160	5
d_c g/ml	0.271	5
v_c ml/g	3.689	5
t_c °C	453.5	5
P_c mm	14897.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9267	5
t_e	0.9025	5
t_c	0.246	5
ΔHc kcal/m	1929.50	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.99	2
40	2.07	2
60	1.539	2
80	1.190	2
B^v | 30 to	664.89	4
A^v | 90 °C	Σ.19306	4
(B^v) | 100 to	663.48	4
(A^v) | 160 °C	Σ.20308	4
c_p liq. °K		
c_p vap 300°K	0.33665	2
400	0.43354	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0192	4
n	600 °K	0.0013	4
o		-0.0_654	4
m'	700 to	0.0913	4
n'	1000 °K	0.0011	4
o'		-0.0_637	4
Surface tension dynes/cm. 20°C		29.74	5
30		28.73	5
40		27.74	5
Parachor [P] 20°C			
30			
40			
Sugd.		519.1	5
Exp. L. l. %/wt. u.			
Dispersion		142.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		0.952	2
110		0.86	2
150		0.59	2

$T_R = 0.81\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 94

NAME	n-Nonylbenzene 1-Phenylnonane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{24}$	Molecular Weight 204.342

		Ref.
F.P. °C	-24.	2
F.P. 100%		
B.P. °C 760 mm	282.0	2
100	203.6	5
30	168.5	5
10	141.5	5
1	96.	5
Pressure mm 25°C	0.0043	5
t_e	1472.	5
Density g/ml 20°C	0.8558	2
d_4^t 25	0.8522	2
30	0.8486	4
a	0.8702	4
b	-0.0_3372	4
Ref. Index n_D 20°C	1.4838	2
25	1.4817	2
30	1.4781	4
"C"	0.7434	4
MR (Obs.)	68.29	2
MR (Calc.)	67.869	5
(nD-d/2)	1.0559	2
Dielectric	2.202	5
A | 165 to	7.19041	5
B | 330 °C	1991.0	5
C	180.	5
A* | 165 to	1.7956	5
B* | 325 °C	1898.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.5503	5
B' | 165 °C	2249.8	5
C'	202.	5
A'* 25 to	2.1508	5
B'* 165 °C	2149.8	5
Ac | 330 to	7.9653	5
Bc | t_c °C	2863.	5
Cc	282.	5
Cryos. A* consts. B*		
t_e °C F	314.95	5

		Ref.
dt/dP °C/mm		
25°C	2291.0	5
BP	0.0613	5
t_e	0.0363	5
30 mm	0.8830	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.97	5
30 mm	71.62	5
BP	59.04	5
t_e	55.80	5
t_e (d, e)	55.39	5
$\Delta Hv/T_e$	19.39	5
d | 165 to	90.28	5
e | 315 °C	0.1108	5
d' | 25 to	89.64	5
e' | 165 °C	0.1070	5
d_c g/ml	0.269	5
v_c^c ml/g	3.719	5
t_c^c °C	467.5	5
P_c mm	13956.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9238	5
t_e	0.8993	5
t_c	0.235	5
ΔHc kcal/m	2076.43	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.66	2
40	2.47	2
60	1.800	2
80	1.370	2
B^v | 30 to	707.9	4
A^v | 90 °C	Σ.1324	4
(B^v) | 100 to	676.90	4
(A^v) | 160 °C	Σ.22006	4
c_p liq. °K		
c_p vap. 300°K	0.34046	2
400	0.43775	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to		-0.0163	4
n | 600 °K		0.0014	4
o |		-0.0_654	4
m' | 700 to		0.0905	4
n' | 1000 °K		0.0011	4
o' |		-0.0_638	4
Surface tension dynes/cm. 20°C		29.85	5
γ 30		28.86	5
40		27.89	5
Parachor [P] 20°C			
30			
40			
Sugd.		558.1	5
Exp. L.1.%/wt. u.			
Dispersion		139.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		1.082	2
110		0.970	2
150		0.660	2

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 95

NAME	n-Decylbenzene 1-Phenyldecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{26}$
		Molecular Weight 218.368

		Ref.
F. P. °C	-14.38	2
F. P. 100%		
B. P. °C 760 mm	300.	2
100	220.	5
30	184.	5
10	156.	5
1	109.	5
Pressure mm 25°C	0.0015	5
t_e	1518.	5
Density g/ml 20°C	0.85553	2
d_4^{25}	0.85189	2
d_4^{30}	0.84825	4
a	0.87009	4
b	-0.0_373	4
Ref. Index n_D 20°C	1.48319	2
25	1.48112	2
30	1.47999	4
"C"	0.7465	4
MR (Obs.)	72.920	2
MR (Calc.)	72.487	5
(nD-d/2)	1.05542	2
Dielectric	2.200	5
A (185 to 345 °C)	7.27177	5
B (185 to 345 °C)	2107.7	5
C	180.	5
A* (185 to 345 °C)	1.8937	5
B* (185 to 345 °C)	2012.2	5
K		
c		
t_k to t_x °C		
A' (25 to 185 °C)	7.6368	5
B' (25 to 185 °C)	2381.6	5
C' (25 to 185 °C)	203.	5
A'* (25 to 185 °C)	2.2551	5
B'* (25 to 185 °C)	2278.7	5
Ac to Bc t_c °C Cc		
Cryos. A* consts. B*		
t_e °C F	335.25	5

		Ref.
dt/dP °C/mm 25°C	6155.8	5
BP	0.0625	5
t_e	0.0360	5
30 mm	0.9087	5
ΔHm cal/g		
ΔHv cal/g 25°C	85.43	5
30 mm	69.70	5
BP	57.67	5
t_e	54.34	5
t_e (d, e)	54.03	5
$\Delta Hv/T_e$	19.50	5
d (185 to 335 °C)	88.70	5
e (185 to 335 °C)	0.1034	5
d' (25 to 185 °C)	87.91	5
e' (25 to 185 °C)	0.0991	5
d_c g/ml		
v_c ml/g		
t_c °C	480.7	5
P_c mm	12912.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9230	5
t_e	0.8964	5
t_c		
ΔHc kcal/m	2223.35	2
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	4.44	2
40	2.92	2
60	2.09	2
80	1.566	2
B^v (30 to 90 °C)	748.3	4
A^v (30 to 90 °C)	Σ.07607	4
(B^v) (100 to 160 °C)	705.98	4
(A^v) (100 to 160 °C)	Σ.19509	4
c_p liq. °K		
c_p vap. 300°K	0.34373	2
400	0.44146	2
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m	300 to 600 °K	-0.0146	4
n		0.0014	4
o		-0.0_654	4
m'	700 to 1000 °K	0.0927	4
n'		0.0011	4
o'		-0.0_638	4
Surface tension dynes/cm. 20°C		29.95	5
γ 30		28.94	5
40		27.96	5
Parachor [P] 20°C			
30			
40			
Sugd.		597.1	5
Exp. L.1.%/wt. u.			
Dispersion		136.6	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes 100°C		1.222	2
110		1.09	2
150		0.730	2

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 96

NAME	n-Undecylbenzene 1-Phenylundecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{28}$
		Molecular Weight 232.394

		Ref.
F.P. °C	-5.	2
F.P. 100%		
B.P. °C		
760 mm	316.	2
100	234.	5
30	197.	5
10	169.	5
1	121.	5
Pressure		
mm 25°C	0.0_360	5
t_e	1525.	5
Density		
g/ml 20°C	0.8553	2
d_4^t 25	0.8517	2
30	0.8481	4
a	0.8697	4
b	-0.0_372	4
Ref. Index		
n_D 20°C	1.4828	2
25	1.4807	2
30	1.4784	4
"C"	0.7443	5
MR (Obs.)	77.57	2
MR (Calc.)	77.105	5
(nD-d/2)	1.0552	2
Dielectric	2.199	5
A | 195 to	7.34672	5
B | 375 °C	2215.1	5
C	180.	5
A* | 195 to	1.9853	5
B* | 360 °C	2116.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7165	5
B' | 195 °C	2503.0	5
C'	204.	5
A'* 25 to	2.3523	5
B'* 195 °C	2397.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C F	353.29	5

		Ref.
dt/dP		
°C/mm		
25°C	15222.	5
BP	0.0635	5
t_e	0.0357	5
30 mm	0.9308	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.73	5
30 mm	67.82	5
BP	56.26	5
t_e	52.94	5
t_e (d, e)	52.63	5
$\Delta Hv/T_e$	19.64	5
d | 195 to	87.05	5
e | 350 °C	0.0974	5
d' | 25 to	86.04	5
e' | 195 °C	0.0923	5
d_c g/ml	0.265	5
v_c ml/g	3.778	5
t_c °C	492.3	5
P_c mm	12059.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9217	5
t_e	0.8949	5
t_c	0.226	5
ΔHc kcal/m	2370.27	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	5.34	2
40	3.43	2
60	2.41	2
80	1.779	2
B^v | 30 to	788.49	4
A^v | 90 °C	Σ.01777	4
(B^v) | 100 to	743.02	4
(A^v) | 160 °C	Σ.14737	4
c_p liq. °K		
c_p vap. 300 °K	0.34661	2
400	0.44467	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m | 300 to		-0.0123	4
n | 600 °K		0.0014	4
o		-0.0_654	4
m' | 700 to		0.0971	4
n' | 1000 °K		0.0011	4
o'		-0.0_637	4
Surface tension			
dynes/cm. 20°C		30.04	5
30		29.04	5
40		28.07	5
Parachor [P]			
20°C			
30			
40			
Sugd.		636.1	5
Exp. L.1.%/wt. u.			
Dispersion		134.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes			
100°C		1.371	2
110		1.22	2
150		0.80	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 97

NAME	n-Dodecylbenzene 1-Phenyldodecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{18}H_{30}$
		Molecular Weight 246.420

		Ref.
F.P. °C	3.	2
F.P. 100%		
B.P. °C		
760 mm	331.	2
100	248.	5
30	210.	5
10	181.	5
1	132.	5
Pressure		
mm 25°C	0.0_324	5
t_e	1600.	5
Density		
g/ml 20°C	0.8551	2
d^t_4 25	0.8516	2
30	0.8481	4
a	0.8691	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4824	2
25	1.4803	2
30	1.4782	4
"C"	0.7439	4
MR (Obs.)	82.21	2
MR (Calc.)	81.723	5
(nD-d/2)	1.0549	2
Dielectric	2.198	5
A | 210 to	7.41934	5
B | 385 °C	2319.2	5
C	180.	5
A* | 210 to	2.0722	5
B* | 380 °C	2217.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7937	5
B' | 210 °C	2620.6	5
C'	205.	5
A'* 25 to	2.44602	5
B'* 210 °C	2512.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	370.21	5

		Ref.
dt/dP		
°C/mm		
25°C	36477.	5
BP	0.0643	5
t_e	0.0354	5
30 mm	0.9508	5
ΔHm cal/g		
ΔHv cal/g		
25°C	82.09	5
30 mm	66.09	5
BP	54.98	5
t_e	51.68	5
t_e (d, e)	51.38	5
$\Delta Hv/T_e$	19.79	5
d | 210 to	85.43	5
e | 360 °C	0.0920	5
d' | 25 to	84.25	5
e' | 210 °C	0.0864	5
d_c g/ml	0.263	5
v_c ml/g	3.798	5
t_c °C	503.6	5
P_c mm	11383.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9211	5
t_e	0.8940	5
t_c		
ΔHc kcal/m	2517.19	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	6.39	2
40	4.06	2
60	2.76	2
80	2.01	2
B^v | 50 to	795.64	4
A^v | 105 °C	Σ.05305	4
(B^v) | 105 to	774.13	4
(A^v) | 160 °C	Σ.11015	4
c_p liq. °K		
c_p vap. 300°K	0.34920	2
400	0.44753	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0103	4
n	600 °K	0.0014	4
o		-0.0_654	4
m'	700 to	0.0978	4
n'	1000 °K	0.0011	4
o'		-0.0_637	4
Surface tension			
dynes/cm. 20°C		30.12	5
30		29.14	5
40		28.19	5
Parachor [P]			
20°C			
30			
40			
Sugd.		675.1	5
Exp. L.1.%/wt. u.			
Dispersion		132.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes			
100°C		1.531	2
110		1.350	2
150		0.870	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 98

NAME	n-Tridecylbenzene 1-Phenyltridecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{32}$
		Molecular Weight 260.446

		Ref.
F.P. °C	10.	2
F.P. 100%		
B.P. °C		
760 mm	346.	5
100	262.	5
30	223.	5
10	194.	5
1	143.	5
Pressure		
mm 25°C	0.0_494	5
t_e	1642.	5
Density		
g/ml 20°C	0.8550	2
d_4^t 25	0.8515	2
30	0.8480	4
a	0.8690	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4821	2
25	1.4800	2
30	1.4779	4
"C"	0.7436	4
MR (Obs.)	86.85	2
MR (Calc.)	86.341	5
(nD-d/2)	1.0546	2
Dielectric	2.197	5
A | 225 to	7.49437	5
B | 405 °C	2626.7	5
C	180.	5
A* | 225 to	2.1594	5
B* | 390 °C	2321.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.87345	5
B' | 225 °C	2742.1	5
C'	205.	5
A'* 25 to	2.54109	5
B'* 225 °C	2631.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	387.12	5

		Ref.
dt/dP		
°C/mm		
25°C	89602.	5
BP	0.0652	5
t_e	0.0363	5
30 mm	0.9702	5
ΔHm cal/g		
ΔHv cal/g		
25°C	80.69	5
30 mm	64.62	5
BP	53.99	5
t_e	50.63	5
t_e (d, e)	50.43	5
$\Delta Hv/T_e$	19.97	5
d | 225 to	83.95	5
e | 380 °C	0.0866	5
d' | 25 to	82.72	5
e' | 225 °C	0.0811	5
d_c g/ml	0.262	5
v_c ml/g	3.820	5
t_c °C	513.7	5
P_c mm	10190.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9221	5
t_e	0.8938	5
t_c	0.206	5
ΔHc kcal/m	2664.12	2
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	7.60	2
40	4.65	2
60	3.15	2
80	2.26	2
B^v | 50 to	831.92	4
A^v | 105 °C	Σ.00154	4
(B^v) | 105 to	805.22	4
(A^v) | 160 °C	Σ.07479	4
c_p liq. °K		
c_p vap. 300 °K	0.35147	2
400	0.45007	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to	-0.0086		4
n | 600 °K	0.0014		4
o |	-0.0_654		4
m' | 700 to	0.0989		4
n' | 1000 °K	0.0011		4
o' |	-0.0_638		4
Surface tension			
dynes/cm. 20°C	30.20		5
γ 30	29.22		5
40	28.27		5
Parachor [P]			
20°C			
30			
40			
Sugd.	714.1		5
Exp. L.1.%/wt. u.			
Dispersion	130.		2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity			
centistokes			
100°C	1.701		2
110	1.50		2
150	0.95		2

$T_R = 0.86\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 99

NAME	n-Tetradecylbenzene 1-Phenyltetradecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{34}$	Molecular Weight 274.472

		Ref.
F.P. °C	16.	2
F.P. 100%		
B.P. °C		
760 mm	359.	2
100	274.	5
30	235.	5
10	204.	5
1	153.	5
Pressure		
mm 25°C	0.0_441	5
t_e	1679.	5
Density		
g/ml 20°C	0.8549	2
d_4^t 25	0.8514	2
30	0.8479	4
a	0.8689	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4818	2
25	1.4797	2
30	1.4776	4
"C"	0.7432	4
MR (Obs.)	91.49	2
MR (Calc.)	90.959	5
(nD-d/2)	1.0543	2
Dielectric	2.196	5
A | 235 to	7.56143	5
B | 410 °C	2522.8	5
C	180.	5
A* | 235 to	2.2384	5
B* | 410 °C	2414.6	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.94474	5
B' | 235 °C	2850.7	5
C'	206.	5
A'* 25 to	2.62769	5
B'* 235 °C	2738.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	401.78	5

		Ref.
dt/dP		
°C/mm		
25°C	1.99×10^5	5
BP	0.0658	5
t_e	0.0347	5
30 mm	0.9866	5
ΔHm cal/g		
ΔHv cal/g		
25°C	79.11	5
30 mm	63.09	5
BP	52.88	5
t_e	49.54	5
t_e (d, e)	49.37	5
$\Delta Hv/T_e$	20.14	5
d | 235 to	82.34	5
e | 390 °C	0.0821	5
d' | 25 to	81.02	5
e' | 235 °C	0.0764	5
d_c g/ml	0.261	5
v_c ml/g	3.833	5
t_c °C	521.4	5
P_c mm	9100.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9226	5
t_e	0.8941	5
t_c	0.193	5
ΔHc kcal/m	2811.04	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	8.98	2
40	5.36	2
60	3.57	2
80	2.53	2
B^v 50 to	865.10	4
A^v | 105 °C	3.95632	4
(B^v) | 105 to	829.69	4
(A^v) | 160 °C	2.05232	4
c_p liq. °K		
c_p vap. 300°K	0.35355	2
400	0.45236	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to	-0.0070		4
n | 600 °K	0.0014		4
o	-0.0_653		4
m' | 700 to	0.0986		4
n' | 1000 °K	0.0011		4
o'	-0.0_638		4
Surface tension			
dynes/cm. 20°C	30.27		5
30	29.30		5
40	28.34		5
Parachor [P]			
20°C			
30			
40			
Sugd.	753.1		5
Exp. L.1.%/wt. u.			
Dispersion	129.		2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes			
100°C	1.881		2
110	1.65		2
150	1.03		2

$T_R = 0.87\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 100

NAME	n-Pentadecylbenzene 1-Phenylpentadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{21}H_{36}$	Molecular Weight 288.498

		Ref.
F.P. °C	22.	2
F.P. 100%		
B.P. °C 760 mm	373.	2
100	287.	5
30	247.	5
10	216.	5
1	163.	5
Pressure mm 25°C	$0.0_4 16$	5
t_e	1720.	5
Density g/ml 20°C	0.8548≠	2
d_4^t 25	0.8513≠	2
30	0.8478	4
a	0.8688	4
b	$-0.0_3 7$	4
Ref. Index n_D 20°C	1.4815≠	2
25	1.4794≠	2
30	1.4773	4
"C"	0.7429	4
MR (Obs.)	96.13≠	2
MR (Calc.)	95.577	5
(nD-d/2)	1.0541≠	2
Dielectric	2.195	5
A | 245 to	7.63586	5
B | 420 °C	2629.5	5
C	180.	5
A* | 245 to	2.3220	5
B* | 420 °C	2517.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.02386	5
B' | 245 °C	2971.3	5
C'	207.	5
A'* 25 to	2.72051	5
B'* 245 °C	2856.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C F	417.58	5

		Ref.
dt/dP °C/mm		
25°C	4.83×10^5	5
BP	0.0665	5
t_e	0.0343	5
30 mm	1.0036	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.92	5
30 mm	61.90	5
BP	52.11	5
t_e	48.74	5
t_e (d, e)	48.65	5
$\Delta Hv/T_e$	20.36	5
d | 245 to	81.08	5
e | 415 °C	0.0777	5
d' | 25 to	79.73	5
e' | 245 °C	0.0722	5
d_c g/ml	0.260	5
v_c ml/g	3.847	5
t_c °C	530.4	5
P_c mm	8050.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9241	5
t_e	0.8951	5
t_c	0.178	5
ΔHc kcal/m	2957.96	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	10.54	2
40	6.15	2
60	4.02	2
80	2.81	2
B^v | 50 to	896.13	4
A^v | 105 °C	3.91476	4
(B^v) | 105 to	851.15	4
(A^v) | 160 °C	2.03411	4
c_p liq. °K		
c_p vap. 300°K	0.35539	2
400	0.45442	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0055	4
n | 600 °K		0.0014	4
o		$-0.0_6 54$	4
m' | 700 to		0.1012	4
n' | 1100 °K		0.0011	4
o'		$-0.0_6 38$	4
Surface tension dynes/cm. 20°C		30.34	5
γ 30		29.36	5
40		28.40	5
Parachor [P] 20°C			
30			
40			
Sugd.		792.1	5
Exp. L.1.%/wt. u.			
Dispersion		127.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes 100°C		2.07	2
110		1.80	2
150		1.11	2

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 101

NAME	n-Hexadecylbenzene 1-Phenylhexadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{22}H_{38}$ — Molecular Weight 302.524

		Ref.
F.P. °C	27.	2
F.P. 100%		
B.P. °C		
760 mm	385.	2
100	298.	5
30	258.	5
10	226.	5
1	173.	5
Pressure		
mm 25°C	0.0_572	5
t_e	1756.	5
Density		
g/ml 20°C	0.8547≠	2
d_4^t 25	0.8512≠	2
30	0.8477	4
a	0.8687	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4813≠	2
25	1.4792≠	2
30	1.4771	4
"C"	0.7427	4
MR (Obs.)	100.77≠	2
MR (Calc.)	100.195	5
(nD-d/2)	1.0539≠	2
Dielectric	2.194	5
A | 260 to	7.70156	5
B | 440 °C	2723.7	5
C	180.	5
A* | 260 to	2.3976	5
B* | 440 °C	2607.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0937	5
B' | 260 °C	3077.7	5
C'	208.	5
A'* 25 to	2.80424	5
B'* 260 °C	2961.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	431.1	5

		Ref.
dt/dP		
°C/mm		
25°C	1.05×10^6	5
BP	0.0670	5
t_e	0.0339	5
30 mm	1.0177	5
ΔHm cal/g		
ΔHv cal/g		
25°C	76.53	5
30 mm	60.61	5
BP	51.23	5
t_e	47.84	5
t_e (d, e)	47.84	5
$\Delta Hv/T_e$	20.55	5
d | 260 to	79.58	5
e | 430 °C	0.0736	5
d' | 25 to	78.24	5
e' | 260 °C	0.0684	5
d_c g/ml	0.259	5
v_c ml/g	3.861	5
t_c °C	537.0	5
P_c mm	7190.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9258	5
t_e	0.8961	5
t_c	0.166	5
ΔHc kcal/m	3104.89	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 40 °C	7.03	2
60	4.52	2
80	3.12	2
100	2.27	2
B^v | 50 to	929.87	4
A^v | 105 °C	3.86442	4
(B^v) | 105 to	887.55	4
(A^v) | 160 °C	3.97830	4
c_p liq. °K		
c_p vap. 300°K	0.35706	2
400	0.45629	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to		-0.0096	4
n | 600 °K		0.0014	4
o |		-0.0_658	4
m' | 700 to		0.1042	4
n' | 1000 °K		0.0011	4
o' |		-0.0_637	4
Surface tension			
dynes/cm. 20°C		30.40	5
γ 30		29.41	5
40		28.45	5
Parachor [P]			
20°C			
30			
40			
Sugd.		831.1	5
Exp. L.1.%/wt. u.			
Dispersion		126.≠	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			
Viscosity centistokes			
110°C		1.97	2
150		1.19	2

≠ for undercooled liquid

+ grams/100 grams solvent

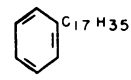
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 102

NAME	n-Heptadecylbenzene 1-Phenylheptadecane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{23}H_{40}$	Molecular Weight 316.550

		Ref.
F.P. °C	32.	2
F.P. 100%		
B.P. °C		
760 mm	397.	2
100	309.5	5
30	269.5	5
10	238.5	5
1	186.	5
Pressure		
mm 25°C	$0.0_6 68$	5
t_e	1786.	5
Density		
g/ml 20°C	0.8546≠	2
d_4^{25}	0.8512≠	2
d_4^{30}	0.8478	4
a	0.8682	4
b	$-0.0_3 68$	4
Ref. Index		
n_D 20°C	1.4810≠	2
25	1.4790≠	2
30	1.4769	4
"C"	0.7423	4
MR (Obs.)	105.42≠	2
MR (Calc.)	104.809	5
(nD-d/2)	1.0537≠	2
Dielectric	2.193	5
A | 270 to	7.55602	4
B | 465 °C	2580.7	4
C	155.	5
A* | 270 to	2.27692	5
B* | 450 °C	2474.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9390	5
B' | 270 °C	2916.1	5
C'	181.7	5
A'* 25 to	2.6900	5
B'* 270 °C	2816.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	444.6	5

		Ref.
dt/dP		
°C/mm		
25°C	9.3×10^6	5
BP	0.06747	4
t_e	0.03387	5
30 mm	1.0110	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.69	5
30 mm	60.97	5
BP	50.32	5
t_e	46.60	5
t_e (d, e)	46.34	5
$\Delta Hv/T_e$	20.55	5
d | 270 to	83.49	5
e | 430 °C	0.0836	5
d' | 25 to	90.42	5
e' | 270 °C	0.1093	5
d_c g/ml		
v_c ml/g		
t_c °C	545.6	5
P_c mm	7973.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9247	5
t_e	0.8945	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | to			
n | °K			
o |			
m' | to			
n' | °K			
o' |			
Surface tension			
dynes/cm. 20°C		30.45	5
γ 30		29.49	5
40		28.56	5
Parachor [P]			
20°C			
30			
40			
Sugd.		870.1	5
Exp. L.1.%/wt. u.			
Dispersion		125.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 103

NAME	n-Octadecylbenzene 1-Phenyloctadecane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{24}H_{42}$	Molecular Weight 330.576

		Ref.
F.P. °C	36.	2
F.P. 100%		
B.P. °C		
760 mm	408.	2
100	319.5	5
30	279.0	5
10	247.5	5
1	194.	5
Pressure		
mm 25°C	0.0_632	5
t_e	1815.	5
Density		
g/ml 20°C	0.8546≠	2
d_4^t 25	0.8511≠	2
30	0.8476	4
a	0.8686	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4809≠	2
25	1.4788≠	2
30	1.4767	4
"C"	0.7422	4
MR (Obs.)	110.06≠	2
MR (Calc.)	109.427	5
(nD-d/2)	1.0535≠	2
Dielectric	2.193	5
A | 280 to	7.60357	4
B | 470 °C	2658.9	4
C	155.	5
A* | 280 to	2.33666	5
B* | 460 °C	2550.76	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.98954	5
B' | 280 °C	3004.5	5
C'	182.3	5
A'* 25 to	2.7534	5
B'* 280 °C	2903.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	457.0	5

		Ref.
dt/dP		
°C/mm		
25°C	1.97×10^7	5
BP	0.06812	4
t_e	0.0337	5
30 mm	1.0255	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.02	5
30 mm	59.58	5
BP	49.27	5
t_e	45.52	5
t_e (d, e)	45.35	5
$\Delta Hv/T_e$	20.61	5
d | 280 to	81.88	5
e | 445 °C	0.0799	5
d' | 25 to	88.62	5
e' | 280 °C	0.1041	5
d_c g/ml		
v_c ml/g		
t_c °C	549.3	5
P_c mm	7207.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9247	5
t_e	0.8936	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		30.51	5
γ 30		29.52	5
40		28.56	5
Parachor [P]			
20°C			
30			
40			
Sugd.		909.1	5
Exp. L.1.%/wt. u.			
Dispersion		124.≠	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 104

NAME	n-Nonadecylbenzene 1-Phenylnonadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{25}H_{44}$ — Molecular Weight 344.602

		Ref.
F.P. °C	40.	2
F.P. 100%		
B.P. °C 760 mm	419.	2
100	329.5	5
30	288.5	5
10	256.6	5
1	202.	5
Pressure mm 25°C	0.0_6144	5
t_e	1844.9	5
Density g/ml 20°C	0.8545≠	2
d_4^t 25	0.8511≠	2
30	0.8477	4
a	0.8681	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4807≠	2
25	1.4786≠	2
30	1.4766	4
"C"	0.7420	4
MR (Obs.)	114.70≠	2
MR (Calc.)	114.045	5
(nD-d/2)	1.0534≠	2
Dielectric	2.192	5
A | 290 to	7.65210	4
B | 480 °C	2738.7	4
C	155.	5
A* | 290 to	2.3962	5
B* | 470 °C	2628.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0411	5
B' | 290 °C	3094.6	5
C'	182.9	5
A'* 25 to	2.8170	5
B'* 290 °C	2992.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	469.4	5

		Ref.
dt/dP °C/mm		
25°C	$4.21x10^7$	5
BP	0.06875	4
t_e	0.0335	5
30 mm	1.0398	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.50	5
30 mm	58.33	5
BP	48.34	5
t_e	44.61	5
t_e (d,e)	44.48	5
ΔHv/T_e	20.70	5
d | 290 to	80.429	5
e | 455 °C	0.0766	5
d' | 25 to	86.987	5
e' | 290 °C	0.0993	5
d_c g/ml		
v_c ml/g		
t_c °C	557.1	5
P_c mm	6843.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9245	5
t_e	0.8929	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C	30.55	5
γ	30	29.59	5
	40	28.65	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	948.1	5
Exp. L.1.%/wt. u. Dispersion		123.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 105

NAME	n-Eicosylbenzene 1-Phenyleicosane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{26}H_{46}$	Molecular Weight 358.628

		Ref.
F. P. °C	44.	2
F. P. 100%		
B. P. °C 760 mm	429.	2
100	338.7	5
30	297.2	5
10	264.9	5
1	209.	5
Pressure mm 25°C	0.0_770	5
t_e	1873.	5
Density g/ml 20°C	0.8545≠	2
d_4^t 25	0.8511≠	2
30	0.8477	4
a	0.8681	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4805≠	2
25	1.4785≠	2
30	1.4764	4
"C"	0.7417	4
MR (Obs.)	119.34≠	2
MR (Calc.)	118.663	5
(nD-d/2)	1.0533≠	2
Dielectric	2.192	5
A | 295 to	7.69708	4
B | 500 °C	2812.7	4
C	155.	5
A* | 295 to	2.4510	5
B* | 480 °C	2699.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0889	5
B' | 295 °C	3178.3	5
C'	183.5	5
A'* 25 to	2.8767	5
B'* 295 °C	3074.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C F	480.72	5

		Ref.
dt/dP °C/mm		
25°C	8.49×10^7	5
BP	0.06929	4
t_e	0.0333	5
30 mm	1.0525	5
ΔHm cal/g		
ΔHv cal/g		
25°C	82.96	5
30 mm	57.10	5
BP	47.45	5
t_e	43.71	5
t_e (d, e)	43.66	5
$\Delta Hv/T_e$	20.79	5
d | 295 to	78.87	5
e | 470 °C	0.0732	5
d' | 25 to	85.33	5
e' | 295 °C	0.0950	5
d_c g/ml		
v_c ml/g		
t_c °C	561.9	5
P_c mm	6350.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9254	5
t_e	0.8932	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		30.60	5
30		29.64	5
40		28.70	5
Parachor [P] 20°C			
30			
40			
Sugd.		987.1	5
Exp. L. l. %/wt. u.			
Dispersion		122.≠	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

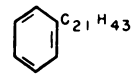
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 106

NAME	n-Heneicosylbenzene 1-Phenylheneicosane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{27}H_{48}$	Molecular Weight 372.654

		Ref.
F.P. °C	48.	2
F.P. 100%		
B.P. °C		
760 mm	439.	2
100	347.9	5
30	305.9	5
10	273.2	5
1	217.	5
Pressure		
mm 25°C	$0.0_7 34$	5
t_e	1901.5	5
Density		
g/ml 20°C	0.8545≠	2
d_4^t 25	0.8510≠	2
30	0.8475	4
a	0.8685	4
b	$-0.0_3 70$	4
Ref. Index		
n_D 20°C	1.4804≠	2
25	1.4783≠	2
30	1.4762	4
"C"	0.7416	4
MR (Obs.)	123.98≠	2
MR (Calc.)	123.281	5
(nD-d/2)	1.0532≠	2
Dielectric	2.192	5
A | 305 to	7.74293	4
B | 500 °C	2888.1	4
C	155.	5
A* | 305 to	2.5064	5
B* | 500 °C	2772.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.1377	5
B' | 305 °C	3263.5	5
C'	184.0	5
A'* 25 to	2.9368	5
B'* 305 °C	3158.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	492.	5

		Ref.
dt/dP		
°C/mm		
25°C	1.73×10^8	5
BP	0.06981	4
t_e	0.0331	5
30 mm	1.0649	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.54	5
30 mm	55.98	5
BP	46.59	5
t_e	42.85	5
t_e (d, e)	42.85	5
$\Delta Hv/T_e$	20.87	5
d | 305 to	77.58	5
e | 480 °C	0.0706	5
d' | 25 to	83.82	5
e' | 305 °C	0.0910	5
d_c g/ml		
v_c ml/g		
t_c °C	564.4	5
P_c mm	5723.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9254	5
t_e	0.8932	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.65	5
30	29.65	5
40	28.69	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1026.1	5
Exp. L.1.%/wt. u.		
Dispersion	121.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

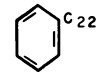
PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 107

NAME	n-Docosylbenzene 1-Phenyldocosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{28}H_{50}$
		Molecular Weight 386.680



		Ref.
F. P. °C	51.	2
F. P. 100%		
B. P. °C 760 mm	448.	2
100	356.2	5
30	313.8	5
10	280.7	5
1	224.	5
Pressure mm 25°C	0.0_717	5
t_e	1927.	5
Density g/ml 20°C	0.8544≠	2
d_4^t 25	0.8510≠	2
30	0.8476	4
a	0.8680	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4802≠	2
25	1.4782≠	2
30	1.4761	4
"C"	0.7414	4
MR (Obs.)	128.62≠	2
MR (Calc.)	127.899	5
(nD-d/2)	1.0531≠	2
Dielectric	2.191	5
A | 310 to	7.78494	4
B | 515 °C	2957.2	4
C	155.	5
A* | 310 to	2.55799	5
B* | 510 °C	2839.7	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.1823	5
B' | 310 °C	3341.5	5
C'	184.5	5
A'* 25 to	2.9927	5
B'* 310 °C	3235.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	502.15	5

		Ref.
dt/dP °C/mm		
25°C	3.32×10^8	5
BP	0.07026	4
t_e	0.0329	5
30 mm	1.0759	5
ΔHm cal/g		
ΔHv cal/g		
25°C	80.08	5
30 mm	54.86	5
BP	45.75	5
t_e	42.04	5
t_e (d, e)	42.07	5
$\Delta Hv/T_e$	20.97	5
d | 310 to	76.18	5
e | 490 °C	0.0679	5
d' | 25 to	82.27	5
e' | 310 °C	0.0873	5
d_c g/ml		
v_c ml/g		
t_c °C	570.4	5
P_c mm	5467.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9256	5
t_e	0.8933	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	30.68	5
γ 30	29.71	5
40	28.77	5
Parachor [P] 20°C		
30		
40		
Sugd.	1065.1	5
Exp. L.1.%/wt. u.		
Dispersion	120.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 108

NAME	n-Tricosylbenzene 1-Phenyltricosane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{29}H_{52}$	Molecular Weight 400.706

		Ref.
F.P. °C	54.	2
F.P. 100%		
B.P. °C		
760 mm	457.	2
100	364.5	5
30	321.7	5
10	288.3	5
1	231.	5
Pressure		
mm 25°C	0.0_887	5
t_e	1953.	5
Density		
g/ml 20°C	0.8544≠	2
d_4^t 25	0.8510≠	2
30	0.8476	4
a	0.8680	5
b	-0.0_368	5
Ref. Index		
n_D 20°C	1.4801≠	2
25	1.4781≠	2
30	1.4760	4
"C"	0.7412	4
MR (Obs.)	133.26≠	2
MR (Calc.)	132.517	5
(nD-d/2)	1.0530≠	2
Dielectric	2.191	5
A | 320 to	7.82768	4
B | 520 °C	3027.5	4
C	155.	5
A* | 320 to	2.6094	5
B* | 510 °C	2907.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.2278	5
B' | 320 °C	3421.	5
C'	185.0	5
A'* 25 to	3.0489	5
B'* 320 °C	3313.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C F	512.3	5

		Ref.
dt/dP		
°C/mm		
25°C	6.43×10^8	5
BP	0.07070	4
t_e	0.0327	5
30 mm	1.0867	5
ΔHm cal/g		
ΔHv cal/g		
25°C	78.74	5
30 mm	53.84	5
BP	44.97	5
t_e	41.29	5
t_e (d, e)	41.35	5
$\Delta Hv/T_e$	21.06	5
d | 320 to	74.93	5
e | 490 °C	0.0656	5
d' | 25 to	80.84	5
e' | 320 °C	0.0839	5
d_c g/ml		
v_c ml/g		
t_c °C	574.3	5
P_c mm	5077.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9260	5
t_e	0.8937	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.72	5
30	29.75	5
40	28.81	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1104.1	5
Exp. L.1.%/wt. u.		
Dispersion	119.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 109

NAME	n-Tetracosylbenzene 1-Phenyltetracosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{30}H_{54}$ Molecular Weight 414.732	

		Ref.
F.P. °C	57.	2
F.P. 100%		
B.P. °C		
760 mm	466.	2
100	372.8	5
30	329.7	5
10	295.9	5
1	238.	5
Pressure		
mm 25°C	$0.0_8 44$	5
t_e	1980.	5
Density		
g/ml 20°C	0.8544≠	2
d_4^t 25	0.8510≠	2
30	0.8476	4
a	0.8680	5
b	$-0.0_3 68$	5
Ref. Index		
n_D 20°C	1.4800≠	2
25	1.4780≠	2
30	1.4760	4
"C"	0.7411	4
MR (Obs.)	137.90≠	2
MR (Calc.)	137.135	5
(nD-d/2)	1.0529≠	2
Dielectric	2.190	5
A | 330 to	7.87118	4
B | 530 °C	3099.0	4
C	155.	5
A* | 330 to	2.6606	5
B* | 525 °C	2976.3	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.2740	5
B' | 330 °C	3501.8	5
C'	185.5	5
A'* 25 to	3.1056	5
B'* 330 °C	3393.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C F	522.45	5

		Ref.
dt/dP		
°C/mm		
25°C	1.26×10^9	5
BP	0.07111	4
t_e	0.03248	5
30 mm	1.0973	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.51	5
30 mm	52.90	5
BP	44.28	5
t_e	40.61	5
t_e (d, e)	40.71	5
$\Delta Hv/T_e$	21.17	5
d | 330 to	73.74	5
e | 500 °C	0.0632	5
d' | 25 to	79.53	5
e' | 330 °C	0.0808	5
d_c g/ml	0.2175	5
v_c ml/g	4.5972	5
t_c °C	578.2	5
P_c mm	4717.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9266	5
t_e	0.8945	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	30.75	5
30	29.79	5
40	28.84	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1143.1	5
Exp. L.1.%/wt. u.		
Dispersion	118.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 110

NAME	n-Pentacosylbenzene 1-Phenylpentacosane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{31}H_{56}$ — Molecular Weight 428.758

		Ref.
F.P. °C	59.	2
F.P. 100%		
B.P. °C 760 mm	474.	2
100	380.3	5
30	336.8	5
10	302.7	5
1	244.	5
Pressure mm 25°C	0.0_824	5
t_e	2004.	5
Density g/ml 20°C	0.8544≠	2
d_4^t 25	0.8510≠	2
30	0.8476	4
a	0.8680	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4799≠	2
25	1.4779≠	2
30	1.4758	4
"C"	0.7410	4
MR (Obs.)	142.54≠	2
MR (Calc.)	141.753	5
(nD-d/2)	1.0527≠	2
Dielectric	2.190	5
A | 335 to	7.91049	4
B | 540 °C	3163.7	4
C	155.	5
A* | 335 to	2.7081	5
B* | 530 °C	3038.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.3158	5
B' | 335 °C	3574.9	5
C'	186.0	5
A'* 25 to	3.1575	5
B'* 335 °C	3464.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C F	531.47	5

		Ref.
dt/dP °C/mm		
25°C	$2.3x10^9$	5
BP	0.07146	4
t_e	0.0323	5
30 mm	1.1066	5
ΔHm cal/g		
ΔHv cal/g 25°C	76.21	5
30 mm	51.94	5
BP	43.59	5
t_e	39.89	5
t_e (d, e)	40.09	5
$\Delta Hv/T_e$	21.26	5
d | 335 to	72.45	5
e | 515 °C	0.0609	5
d' | 25 to	78.16	5
e' | 335 °C	0.0778	5
d_c g/ml		
v_c ml/g		
t_c °C	581.1	5
P_c mm	4384.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9279	5
t_e	0.8950	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	30.79	5
γ 30	29.82	5
40	28.88	5
Parachor [P] 20°C		
30		
40		
Sugd.	1182.1	5
Exp. L.1.%/wt. u.		
Dispersion	118.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 111

NAME	n-Hexacosylbenzene 1-Phenylhexacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{32}H_{58}$	Molecular Weight 442.784

		Ref.
F. P. °C	62.	2
F. P. 100%		
B. P. °C		
760 mm	482.	2
100	388.	5
30	344.	5
10	309.	5
1	250.	5
Pressure		
mm 25°C	0.0_813	5
t_e	2029.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8510≠	2
30	0.8477	4
a	0.8675	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4798≠	2
25	1.4778≠	2
30	1.4768	4
"C"	0.7409	4
MR (Obs.)	147.18≠	2
MR (Calc.)	146.371	5
(nD-d/2)	1.0526≠	2
Dielectric	2.190	5
A | 345 to	7.95042	4
B | 550 °C	3229.3	4
C	155.	5
A* | 345 to	2.75494	5
B* | 550 °C	3101.4	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.3582	5
B' | 345 °C	3649.0	5
C'	186.4	5
A'* 25 to	3.2098	5
B'* 345 °C	3538.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C F	540.49	5

		Ref.
dt/dP		
°C/mm		
25°C	4.23×10^9	5
BP	0.07180	4
t_e	0.0321	5
30 mm	1.1156	5
ΔHm cal/g		
ΔHv cal/g		
25°C	75.01	5
30 mm	51.06	5
BP	42.93	5
t_e	39.29	5
t_e (d, e)	39.49	5
$\Delta Hv/T_e$	21.38	5
d | 345 to	71.29	5
e | 540 °C	0.0588	5
d' | 25 to	76.89	5
e' | 345 °C	0.0751	5
d_c g/ml		
v_c ml/g		
t_c °C	586.7	5
P_c mm	4225.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9285	5
t_e	0.8961	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.81	5
30	29.87	5
40	28.95	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1221.1	5
Exp. L.1.%/wt. u.		
Dispersion	117.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 112

NAME	n-Heptacosylbenzene 1-Phenylheptacosane	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{33}H_{60}$ — Molecular Weight 456.810

		Ref.
F.P. °C	64.	2
F.P. 100%		
B.P. °C		
760 mm	490.	2
100	397.4	5
30	354.	5
10	320.3	5
1	262.	5
Pressure		
mm 25°C	$0.0_{10}71$	5
t_e	1972.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^{25}	0.8510≠	2
30	0.8477	4
a	0.8675	4
b	$-0.0_3 66$	4
Ref. Index		
n_D 20°C	1.4797≠	2
25	1.4777≠	2
30	1.4758	4
"C"	0.7408	4
MR (Obs.)	151.82≠	2
MR (Calc.)	150.989	5
(nD-d/2)	1.0526≠	2
Dielectric	2.190	5
A | 355 to	7.99100	4
B | 550 °C	3219.4	4
C	140.	5
A* | 355 to	2.86032	5
B* | 550 °C	3120.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.4014	5
B' | 355 °C	3637.8	5
C'	171.	5
A'* 25 to	3.2762	5
B'* 355 °C	3536.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	545.5	5

		Ref.
dt/dP		
°C/mm		
25°C	6.43×10^{10}	5
BP	0.07045	4
t_e	0.0321	5
30 mm	1.0984	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.23	5
30 mm	51.97	5
BP	42.07	5
t_e	38.21	5
t_e (d,e)	36.03	5
$\Delta Hv/T_e$	21.32	5
d | 355 to	77.74	5
e | 540 °C	0.0728	5
d' | 25 to	86.68	5
e' | 355 °C	0.0980	5
d_c g/ml		
v_c ml/g		
t_c °C	585.	5
P_c mm	3577.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9026	5
t_e	0.8657	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.84	5
γ 30	29.90	5
40	28.98	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1260.1	5
Exp. L.1.%/wt. u.		
Dispersion	117.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 113

NAME	n-Octacosylbenzene 1-Phenyloctacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{34}H_{62}$ Molecular Weight 470.836	

		Ref.
F. P. °C	66.	2
F. P. 100%		
B. P. °C		
760 mm	498.	2
100	405.	5
30	361.	5
10	327.	5
1	268.	5
Pressure		
mm 25°C	$0.0_{10}36$	5
t_e	2001.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8510≠	2
30	0.8477	4
a	0.8675	4
b	-0.0_3366	4
Ref. Index		
n_D 20°C	1.4796≠	2
25	1.4776≠	2
30	1.4757	4
"C"	0.7407	4
MR (Obs.)	156.46≠	2
MR (Calc.)	155.607	4
(nD-d/2)	1.0524≠	2
Dielectric	2.189	5
A 360 to	8.03223	4
B 560 °C	3286.6	4
C	140.	5
A* 360 to	2.89990	5
B* 560 °C	3180.	5
K		
c		
t_k to		
t_x °C		
A' 25 to	8.4452	5
B' 360 °C	3713.8	5
C'	172.	5
A'* 25 to	3.3291	5
B'* 360 °C	3611.7	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	554.7	5

		Ref.
dt/dP		
°C/mm		
25°C	$1.26x10^{11}$	5
BP	0.07077	4
t_e	0.0319	5
30 mm	1.1073	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.04	5
30 mm	51.16	5
BP	41.52	5
t_e	37.65	5
t_e (d, e)	37.53	5
$\Delta Hv/T_e$	21.41	5
d 360 to	76.58	5
e 550 °C	0.0704	5
d' 25 to	85.41	5
e' 360 °C	0.0948	5
d_c g/ml		
v_c ml/g		
t_c °C	588.8	5
P_c mm	3333.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9037	5
t_e	0.8687	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	30.87	5
30	29.93	5
40	29.01	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1299.1	5
Exp. L. 1. %/wt. u.		
Dispersion	116.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 114

NAME	n-Nonacosylbenzene 1-Phenylnonacosane	STRUCTURAL FORMULA  $C_{29}H_{59}$

Mole % Pur.	Ref.	Molecular Formula $C_{35}H_{64}$	Molecular Weight 484.862

		Ref.
F.P. °C	68.	2
F.P. 100%		
B.P. °C		
760 mm	505.	2
100	411.	4
30	368.	5
10	333.	4
1	274.	5
Pressure		
mm 25°C	$0.0_{10}19$	5
t_e	2110.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4796≠	2
25	1.4775≠	2
30	1.4756	4
"C"	0.7407	4
MR (Obs.)	161.10≠	2
MR (Calc.)	160.235	5
(nD-d/2)	1.0524≠	2
Dielectric	2.189	5
A | 365 to	8.06885	4
B | 570 °C	3346.3	4
C	140.	5
A* | 365 to	2.92902	5
B* | 570 °C	3240.	5
K		
c		
t_x | to		
t_x | °C		
A' | 25 to	8.48413	5
B' | 365 °C	3781.2	5
C'	172.	5
A'* 25 to	3.37707	5
B'* 365 °C	3678.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	565.3	5

		Ref.
dt/dP		
°C/mm		
25°C	$2.29x10^{11}$	5
BP	0.07104	4
t_e	0.0306	5
30 mm	1.1149	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.78	5
30 mm	50.32	5
BP	42.69	5
t_e	38.47	5
t_e (d, e)	39.33	5
$\Delta Hv/T_e$	22.24	5
d | 365 to	70.82	5
e | 555 °C	0.0557	5
d' | 25 to	84.07	5
e' | 365 °C	0.0918	5
d_c g/ml		
v_c ml/g		
t_c °C	591.	5
P_c mm	3098.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9433	5
t_e	0.9045	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		30.90	5
γ 30		29.93	5
40		28.98	5
Parachor [P]			
20°C			
30			
40			
Sugd.		1338.1	5
Exp. L.1.%/wt. u.			
Dispersion		116.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 115

NAME	n-Triacontylbenzene 1-Phenyltriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{36}H_{66}$ Molecular Weight 498.888	

		Ref.
F.P. °C	70.	2
F.P. 100%		
B.P. °C 760 mm	512.	2
100	418.	5
30	374.	5
10	339.	5
1	279.	5
Pressure mm 25°C	$0.0_{10}1$	5
t_e	2060.	5
Density g/ml 20°C	0.8543≠	2
d_4^{t} 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	-0.0_3368	4
Ref. Index n_D 20°C	1.4795≠	2
25	1.4775≠	2
30	1.4755	4
"C"	0.7405	4
MR (Obs.)	165.74≠	2
MR (Calc.)	164.853	5
(nD-d/2)	1.0523≠	2
Dielectric	2.189	5
A | 375 to	8.10600	4
B | 580 °C	3406.8	4
C	140.	5
A* | 375 to	2.98945	5
B* | 570 °C	3300.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.52362	5
B' | 375 °C	3849.6	5
C'	172.	5
A'* 25 to	3.4254	5
B'* 375 °C	3745.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	570.9	5

		Ref.
dt/dP °C/mm 25°C	$4.2x10^{11}$	5
BP	0.07130	4
t_e	0.0313	5
30 mm	1.1224	5
ΔHm cal/g		
ΔHv cal/g 25°C	80.59	5
30 mm	49.54	5
BP	40.73	5
t_e	36.73	5
t_e (d, e)	36.96	5
$\Delta Hv/T_e$	21.71	5
d | 375 to	73.38	5
e | 570 °C	0.0638	5
d' | 25 to	82.81	5
e' | 375 °C	0.0890	5
d_c g/ml		
v_c ml/g		
t_c °C	590.8	5
P_c mm	2781.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9138	5
t_e	0.8772	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	30.92	5
γ 30	29.95	5
40	29.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	1377.1	5
Exp. L.1.%/wt. u.		
Dispersion	115.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

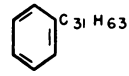
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 116

NAME	n-Hentriacontylbenzene 1-Hentriacontane	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{37}H_{68}$	Molecular Weight 512.914

		Ref.
F.P. °C	72.	2
F.P. 100%		
B.P. °C		
760 mm	519.	2
100	425.	5
30	380.	5
10	345.	5
1	285.	5
Pressure		
mm 25°C	$0.0_{11}56$	5
t_e	2037.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	$-0.0_3$68	4
Ref. Index		
n_D 20°C	1.4794≠	2
25	1.4774≠	2
30	1.4754	4
"C"	0.7404	4
MR (Obs.)	170.38≠	2
MR (Calc.)	169.471	5
(nD-d/2)	1.0523≠	2
Dielectric	2.189	5
A | 380 to	8.14368	4
B | 580 °C	3468.2	4
C	140.	5
A* | 380 to	3.05729	5
B* | 580 °C	3370.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.56367	5
B' | 380 °C	3919.0	5
C'	173.	5
A'* 25 to	3.47392	5
B'* 380 °C	3814.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	577.4	5

		Ref.
dt/dP		
°C/mm		
25°C	$7.74x10^{11}$	5
BP	0.07155	4
t_e	0.0316	5
30 mm	1.1297	5
ΔHm cal/g		
ΔHv cal/g		
25°C	79.48	5
30 mm	48.81	5
BP	39.49	5
t_e	35.59	5
t_e (d, e)	35.59	5
ΔHv/T_e	21.46	5
d | 380 to	74.30	5
e | 580 °C	0.06705	5
d' | 25 to	81.64	5
e' | 380 °C	0.0863	5
d_c g/ml		
v_c ml/g		
t_c °C	591.	5
P_c mm	2508.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.8987	5
t_e	0.8607	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension			
dynes/cm. 20°C		30.95	5
γ 30		29.97	5
40		29.02	5
Parachor [P]			
20°C			
30			
40			
Sugd.		1416.1	5
Exp. L.1.%/wt. u.			
Dispersion		115.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 117

NAME	n-Dotriacontylbenzene 1-Phenyldotriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{38}H_{70}$
		Molecular Weight 526.940

		Ref.
F. P. °C	74.	2
F. P. 100%		
B. P. °C		
760 mm	525.	2
100	430.	4
30	386.	5
10	351.	4
1	290.	5
Pressure		
mm 25°C	$0.0_{11}33$	5
t_e	2091.7	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	$-0.0_3$68	4
Ref. Index		
n_D 20°C	1.4794≠	2
25	1.4773≠	2
30	1.4754	4
"C"	0.7404	4
MR (Obs.)	175.02≠	2
MR (Calc.)	174.089	5
(nD-d/2)	1.0522≠	2
Dielectric	2.189	5
A | 385 to	8.17642	4
B | 585 °C	3521.6	4
C	140.	5
A* | 385 to	3.08707	5
B* | 570 °C	3420.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.59848	5
B' | 385 °C	3979.3	5
C'	173.	5
A'* 25 to	3.51752	5
B'* 385 °C	3873.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	585.2	5

		Ref.
dt/dP		
°C/mm		
25°C	1.32×10^{12}	5
BP	0.07176	5
t_e	0.0310	5
30 mm	1.1359	5
ΔHm cal/g		
ΔHv cal/g		
25°C	78.28	5
30 mm	48.04	5
BP	39.60	5
t_e	35.66	5
t_e (d, e)	35.95	5
$\Delta Hv/T_e$	21.89	5
d | 385 to	71.74	5
e | 580 °C	0.0607	5
d' | 25 to	80.38	5
e' | 385 °C	0.0839	5
d_c g/ml		
v_c ml/g		
t_c °C	597.7	5
P_c mm	2526.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9148	5
t_e	0.8758	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.97	5
30	30.00	5
40	29.05	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1455.1	5
Exp. L.l.%/wt. u.		
Dispersion	114.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 118

NAME	n-Tritriacontylbenzene 1-Phenyltritriacontane	STRUCTURAL FORMULA  $C_{33}H_{67}$

Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{72}$	Molecular Weight 540.966

		Ref.
F.P. °C	75.	2
F.P. 100%		
B.P. °C		
760 mm	532.	2
100	437.	5
30	392.	5
10	357.	5
1	295.	5
Pressure		
mm 25°C	$0.0_{11}17$	5
t_e	2094.	5
Density		
g/ml 20°C	0.8543≠	2
d^t_4 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	-0.0_3368	4
Ref. Index		
n_D 20°C	1.4793≠	2
25	1.4773≠	2
30	1.4753	4
"C"	0.7403	4
MR (Obs.)	179.66≠	2
MR (Calc.)	178.707	5
(nD-d/2)	1.0522≠	2
Dielectric	2.188	5
A | 390 to	8.21513	4
B | 590 °C	3584.7	4
C	140.	5
A* | 390 to	3.13377	5
B* | 590 °C	3480.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.63962	5
B' | 390 °C	4050.6	5
C'	174.	5
A'* 25 to	3.56644	5
B'* 390 °C	3944.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	592.5	5

		Ref.
dt/dP		
°C/mm		
25°C	$2.46x10^{12}$	5
BP	0.07199	4
t_e	0.0310	5
30 mm	1.1430	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.31	5
30 mm	47.40	5
BP	38.80	5
t_e	34.85	5
t_e (d, e)	35.06	5
$\Delta Hv/T_e$	21.78	5
d | 390 to	71.46	5
e | 585 °C	0.0614	5
d' | 25 to	79.34	5
e' | 390 °C	0.0815	5
d_c g/ml		
v_c ml/g		
t_c °C	596.	5
P_c mm	2199.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9077	5
t_e	0.8694	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.99	5
γ 30	30.02	5
40	29.07	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1494.1	5
Exp. L.1.%/wt. u.		
Dispersion	114.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 119

NAME	n-Tetratriacontylbenzene 1-Phenyltetratriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{40}H_{74}$ — Molecular Weight 554.992

		Ref.
F. P. °C	77.	2
F. P. 100%		
B. P. °C		
760 mm	538.	2
100	442.	5
30	397.	5
10	362.	5
1	300.	5
Pressure		
mm 25°C	$0.0_{12}99$	5
t_e	2068.	5
Density		
g/ml 20°C	0.8543≠	2
d_4^t 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	-0.0_3368	4
Ref. Index		
n_D 20°C	1.4792≠	2
25	1.4772≠	2
30	1.4752	4
"C"	0.7402	4
MR (Obs.)	184.30≠	2
MR (Calc.)	183.323	5
(nD-d/2)	1.0521≠	2
Dielectric	2.188	5
A | 400 to	8.24877	4
B | 610 °C	3639.5	4
C	140.	5
A* | 400 to	3.19216	5
B* | 600 °C	3540.	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.67538	5
B' | 400 °C	4112.5	5
C'	174.	5
A'* 25 to	3.61032	5
B'* 400 °C	4005.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	598.	5

		Ref.
dt/dP		
°C/mm		
25°C	$4.23x10^{12}$	5
BP	0.07218	4
t_e	0.0314	5
30 mm	1.1490	5
ΔHm cal/g		
ΔHv cal/g		
25°C	76.24	5
30 mm	46.72	5
BP	37.56	5
t_e	33.67	5
t_e (d, e)	33.66	5
$\Delta Hv/T_e$	21.46	5
d | 395 to	72.53	5
e | 595 °C	0.0650	5
d' | 25 to	78.22	5
e' | 395 °C	0.0793	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.8915	5
t_e	0.8534	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.67	5
30	31.64	5
40	30.63	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1553.1	5
Exp. L.1.%/wt. u.		
Dispersion	113.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 120

NAME	n-Pentatriacontylbenzene 1-Phenylpentatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{41}H_{76}$ — Molecular Weight 569.018

		Ref.
F.P. °C	79.	2
F.P. 100%		
B.P. °C		
760 mm	544.	2
100	448.	5
30	403.	5
10	367.	5
1	305.	5
Pressure mm 25°C	$0.0_{12}56$	5
t_e	2128.	5
Density g/ml 20°C	0.8543≠	2
d_4^t 25	0.8509≠	2
30	0.8475	4
a	0.8679	4
b	-0.0_3368	4
Ref. Index n_D 20°C	1.4792≠	2
25	1.4772≠	2
30	1.4752	4
"C"	0.7402	4
MR (Obs.)	188.95≠	2
MR (Calc.)	187.943	5
(nD-d/2)	1.0521≠	2
Dielectric	2.188	5
A | 400 to	8.28283	4
B | 610 °C	3695.0	4
C	140.	5
A* | 400 to	3.21872	5
B* | 600 °C	3590.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.7116	5
B' | 400 °C	4175.2	5
C'	174.	5
A'* 25 to	3.6544	5
B'* 400 °C	4067.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	606.	5

		Ref.
dt/dP °C/mm		
25°C	7.31×10^{12}	5
BP	0.07236	4
t_e	0.0307	5
30 mm	1.1549	5
ΔHm cal/g		
ΔHv cal/g		
25°C	75.24	5
30 mm	46.08	5
BP	37.81	5
t_e	33.83	5
t_e (d,e)	34.18	5
$\Delta Hv/T_e$	21.89	5
d | 400 to	69.72	5
e | 590 °C	0.0586	5
d' | 25 to	77.16	5
e' | 400 °C	0.0771	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9089	5
t_e	0.8702	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	31.04	5
γ 30	30.06	5
40	29.11	5
Parachor [P] 20°C		
30		
40		
Sugd.	1572.1	5
Exp. L.1.%/wt. u.		
Dispersion	113.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 121

NAME	n-Hexatriacontylbenzene 1-Phenylhexatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{42}H_{78}$ — Molecular Weight 583.044

		Ref.
F.P. °C	80.	2
F.P. 100%		
B.P. °C		
760 mm	549.	2
100	453.	5
30	407.	5
10	372.	5
1	309.	5
Pressure mm 25°C	$0.0_{12}35$	5
t_e	2097.	5
Density g/ml 20°C	0.8542≠	2
d_4^t 25	0.8509≠	2
30	0.8476	4
a	0.8674	4
b	-0.0_3366	4
Ref. Index n_D 20°C	1.4791≠	2
25	1.4771≠	2
30	1.4752	4
"C"	0.7401	4
MR (Obs.)	193.59≠	2
MR (Calc.)	192.561	5
(nD-d/2)	1.0520≠	2
Dielectric	2.188	5
A | 405 to	8.31154	4
B | 610 °C	3741.8	4
C	140.	5
A* | 405 to	3.26943	5
B* | 600 °C	3640.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.74211	5
B' | 405 °C	4228.1	5
C'	174.	5
A'* 25 to	3.6930	5
B'* 405 °C	4119.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	610.	5

		Ref.
dt/dP °C/mm		
25°C	1.16×10^{13}	5
BP	0.07250	4
t_e	0.0311	5
30 mm	1.1597	5
ΔHm cal/g		
ΔHv cal/g		
25°C	74.14	5
30 mm	45.39	5
BP	36.56	5
t_e	32.73	5
t_e (d, e)	32.77	5
$\Delta Hv/T_e$	21.61	5
d | 405 to	70.71	5
e | 610 °C	0.0622	5
d' | 25 to	76.02	5
e' | 405 °C	0.0752	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.8917	5
t_e	0.8536	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	31.04	5
30	30.09	5
40	29.17	5
Parachor [P] 20°C		
30		
40		
Sugd.	1611.1	5
Exp. L.1.%/wt. u.		
Dispersion	113.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 122

NAME	Fluorobenzene Phenyl fluoride	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_6H_5F	Molecular Weight 96.100

		Ref.
F. P. °C	-41.9	3
F. P. 100%		
B. P. °C		
760 mm	85.1	3'
100	31.3	5
30	7.5	5
10	-10.7	5
1	-41.	5
Pressure mm 25°C	74.33	4
t_e	986.4	5
Density g/ml 20°C	1.0225	3'
d_4^t 25	1.0165	4
30	1.0104	3'
a	1.0463	4
b	-0.00118	4
Ref. Index n_D 20°C	1.46837	3
25	1.46553	4
30	1.46256	4
"C"	0.6052	4
MR (Obs.)	26.020	4
MR (Calc.)	26.229	5
(nD-d/2)	0.9571	4
Dielectric	5.42	3²
A | 0 to	7.04659	3'
B | 145 °C	1283.5	3'
C	223.	5
A* | 0 to	1.41361	5
B* | 105 °C	1197.6	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 145 to	7.0756	4
Bc | t_c °C	1305.	4
Cc	226.	4
Cryos. A° consts. B°		
t_e °C	93.7	5

		Ref.
dt/dP °C/mm		
25°C	0.2800	4
BP	0.0423	4
t_e	0.0344	5
30 mm	0.5990	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.35	5
30 mm	90.64	5
BP	80.09	4
t_e	78.89	5
t_e (d, e)	78.92	5
$\Delta Hv/T_e$	20.66	5
d | 5 to	91.65	5
e | 95 °C	0.1358	5
d' | to		
e' | °C		
d_c g/ml	0.3541	3'
v_c^c ml/g	2.824	3'
t_c^c °C	286.65	3'
P_c mm	33912.	3'
PV/RT		
25°C	0.9999	5
30 mm	1.0000	5
BP	0.9725	4
t_e	0.9663	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		27.51	5
γ 30		26.23	5
40		24.98	5
Parachor [P] 20°C			
30			
40			
Sugd.		215.3	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3, 3'

PURIFICATION: 3, 3'

LITERATURE REFERENCES: 3 Timmermans; 3' Young; 3² NBS Circ. 514

TABLE I. ALKYL AND HALO BENZENES

No. 123

NAME	Benzotrifluoride α,α,α-Trifluorotoluene	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 1	Molecular Formula $C_7H_5F_3$ — Molecular Weight 146.11

		Ref.
F.P. °C	-29.11	1
F.P. 100%		
B.P. °C		
760 mm	102.06	1
100	45.30	4
30	20.2	4
10	1.0	5
1	-30.6	5
Pressure		
mm 25°C	38.55	5
t_e	1019.5	5
Density		
g/ml 20°C	1.18838	1
d_4^t 25	1.18129	1
30	1.17351	4
a	1.21665	4
b	-0.00143	4
Ref. Index		
n_D 20°C	1.41458	1
25	1.41225	1
30	1.39991	1
"C"	0.4642	4
MR (Obs.)	30.762	4
MR (Calc.)	30.475	5
(nD-d/2)	0.82039	4
Dielectric	9.035	1
A | 0 to	7.00708	1
B | 150 °C	1331.3	1
C	220.58	1
A* | 10 to	1.56264	5
B* | 125 °C	1248.0	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 150 to	7.42586	5
Bc | t_c °C	1658.7	5
Cc	263.5	5
Cryos. A*	0.02732	1
consts. B*		
t_e °C	112.35	5

		Ref.
dt/dP		
°C/mm		
25°C	0.5104	5
BP	0.04468	4
t_e	0.03547	5
30 mm	0.6302	4
ΔHm cal/g	22.04	4
ΔHv cal/g		
25°C	61.48	5
30 mm	61.90	5
BP	53.82	5
t_e	52.80	5
t_e (d, e)	52.80	5
ΔHv/T_e	20.01	5
d | 15 to	63.89	5
e | 120 °C	0.0987	5
d' | to		
e' | °C		
d_c g/ml	0.427	5
v_c ml/g	2.34	5
t_c °C	289.5	5
P_c mm	26698.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9587	5
t_e	0.9504	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	0.4878	1
40	0.4039	1
60	0.3441	1
80	0.2979	1
B^v | 20 to	365.61	4
A^v | 90 °C	2.43894	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		23.41	1
30		22.34	1
40		21.28	1
Parachor [P]			
20°C		270.5	4
30		270.6	4
40		270.8	4
Sugd.		271.9	5
Exp. L.l.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water		Decomp.	1
Water in		Decomp.	1

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, Lit.

PURIFICATION: Dow distillation, Lit.

LITERATURE REFERENCES: 3 JACS 73, 91 (1951) Potter and Saylor

No. 124

NAME	Chlorobenzene	STRUCTURAL FORMULA
		

Mole % Pur. 99.98	Ref. 1	Molecular Formula C_6H_5Cl	Molecular Weight 112.557

		Ref.
F.P. °C	-45.58	1
F.P. 100%		
B.P. °C		
760 mm	131.70	1
100	69.8	4
30	42.4	4
10	21.6	5
1	-13.	5
Pressure		
mm 25°C	11.75	4
t_e	1109.	5
Density		
g/ml 20°C	1.10578	1
d_4^t 25	1.10037	1
30	1.09477	4
a	1.12743	4
b	-0.00109	4
Ref. Index		
n_D 20°C	1.52406	1
25	1.52138	1
30	1.51837	4
"C"	0.6216	4
MR (Obs.)	31.17	4
MR (Calc.)	31.174	5
(nD-d/2)	0.97120	4
Dielectric	5.621	3^2
A | 40 to	6.94504	4
B | 200 °C	1413.12	4
C	216.0	4
A* | 40 to	1.34982	4
B* | 205 °C	1321.8	4
K	34.2	4
c	-0.16067	4
t_x | 205 to	207.2	4
t_x | 310 °C	420.	5
A' | 0 to	7.49823	4
B' | 40 °C	1654.0	4
C'	232.3	5
A'* 0 to	1.89473	5
B'* 40 °C	1527.4	5
Ac | 200 to	7.58977	4
Bc | t_c °C	2001.9	4
Cc	295.3	4
Cryos. A° consts. B°		
t_e °C	146.24	4

		Ref.
dt/dP °C/mm		
25°C	1.4794	4
BP	0.0489	4
t_e	0.0364	5
30 mm	0.6842	4
ΔHm cal/g		
ΔHv cal/g		
25°C	90.31	4
30 mm	85.66	4
BP	74.39	3
t_e	72.74	5
t_e (d, e)	72.74	5
$\Delta Hv/T_e$	19.52	5
d | 40 to	90.99	5
e | 150 °C	0.1248	5
d' | 0 to	89.35	5
e' | 40 °C	0.0864	5
d_c g/ml	0.3654	3
v_c ml/g	2.737	3
t_c °C	359.2	3
P_c mm	33926.	3
PV/RT		
25°C	1.0000	5
30 mm	0.99992	5
BP	0.9604	5
t_e	0.9499	5
t_c	0.265	4
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	0.7232	1
40	0.5837	1
60	0.4858	1
80	0.4139	1
B^V | 30 to	412.87	4
A^V | 90 °C	2.44796	4
(B^V) | to		
(A^V) | °C		
c_p liq 293.2 °K	0.3186	$3'$
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension			
dynes/cm. 20°C		33.19	1
γ 30		31.98	1
40		30.77	1
Parachor [P]			
20°C		244.33	4
30		244.51	4
40		244.62	4
Sugd.		244.3	5
Exp. L.1.%/wt.		6.6 ≠	3^3
u.		29. #	3^3
Dispersion			
Flash Point °C		29.	3^5
Fire Point			
M Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		240.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water		0.050	1
Water in		4.4	1

$T_R = 0.75\,T_c$ ≠ 100°C # 150°C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 Young; $3'$ Timmermans; 3^2 NBS 514; 3^3 NFPA 325

TABLE I. ALKYL AND HALO BENZENES

No. 125

NAME	o-Dichlorobenzene 1,2-Dichlorobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.85	Ref. 1	Molecular Formula $C_6H_4Cl_2$ — Molecular Weight 147.006

		Ref.
F. P. °C	-17.0	1
F. P. 100%		
B. P. °C 760 mm	180.46	4
100	112.4	4
30	82.4	4
10	59.6	5
1	21.	5
Pressure mm 25°C	1.282	5
t_e	1221.5	5
Density g/ml 20°C	1.30570	1
d_4^t 25	1.30015	1
30	1.29457	4
a	1.32790	4
b	-0.00111	4
Ref. Index n_D 20°C	1.55154	1
25	1.54920	1
30	1.54650	4
"C"	0.5521	1
MR (Obs.)	35.94	4
MR (Calc.)	36.041	5
(nD-d/2)	0.8985	5
Dielectric	9.93	1
A | 80 to	6.92400	4
B | 250 °C	1538.3	4
C	200.0	4
A* | 80 to	1.43584	5
B* | 220 °C	1450.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.26715	5
B' | 80 °C	1738.2	5
C'	217.8	5
A'* 15 to	1.76521	5
B'* 80 °C	1641.1	5
Ac | 250 to	7.33302	5
Bc | t_c °C	1928.2	5
Cc	253.8	5
Cryos. A* consts. B*	0.02215	1
t_e °C	200.9	5

		Ref.
dt/dP °C/mm 25°C	11.490	5
BP	0.0538	5
t_e	0.03715	5
30 mm	0.7506	4
ΔHm cal/g	21.70	1
ΔHv cal/g 25°C	81.61	5
30 mm	75.92	5
BP	63.88	5
t_e	61.63	5
t_e (d, e)	61.38	5
$\Delta Hv/T_e$	19.11	5
d | 80 to	85.91	5
e | 200 °C	0.1221	5
d' | 15 to	84.09	5
e' | 80 °C	0.0992	5
d_c g/ml	0.408	5
v_c ml/g	2.449	5
t_c °C	424.1	5
P_c mm	30800.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9423	5
t_e	0.9261	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η 20 °C	1.0656	1
40	0.8288	1
60	0.6636	1
80	0.5729	1
B^v | 30 to	443.51	4
A^v | 90 °C	2.50238	4
(B^v) | to		
(A^v) | °C		
c_p liq. 20 °C	0.275	1
40	0.298	1
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension dynes/cm. 20°C		37.18	1
σ 30		36.02	1
40		34.92	1
Parachor [P] 20°C			
30			
40			
Sugd.		281.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C		93.3	1
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		351.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in		2.1	1

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 126

NAME	m-Dichlorobenzene 1, 3-Dichlorobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.04	Ref. 1	Molecular Formula $C_6H_4Cl_2$
Molecular Weight 147.006		

		Ref.
F. P. °C	-24.76	1
F. P. 100%		
B. P. °C		
760 mm	173.08	1
100	105.57	4
30	75.9	4
10	53.3	5
1	16.	5
Pressure		
mm 25°C	1.889	5
t_e	1214.	5
Density		
g/ml 20°C	1.28844	1
d_4^t 25	1.28280	1
30	1.27712	4
a	1.31101	4
b	-0.00113	4
Ref. Index		
n_D 20°C	1.54586	1
25	1.54337	1
30	1.54076	4
"C"	0.5543	4
MR (Obs.)	36.14	4
MR (Calc.)	36.041	5
(nD-d/2)	0.90197	5
Dielectric	5.04	3
A | 75 to	6.88045	4
B | 240 °C	1496.2	4
C	201.	5
A* | 75 to	1.38472	5
B* | 205 °C	1406.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.22086	5
B' | 75 °C	1690.7	5
C'	218.4	5
A'* 15 to	1.72298	5
B'* 75 °C	1594.3	5
Ac | 240 to	7.28934	5
Bc | t_c °C	1878.8	5
Cc	254.2	5
Cryos. A°		
consts. B°		
t_e °C F	193.11	5

		Ref.
dt/dP		
°C/mm		
25°C	8.061	5
BP	0.0534	5
t_e	0.0372	5
30 mm	0.7419	4
ΔHm cal/g		
ΔHv cal/g		
25°C	78.96	5
30 mm	74.02	5
BP	62.79	5
t_e	60.61	5
t_e (d, e)	60.48	5
ΔHv/T_e	19.11	5
d | 75 to	82.79	5
e | 190 °C	0.1156	5
d' | 25 to	81.38	5
e' | 75 °C	0.0969	5
d_c g/ml	0.410	5
v_c ml/g	2.44	5
t_c °C	410.8	1
P_c mm	29112.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9354	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	36.84	5
30	35.56	5
40	34.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	281.1	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C	72.0	5
Fire Point		
M Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	352.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 NBS Circ. 514

TABLE I. ALKYL AND HALO BENZENES

No. 127

NAME	p-Dichlorobenzene 1,4-Dichlorobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.91	Ref. 1	Molecular Formula $C_6H_4Cl_2$
	Molecular Weight 147.006	

		Ref.
F. P. °C	53.1	1
F. P. 100%		
B. P. °C		
760 mm	174.21	1
100	106.73	4
30	77.06	4
10	54.5	5
1	16.7	5
Pressure		
mm 25°C	1.759	5
t_e	1213.	5
Density		
g/ml 55 C	1.24750	1
d_4^t 60	1.24166	1
65	1.23581	4
a 55°C	1.31159	4
b	-0.00116	4
Ref. Index		
n_D 55°C	1.52849	1
60	1.52586	4
65	1.52319	5
"C" 55°C	0.5554	4
MR (Obs.)55°	36.323	4
MR (Calc.)	36.041	5
(nD-d/2)55°	0.90474	5
Dielectric 55°	2.465	1
A | 75 to	6.89797	4
B | 240 °C	1507.3	4
C	201.	4
A* | 75 to	1.40489	5
B* | 205 °C	1418.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.23948	5
B' | 75 °C	1703.2	5
C'	218.	5
A'* 15 to	1.74063	5
B'* 75 °C	1606.6	5
Ac | 240 to	7.30658	5
Bc | t_c °C	1889.6	5
Cc	254.	5
Cryos. A* consts. B*	0.02116	1
t_e °C F	194.2	5

		Ref.
dt/dP °C/mm		
25°C	8.595	5
BP	0.0534	5
t_e	0.0371	5
30 mm	0.7426	4
ΔHm cal/g	30.434	1
ΔHv cal/g		
25°C	79.49	5
30 mm	74.44	5
BP	63.04	5
t_e	60.85	5
t_e (d, e)	60.69	5
ΔHv/T_e	19.06	5
d | 75 to	83.48	5
e | 190 °C	0.1173	5
d' | 20 to	81.92	5
e' | 75 °C	0.0970	5
d_c g/ml	0.395	5
v_c ml/g	2.53	5
t_c °C	411.6	1
P_c mm	29300.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9481	5
t_e	0.9330	5
t_c	0.268	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm 60C	31.33	1
70	30.42	1
117	25.44	3
Parachor [P]		
60°C	280.1	4
70	280.7	4
117	281.3	4
Sugd.	281.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C	68.3	1
Fire Point	140.5	1
M. Spec.	Yes	1
Ultra V.	Yes	1
X-Ray Dif.	Yes	1
Infrared	353.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 Timmermans

No. 128

NAME	1,2,4-Trichlorobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 1	Molecular Formula $C_6H_3Cl_3$
	Molecular Weight 181.455	

		Ref.
F.P. °C	16.92	1
F.P. 100%	16.95	1
B.P. °C		
760 mm	213.48	1
100	141.68	4
30	109.52	4
10	84.8	5
1	43.1	5
Pressure		
mm 25°C	0.2907	5
t_e	1324.	5
Density		
g/ml 20°C	1.45420	1
d_4^t 25	1.44829	1
30	1.44237	4
a	1.47784	4
b	-0.00118	4
Ref. Index		
n_D 20°C	1.57168	1
25	1.56933	1
50	1.55765	1
"C"	0.5127	4
MR (Obs.)	41.038	4
MR (Calc.)	40.908	5
(nD-d/2)	0.84458	4
Dielectric	3.945	1
A | 110 to	7.19508	1
B | 280 °C	1827.0	1
C	210.	1
A* | 25 to	1.74692	5
B* | 110 °C	1721.8	5
K		
c		
t_x | to		
t_x | °C		
A' | 20 to	7.5553	5
B' | 110 °C	2064.4	5
C'	230.1	5
A'* 25 to	2.1092	5
B'* 110 °C	1953.3	5
Ac | 280 to	7.19792	5
Bc | t_c °C	1829.7	5
Cc	210.4	5
Cryos. A°	0.02338	1
consts. B°		
t_e °C F	238.54	5

		Ref.
dt/dP		
°C/mm		
25°C	47.094	5
BP	0.0561	4
t_e	0.0361	5
30 mm	0.8089	4
ΔHm cal/g	21.53	4
ΔHv cal/g		
25°C	71.12	5
30 mm	66.10	5
BP	57.43	5
t_e	55.38	5
t_e (d, e)	55.34	5
ΔHv/T_e	19.64	5
d | 110 to	75.23	5
e | 240 °C	0.0834	5
d' | 20 to	72.60	5
e' | 110 °C	0.0594	5
d_c g/ml	0.471	5
v_c ml/g	2.12	5
t_c °C	461.8	5
P_c mm	29900.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9476	5
t_e	0.9299	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	1.4225	1
40	1.0252	1
60	0.7915	1
80	0.6402	1
B^v | 30 to	565.53	4
A^v | 90 °C	2.20516	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		39.10	1
γ 30		37.98	1
40		36.86	1
Parachor [P]			
20°C		312.0	4
30		312.3	4
40		312.5	4
Sugd.		318.7	5
Exp. L.			
1. %/wt.			
u.			
Dispersion			
Flash Point °C		110.	3
Fire Point		None	1
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3, Dow

PURIFICATION: Dow distillation, crystallization

LITERATURE REFERENCES: 3 Prod. Dev. Bull. CB-3, Solvay Proc. Div.

TABLE I. ALKYL AND HALO BENZENES

No. 129

NAME	o-Chlorotoluene 1-Chloro-2-methylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_7Cl
		Molecular Weight 126.583

		Ref.
F. P. °C	-35.1	3
F. P. 100%		
B. P. °C 760 mm	159.15	3
100	93.61	4
30	64.69	4
10	42.6	5
1	5.8	5
Pressure mm 25°C	3.619	5
t_e	1179.	5
Density g/ml 20°C	1.08245	4
d_4^t 25	1.07762	3
30	1.07273	3
a	1.10178	4
b	-0.0_3967	4
Ref. Index n_D 20°C	1.52680	1
25	1.52221	1
30	1.51760	4
"C"	0.6382	4
MR (Obs.)	35.473	4
MR (Calc.)	35.792	5
(nD-d/2)	0.9856	4
Dielectric	4.73	3
A | 65 to	6.94763	4
B | 220 °C	1497.2	4
C	209.0	5
A* | 65 to	1.38854	5
B* | 200 °C	1404.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.29227	5
B' | 65 °C	1691.79	5
C'	226.2	5
A'* 10 to	1.72744	5
B'* 65 °C	1591.85	5
Ac | 220 to	7.3637	5
Bc | t_c °C	1876.5	5
Cc	260.4	5
Cryos. A*		
consts. B*		
t_e °C F	177.27	5

		Ref.
dt/dP °C/mm		
25°C	4.478	5
BP	0.0517	4
t_e	0.0367	5
30 mm	0.7242	4
ΔHm cal/g	15.80	3
ΔHv cal/g		
25°C	86.15	5
30 mm	82.49	5
BP	70.87	5
t_e	68.83	5
t_e (d, e)	68.64	5
$\Delta Hv/T_e$	19.34	5
d | 65 to	90.45	5
e | 175 °C	0.1230	5
d' | 15 to	88.45	5
e' | 65 °C	0.0922	5
d_c g/ml	0.348	5
v_c ml/g	2.869	5
t_c °C	385.9	5
P_c mm	28862.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9532	5
t_e	0.9409	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. 0°C	0.315	3
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 15°C	33.99	3
γ 20	33.44	3
30	32.33	3
Parachor [P] 20°C	281.3	4
30	281.4	4
40	281.4	4
Sugd.	283.3	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.	Yes	3
X-Ray Dif.		
Infrared	Yes	3
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3

PURIFICATION: 3

LITERATURE REFERENCES: 3 Characteristics der Corps Chim. Purs. et Tech. editor Dunod, Paris, France

No. 130

NAME	3,4-Dichlorotoluene 3,4-Dichloro-1-methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 1	Molecular Formula $C_7H_6Cl_2$ — Molecular Weight 161.032

		Ref.
F.P. °C	-15.25	1
F.P. 100%		
B.P. °C		
760 mm	208.92	1
100	137.47	4
30	105.87	4
10	81.8	5
1	41.4	5
Pressure		
mm 25°C	0.315	5
t_e	1303.	5
Density		
g/ml 20°C	1.25256	1
d_4^{25}	1.24751	1
d_4^{30}	1.24245	4
a	1.27276	4
b	-0.00101	4
Ref. Index		
n_D 20°C	1.54712	1
25	1.54494	1
50	1.53368	1
"C"	0.5714	4
MR (Obs.)	40.780	4
MR (Calc.)	40.659	5
(nD-d/2)	0.92084	4
Dielectric	8.970	1
A | 105 to	6.97925	4
B | 270 °C	1655.44	4
C	195.0	4
A* | 105 to	1.50376	5
B* | 245 °C	1562.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.32588	5
B' | 105 °C	1870.60	5
C'	214.0	5
A'* 25 to	1.85124	5
B'* 105 °C	1772.11	5
Ac | 270 to	7.3839	5
Bc | t_c °C	2053.3	5
Cc	247.9	5
Cryos. A*	0.01932	1
consts. B*		
t_e °C F	233.4	5

		Ref.
dt/dP		
°C/mm		
25°C	42.149	5
BP	0.0563	4
t_e	0.0369	5
30 mm	0.7916	4
ΔHm cal/g	15.85	4
ΔHv cal/g		
25°C	82.78	5
30 mm	74.67	5
BP	62.92	5
t_e	60.39	5
t_e (d,e)	60.12	5
$\Delta Hv/T_e$	19.20	5
d | 105 to	86.74	5
e | 230 °C	0.1140	5
d' | 25 to	85.28	5
e' | 105 °C	0.1003	5
d_c g/ml	0.407	5
v_c ml/g	2.456	5
t_c °C	451.2	5
P_c mm	27986.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9427	5
t_e	0.9246	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.2542	1
40	0.9403	1
60	0.7447	1
80	0.6121	1
B^v | 30 to	515.64	4
A^v | 90 °C	2.32692	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 20°C		36.50	1
γ 30		35.61	1
40		34.58	1
Parachor [P]			
20°C		316.0	4
30		316.8	4
40		316.7	4
Sugd.		320.5	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in 30°C		0.0026	1

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

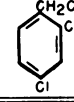
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 131

NAME	2,4-Dichlorobenzyl chloride α,2,4-Trichlorotoluene	STRUCTURAL FORMULA 

Mole % Pur. 99.53	Ref. 1	Molecular Formula $C_7H_5Cl_3$	Molecular Weight 195.481

		Ref.
F.P. °C	-2.60	1
F.P. 100%		
B.P. °C		
760 mm	248.03	1
100	172.57	1
30	138.87	4
10	113.0	5
1	69.4	5
Pressure		
mm 25°C	0.04012	5
t_e	1383.	5
Density		
g/ml 20°C	1.40683	1
d_4^t 25	1.40139	1
30	1.39595	4
a	1.42859	4
b	-0.00109	4
Ref. Index		
n_D 20°C	1.57606	1
25	1.57383	1
50	1.56271	1
"C"	0.5338	4
MR (Obs.)	47.035	4
MR (Calc.)	46.258	5
(nD-d/2)	0.87265	4
Dielectric	6.290	1
A 140 to	7.14735	1
B 305 °C	1881.38	1
C	192.93	1
A* 140 to	1.75073	5
B* 290 °C	1789.19	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.50457	5
B' 140 °C	2125.90	5
C'	213.8	5
A'* 25 to	2.09119	5
B'* 140 °C	2022.0	5
Ac 305 to	7.5540	5
Bc t_c °C	2308.4	5
Cc	246.6	5
Cryos. A*	0.02274	1
consts. B*		
t_e °C F	276.64	5

		Ref.
dt/dP		
°C/mm		
25°C	290.43	5
BP	0.0591	4
t_e	0.0368	5
30 mm	0.8471	4
ΔHm cal/g	16.08	4
ΔHv cal/g		
25°C	77.57	5
30 mm	67.92	5
BP	56.71	5
t_e	54.15	5
t_e (d,e)	53.77	5
ΔHv/T_e	19.25	5
d 140 to	82.19	5
e 270 °C	0.1027	5
d' 25 to	79.69	5
e' 140 °C	0.0848	5
d_c g/ml		
v_c ml/g		
t_c °C	498.1	5
P_c mm	28460.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9256	5
t_e	0.9039	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	2.6000	1
40	1.6617	1
60	1.1876	1
100	0.9084	1
B^v 30 to	510.93	4
A^v 110 °C	2.58923	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		41.32	1
30		40.19	1
40		39.06	1
Parachor [P]			
20°C		352.3	4
30		352.6	4
40		352.8	4
Sugd.		357.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow

LITERATURE REFERENCES:

No. 132

NAME	o-Chlorobenzotrichloride o, α, α, α-Tetrachlorotoluene	STRUCTURAL FORMULA
Mole % Pur. 99.98	Ref. 1	Molecular Formula $C_7H_4Cl_4$	Molecular Weight 229.930

		Ref.
F.P. °C	29.37	1
F.P. 100%		
B.P. °C		
760 mm	264.27	1
100	185.01	4
30	149.67	4
10	122.6	5
1	77.0	5
Pressure mm 25°C	0.0252	5
t_e	1398.	5
Density g/ml 20°C	1.51870	1
d_4^t 25	1.51312	1
30	1.50754	4
a	1.54102	4
b	-0.00112	4
Ref. Index n_D 20°C	1.58362	1
25	1.58142	1
30	1.57032	1
"C"	0.5005	4
MR (Obs.)	50.628	4
MR (Calc.)	50.393	5
(nD-d/2)	0.82427	5
Dielectric	8.989	1
A | 150 to	7.11794	4
B | 315 °C	1951.37	4
C	196.27	4
A* | 150 to	1.80509	5
B* | 305 °C	1863.73	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.47331	5
B' | 150 °C	2205.	5
C'	218.1	5
A'* 20 to	2.11803	5
B'* 150 °C	2096.2	5
Ac | 315 to	7.5302	5
Bc | t_c °C	2395.6	5
Cc	251.5	5
Cryos. A°	0.01813	1
consts. B°		
t_e °C F	294.96	5

		Ref.
dt/dP		
°C/mm		
25°C	461.466	5
BP	0.0621	4
t_e	0.0384	5
30 mm	0.8878	4
ΔHm cal/g	14.32	1
ΔHv cal/g		
25°C	66.04	5
30 mm	58.02	5
BP	47.90	5
t_e	45.55	5
t_e (d, e)	45.19	5
$\Delta Hv/T_e$	18.43	5
d | 150 to	71.24	5
e | 290 °C	0.0883	5
d' | 25 to	67.65	5
e' | 150 °C	0.0643	5
d_c g/ml		
v_c ml/g		
t_c °C	511.0	5
P_c mm	24455.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9100	5
t_e	0.8844	5
t_c	0.23	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	5.4408	1
40	3.16736	1
60	2.10212	1
80	1.50080	1
B^v | 30 to	897.09	4
A^v | 90 °C	3.63643	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		42.34	1
γ 30		41.16	1
40		40.03	1
Parachor [P]			
20°C		386.2	4
30		386.3	4
40		386.5	4
Sugd.		388.8	5
Exp. L.I. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water		Decomp.	1
Water in		Decomp.	1

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

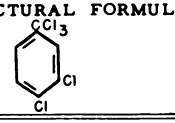
SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 133

NAME	3,4-Dichlorobenzotrichloride	STRUCTURAL FORMULA
Mole % Pur. 99.68	Ref. 1	Molecular Formula $C_7H_3Cl_5$
	Molecular Weight 264.379	



		Ref.
F.P. °C	25.82	1
F.P. 100%		
B.P. °C 760 mm	283.14	1
100	202.89	4
30	167.30	4
10	140.1	5
1	95.	5
Pressure mm 25°C	0.00459	5
t_e	1436.	5
Density g/ml 20°C	1.59134	1
d_4^{25}	1.58544	1
30	1.57954	4
a	1.61494	4
b	-0.00118	4
Ref. Index n_D 20°C	1.58860	1
25	1.58643	1
30	1.57550	1
"C"	0.4815	4
MR (Obs.)	55.958	4
MR (Calc.)	55.260	5
(nD-d/2)	0.79293	4
Dielectric		
A | 165 to	6.98524	4
B | 390 °C	1868.905	4
C	172.0	1
A* | 165 to	1.74321	5
B* | 330 °C	1792.43	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.33225	5
B' | 165 °C	2111.80	5
C'	193.4	5
A'* 25 to	2.05561	5
B'* 165 °C	2018.0	5
Ac | 330 to	7.4091	5
Bc | t_c °C	2321.3	5
Cc	230.	5
Cryos. A* consts. B*	0.02267	1
t_e °C F	316.2	5

		Ref.
dt/dP °C/mm		
25°C	2136.9	5
BP	0.0634	4
t_e	0.0386	5
30 mm	0.8918	4
ΔHm cal/g	15.23	5
ΔHv cal/g		
25°C	68.15	5
30 mm	54.52	5
BP	43.60	5
t_e	40.88	5
t_e (d, e)	40.48	5
ΔHv/T_e	18.34	5
d | 165 to	70.29	5
e | 310 °C	0.0943	5
d' | 25 to	70.55	5
e' | 165 °C	0.0958	5
d_c g/ml		
v_c ml/g		
t_c °C	524.0	5
P_c mm	21355.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9075	5
t_e	0.8756	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	4.5369	1
40	2.6711	1
60	1.8034	1
80	1.3221	1
B^v | 30 to	844.66	4
A^v | 90 °C	3.72982	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	41.70	1
γ 30	40.58	1
40	39.50	1
Parachor [P] 20°C	422.2	4
30	422.5	4
40	422.8	4
Sugd.	432.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 134

NAME	1-Chloro-2-ethylbenzene o-Chloroethylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.61	Ref. 1	Molecular Formula C_8H_9Cl	Molecular Weight 140.609

		Ref.
F.P. °C	-83.32	1
F.P. 100%		
B.P. °C		
760 mm	178.43	1
100	111.34	4
30	81.67	4
10	59.0	5
1	21.	5
Pressure		
mm 25°C	1.309	5
t_e	1236.	5
Density		
g/ml 20°C	1.05690	1
d_4^{25}	1.05228	1
d_4^{30}	1.04763	4
a	1.07538	4
b	-0.0_3925	4
Ref. Index		
n_D 20°C	1.52175	1
25	1.51905	1
30	1.51688	1
"C"	0.6478	4
MR (Obs.)	40.558	4
MR (Calc.)	40.410	5
(nD-d/2)	0.99330	4
Dielectric		
A | 80 to	6.98169	4
B | 230 °C	1556.0	4
C	201.0	5
A* | 80 to	1.45261	5
B* | 210 °C	1462.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.32848	5
B' | 80 °C	1758.2	5
C'	218.8	5
A'* 10 to	1.80780	5
B'* 80 °C	1661.06	5
Ac | 230 to	7.3867	5
Bc | t_c °C	1926.1	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_e °C F	199.02	5

		Ref.
dt/dP		
°C/mm		
25°C	11.216	5
BP	0.0529	4
t_e	0.0361	5
30 mm	0.7434	4
ΔHm cal/g		
ΔHv cal/g		
25°C	85.59	5
30 mm	79.80	5
BP	68.14	5
t_e	65.89	5
t_e (d, e)	65.65	5
ΔHv/T_e	19.62	5
d | 80 to	89.65	5
e | 200 °C	0.1206	5
d' | 25 to	88.14	5
e' | 80 °C	0.1021	5
d_c g/ml	0.346	5
v_c ml/g	2.89	5
t_c °C	399.8	5
P_c mm	26384.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9405	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	34.44	5
30	33.25	5
40	32.09	5
Parachor [P]		
20°C		
30		
40		
Sugd.	322.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C	57.0	5
Fire Point		
M Spec.		
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	515.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 135

NAME	1-Chloro-3-ethylbenzene m-Chloroethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 98.83	Ref. 1	Molecular Formula C_8H_9Cl
		Molecular Weight 140.609

		Ref.
F.P. °C	-55.04	1
F.P. 100%		
B.P. °C		
760 mm	183.77	1
100	116.04	4
30	86.07	4
10	63.2	5
1	24.9	5
Pressure		
mm 25°C	1.010	5
t_e	1248.	5
Density		
g/ml 20°C	1.05294	1
d_4^t 25	1.04826	1
30	1.04356	4
a	1.07166	4
b	-0.0_3936	4
Ref. Index		
n_D 20°C	1.51949	1
25	1.51707	1
30	1.51464	1
"C"	0.64760	4
MR (Obs.)	40.563	4
MR (Calc.)	40.586	4
(nD-d/2)	0.99302	4
Dielectric		
A | 85 to	6.99082	5
B | 235 °C	1577.3	5
C	200.	5
A* | 85 to	1.46007	5
B* | 220 °C	1483.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.33818	5
B' | 85 °C	1782.3	5
C'	218.	5
A'* 10 to	1.81406	5
B'* 85 °C	1684.44	5
Ac | 235 to	7.3954	5
Bc | t_c °C	1950.5	5
Cc	249.	5
Cryos. A* consts. B*		
t_e °C F	205.0	5

		Ref.
dt/dP		
°C/mm		
25°C	14.250	5
BP	0.0534	5
t_e	0.0362	5
30 mm	0.7511	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.32	5
30 mm	80.96	5
BP	69.06	5
t_e	66.65	5
t_e (d, e)	66.48	5
$\Delta Hv/T_e$	19.60	5
d | 85 to	91.43	5
e | 200 °C	0.1217	5
d' | 25 to	89.93	5
e' | 85 °C	0.1043	5
d_c g/ml	0.343	5
v_c ml/g	2.914	5
t_c °C	406.9	5
P_c mm	26376.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9532	5
t_e	0.9381	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	33.93	5
30	32.74	5
40	31.58	5
Parachor [P]		
20°C		
30		
40		
Sugd.	322.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C	62.0	5
Fire Point		
M. Spec.		
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	1084.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

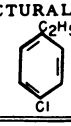
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 136

NAME	1-Chloro-4-ethylbenzene p-Chloroethylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.86	Ref. 1	Molecular Formula C_8H_9Cl	Molecular Weight 140.609

		Ref.
F.P. °C	-62.57	1
F.P. 100%		
B.P. °C		
760 mm	184.42	1
100	116.47	4
30	86.42	4
10	63.5	5
1	25.1	5
Pressure		
mm 25°C	0.9957	5
t_e	1250.	5
Density		
g/ml 20°C	1.04553	1
d_4^t 25	1.04083	1
30	1.03611	4
a	1.06433	4
b	-0.03941	4
Ref. Index		
n_D 20°C	1.51751	1
25	1.51517	1
30	1.51260	1
"C"	0.6498	4
MR (Obs.)	40.736	4
MR (Calc.)	40.410	5
(nD-d/2)	1.09475	4
Dielectric	6.049	1
A | 85 to	6.98309	4
B | 235 °C	1577.0	4
C	200.	4
A* | 85 to	1.45161	5
B* | 220 °C	1482.84	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.32997	5
B' | 85 °C	1781.96	5
C'	218.0	5
A'* 10 to	1.80553	5
B'* 85 °C	1684.02	5
Ac | 235 to	7.38761	5
Bc | t_c °C	1950.2	5
Cc	248.9	5
Cryos. A°	0.02519	1
consts. B°		
t_e °C F	205.8	5

		Ref.
dt/dP		
°C/mm		
25°C	14.459	5
BP	0.0535	4
t_e	0.0363	5
30 mm	0.7531	4
ΔHm cal/g	15.72	1
ΔHv cal/g		
25°C	87.29	5
30 mm	80.90	5
BP	69.01	5
t_e	66.58	5
t_e (d, e)	66.41	5
$\Delta Hv/T_e$	19.55	5
d | 85 to	91.39	5
e | 205 °C	0.1214	5
d' | 25 to	89.89	5
e' | 85 °C	0.1041	5
d_c g/ml	0.337	5
v_c ml/g	2.967	5
t_c °C	406.8	5
P_c mm	25926.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9531	5
t_e	0.9380	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	32.78	1
γ 30	31.68	1
40	30.64	1
Parachor [P]		
20°C	321.8	4
30	322.0	4
40	322.2	4
Sugd.	321.9	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C	62.0	5
Fire Point		
M Spec.		
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	516.	1

Solubility in +

Acetone	∞
Carbon tet.	∞
Benzene	∞
Ether	∞
n-Heptane	∞
Ethanol	∞
Water	
Water in	

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 137

NAME	2,5-Dichloro-p-xylene		STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 1	Molecular Formula $C_8H_8Cl_2$	Molecular Weight 175.058

		Ref.
F.P. °C	68.24	1
F.P. 100%		
B.P. °C 760 mm	224.32	4
100	152.84	4
30	120.88	4
10	96.3	5
1	55.	5
Pressure mm 25°C	0.1147	5
t_e	1365.	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	45.277	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 120 to	7.16727	4
B | 300 °C	1797.4	4
C	195.	4
A* | 120 to	1.71859	5
B* | 275 °C	1702.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.52575	5
B' | 120 °C	2031.0	5
C'	215.	5
A'* 25 to	2.07549	5
B'* 120 °C	1929.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01955	1
consts. B°		
t_e °C F	250.76	5

		Ref.
dt/dP °C/mm		
25°C	107.26	5
BP	0.0559	4
t_e	0.0352	5
30 mm	0.8036	4
ΔHm cal/g	25.85	4
ΔHv cal/g		
25°C	82.02	5
30 mm	73.12	5
BP	61.97	5
t_e	60.73	5
t_e (d, e)	59.30	5
$\Delta Hv/T_e$	20.29	5
d | 120 to	86.33	5
e | 250 °C	0.1078	5
d' | 25 to	84.34	5
e' | 120 °C	0.0928	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9399	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 120 °C	0.5533	1
130	0.5114	1
140≠	0.4785	1
150≠	0.4448	1
B^v | 120 to	517.02	4
A^v | 160 °C	2.42647	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C			
σ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.	359.5		5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point.			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in †			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ some sublimation

† grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 138

NAME	o-Chlorocumene 1-Chloro-2-isopropylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 100.0	Ref. 1	Molecular Formula $C_9H_{11}Cl$	Molecular Weight 154.635

		Ref.
F.P. °C	-74.42	1
F.P. 100%		
B.P. °C		
760 mm	191.08	1
100	122.43	4
30	92.05	4
10	68.8	5
1	30.0	5
Pressure mm 25°C	0.705	5
t_e	1267.	5
Density g/ml 20°C	1.03414	1
d_4^t 25	1.02950	1
d_4^t 30	1.02484	4
a	1.05270	4
b	-0.03928	4
Ref. Index n_D 20°C	1.51678	1
25	1.51437	1
30	1.51189	4
"C"	0.6561	4
MR (Obs.)	45.24	4
MR (Calc.)	45.189	5
(nD-d/2)	0.99962	4
Dielectric		
A | 90 to	6.99207	4
B | 235 °C	1599.61	4
C	198.00	4
A* | 90 to	1.49897	5
B* | 230 °C	1505.37	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.33951	5
B' | 90 °C	1807.5	5
C'	216.3	5
A'* 10 to	1.85437	5
B'* 90 °C	1709.8	5
Ac | 235 to	7.39236	5
Bc | t_c °C	1964.5	5
Cc	244.8	5
Cryos. A° consts. B°		
t_e °C F	213.28	5

		Ref.
dt/dP °C/mm		
25°C	19.850	5
BP	0.0541	4
t_e	0.0363	5
30 mm	0.7614	4
ΔHm cal/g		
ΔHv cal/g		
25°C	81.70	5
30 mm	75.06	5
BP	63.80	5
t_e	61.48	5
t_e (d, e)	61.27	5
$\Delta Hv/T_e$	19.54	5
d | 90 to	85.52	5
e | 210 °C	0.1137	5
d' | 25 to	84.18	5
e' | 90 °C	0.0991	5
d_c g/ml	0.333	5
v_c^c ml/g	3.003	5
t_c^c °C	403.5	5
P_c mm	23024.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9513	5
t_e	0.9360	5
t_c	0.253	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C	34.08	5
30	32.87	5
40	31.70	5
Parachor [P] 20°C		
30		
40		
Sugd.	361.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 139

NAME	p-Chlorocumene 1-Chloro-4-isopropylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.98	Ref. 1	Molecular Formula $C_9H_{11}Cl$
Molecular Weight 154.635		

		Ref.
F.P. °C	-12.27	1
F.P. 100%		
B.P. °C 760 mm	198.30	1
100	128.49	4
30	97.61	4
10	74.0	5
1	34.5	5
Pressure mm 25°C	0.5117	5
t_e	1274.	5
Density g/ml 20°C	1.02078	1
d_4^t 25	1.01622	1
30	1.01165	4
a	1.03902	4
b	-0.03912	4
Ref. Index n_D 20°C	1.51174	1
25	1.50938	1
30	1.50678	4
"C"	0.6585	4
MR (Obs.)	45.46	4
MR (Calc.)	45.028	5
(nD-d/2)	1.00127	4
Dielectric		
A | 95 to	6.98784	5
B | 240 °C	1623.51	5
C	197.00	5
A* | 95 to	1.50326	5
B* | 240 °C	1532.23	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.33502	5
B' | 95 °C	1834.52	5
C'	215.6	5
A'* 15 to	1.84670	5
B'* 95 °C	1736.32	5
Ac | 240 to	7.3880	5
Bc | t_c °C	1992.7	5
Cc	244.2	5
Cryos. A*		
consts. B*		
t_e °C F	221.13	5

		Ref.
dt/dP °C/mm		
25°C	26.774	5
BP	0.0550	4
t_e	0.0367	5
30 mm	0.7739	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.41	5
30 mm	76.10	5
BP	64.48	5
t_e	61.66	5
t_e (d, e)	61.42	5
$\Delta Hv/T_e$	19.29	5
d | 95 to	87.71	5
e | 220 °C	0.1189	5
d' | 25 to	85.93	5
e' | 95 °C	0.1007	5
d_c g/ml	0.340	5
v_c ml/g	2.94	5
t_c °C	412.0	5
P_c mm	22454.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9431	5
t_e	0.9261	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	32.36	5
30	31.21	5
40	30.10	5
Parachor [P] 20°C		
30		
40		
Sugd.	361.3	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C	72.0	5
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	788.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 140

NAME	Bromobenzene	STRUCTURAL FORMULA
		

Mole % Pur. 99.97	Ref. 1	Molecular Formula C_6H_5Br	Molecular Weight 157.016

		Ref.
F.P. °C	-30.82	1
F.P. 100%		
B.P. °C		
760 mm	156.06	1
100	90.54	1
30	61.70	4
10	42.07	4
1	3.7	4
Pressure mm 25°C	4.182	5
t_e	1165.0	4
Density g/ml 20°C	1.49500	1
d_4^t 25	1.48824	1
30	1.48148	4
a	1.52203	4
b	-0.00135	4
Ref. Index n_D 20°C	1.55972	1
25	1.55709	1
30	1.55426	1
"C"	0.4890	4
MR (Obs.)	33.97	4
MR (Calc.)	34.38	5
(nD-d/2)	0.81297	4
Dielectric	5.308	1
A | 60 to	6.91444	1
B | 190 °C	1474.06	1
C	209.4	1
A* | 60 to	1.44788	4
B* | 200 °C	1380.0	4
K	37.	4
c	-0.14394	4
t_x | 200 to	207.	4
t_x | 340 °C	464.	5
A' | 0 to	7.35311	5
B' | 60 °C	1696.4	5
C'	227.	5
A'* 10 to	1.88241	5
B'* 60 °C	1596.3	5
Ac | 190 to	7.35936	4
Bc | t_c °C	1853.57	4
Cc	258.2	4
Cryos. A* consts. B*	0.02039	1
t_e °C	173.67	4

		Ref.
dt/dP °C/mm		
25°C	3.887	5
BP	0.05177	4
t_e	0.03711	4
30 mm	0.7218	4
ΔHm cal/g	16.18	4
ΔHv cal/g		
25°C	69.23	5
30 mm	65.50	5
BP	56.25	4
t_e	54.77	4
t_e (d,e)	54.50	5
$\Delta Hv/T_e$	19.24	5
d | 60 to	71.61	4
e | 175 °C	0.0991	4
d' | 15 to	71.77	5
e' | 60 °C	0.1016	5
d_c g/ml	0.4853	3
v_c ml/g	2.061	3
t_c °C	397.	3
P_c mm	33912.	3
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9491	4
t_e	0.9370	5
t_c	0.3026	3
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C	36.34	3'
γ	30	35.11	5
	40	33.84	5
Parachor [P]	20°C	258.4	5
	30		
	40		
	Sugd.	258.0	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.		Yes	1
Infrared		Yes	1
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 Young; 3' Timmermans

TABLE I. ALKYL AND HALO BENZENES

No. 141

NAME	o-Dibromobenzene 1,2-Dibromobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.80	Ref. 1	Molecular Formula $C_6H_4Br_2$	Molecular Weight 235.924

		Ref.
F. P. °C	7.13	1
F. P. 100%		
B. P. °C		
760 mm	225.46	1
100	150.81	4
30	117.55	4
10	92.1	5
1	49.2	5
Pressure mm 25°C	0.1927	5
t_e	1312.	5
Density g/ml 20°C	1.98429	1
d_4^t 25	1.97670	1
30	1.96910	4
a	2.01465	4
b	-0.00152	4
Ref. Index n_D 20°C	1.61553	1
25	1.60909	1
30	1.59716	1
"C"	0.4026	4
MR (Obs.)	41.518	4
MR (Calc.)	41.837	5
(nD-d/2)	0.62339	4
Dielectric	7.793	1
A | 115 to	7.10265	4
B | 295 °C	1825.77	4
C	207.0	4
A* | 120 to	1.80879	5
B* | 280 °C	1735.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.45706	5
B' | 120 °C	2063.06	5
C'	227.4	5
A'* 20 to	2.12281	5
B'* 120 °C	1952.59	5
Ac | 295 to	7.52773	5
Bc | t_c °C	2279.0	5
Cc	266.1	5
Cryos. A*	0.01901	1
consts. B*		
t_e °C F	251.19	5

		Ref.
dt/dP °C/mm		
25°C	69.635	5
BP	0.0585	4
t_e	0.0381	5
30 mm	0.8352	4
ΔHm cal/g	12.80	4
ΔHv cal/g		
25°C	55.83	5
30 mm	51.33	5
BP	43.15	5
t_e	41.44	5
t_e (d, e)	41.19	5
$\Delta Hv/T_e$	18.64	5
d | 115 to	60.24	5
e | 250 °C	0.0758	5
d' | 25 to	57.05	5
e' | 115 °C	0.0486	5
d_c g/ml	0.644	5
v_c ml/g	1.55	5
t_c °C	486.6	5
P_c mm	31591.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9199	5
t_e	0.8992	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.4686	1
40	1.0520	1
60	0.8062	1
80	0.6470	1
B^v | 30 to	583.85	4
A^v | 90 °C	2.15788	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		43.02	1
σ 30		41.80	1
40		40.64	1
Parachor [P] 20°C		304.5	4
30		304.6	4
40		305.2	4
Sugd.		308.9	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 142

NAME	o-Bromotoluene 1-Bromo-2-methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.96	Ref. 1	Molecular Formula C_7H_7Br
Molecular Weight 171.042		

		Ref.
F.P. °C	-27.73	1
F.P. 100%		
B.P. °C		
760 mm	181.69	1
100	112.66	4
30	82.27	4
10	59.1	5
1	20.5	5
Pressure		
mm 25°C	1.358	5
t_e	1228.	5
Density		
g/ml 20°C	1.42322	1
d_4^t 25	1.41774	1
30	1.41223	4
a	1.44514	4
b	-0.00110	4
Ref. Index		
n_D 20°C	1.55650	1
25	1.55412	1
30	1.54187	1
"C"	0.5109	4
MR (Obs.)	38.662	4
MR (Calc.)	38.690	5
(nD-d/2)	0.84489	4
Dielectric		
A | 80 to	6.90847	4
B | 245 °C	1549.39	4
C	203.0	4
A* | 80 to	1.47860	5
B* | 215 °C	1458.88	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.25065	5
B' | 80 °C	1750.76	5
C'	221.0	5
A'* 20 to	1.81035	5
B'* 80 °C	1651.40	5
Ac | 245 to	7.3209	5
Bc | t_c °C	1942.3	5
Cc	256.8	5
Cryos. A°	0.02025	1
consts. B°		
t_e °C F	202.69	5

		Ref.
dt/dP		
°C/mm		
25°C	11.0514	5
BP	0.0546	5
t_e	0.0376	5
30 mm	0.7603	5
ΔHm cal/g	14.17	4
ΔHv cal/g		
25°C	68.84	5
30 mm	64.36	5
BP	54.49	5
t_e	52.58	5
t_e (d, e)	52.41	5
$\Delta Hv/T_e$	18.90	5
d | 85 to	72.52	5
e | 200 °C	0.0993	5
d' | 25 to	70.79	5
e' | 85 °C	0.0782	5
d_c g/ml	0.468	5
v_c ml/g	2.138	5
t_c °C	419.7	5
P_c mm	28151.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9439	5
t_e	0.9277	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.0045	1
40	0.7706	1
60	0.6189	1
80	0.5131	1
B^v | 30 to	488.48	4
A^v | 90 °C	2.42771	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | to			
n | °K			
o |			
m' | to			
n' | °K			
o' |			
Surface tension			
dynes/cm. 20°C		35.85	1
γ 30		34.79	1
40		33.68	1
Parachor [P]			
20°C		294.1	4
30		294.1	4
40		294.0	4
Sugd.		297.0	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 143

NAME	p-Bromotoluene 1-Bromo-4-methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.94	Ref. 1	Molecular Formula C_7H_7Br — Molecular Weight 171.042

		Ref.
F. P. °C	24.84	1
F. P. 100%		
B. P. °C		
760 mm	184.35	1
100	115.62	4
30	85.18	4
10	61.9	5
1	22.9	5
Pressure mm 25°C	1.149	5
t_e	1243.	5
Density g/ml 25 °C	1.39953	1
d_4^t 30	1.39339	1
35	1.38729	1
a	1.43023	4
b	-0.00123	4
Ref. Index n_D 25°C	1.54768	1
30	1.54433	1
50	1.53700	1
"C"	0.5119	4
MR (Obs.)	38.78	4
MR (Calc.)	38.690	5
(nD-d/2)	0.74792	4
Dielectric	5.829	1
A | 85 to	7.00762	4
B | 250 °C	1612.35	4
C	206.36	4
A* | 85 to	1.56345	5
B* | 215 °C	1516.72	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.35604	5
B' | 85 °C	1821.91	5
C'	224.7	5
A'* 25 to	1.90860	5
B'* 85 °C	1719.24	5
Ac | 250 to	7.4238	5
Bc | t_c °C	2011.3	5
Cc	259.3	5
Cryos. A* consts. B*		
t_e °C F	205.69	5

		Ref.
dt/dP °C/mm		
25°C	12.934	5
BP	0.0541	4
t_e	0.0368	5
30 mm	0.7631	4
ΔHm cal/g	20.71	4
ΔHv cal/g		
25°C	69.50	5
30 mm	65.18	5
BP	55.87	5
t_e	54.02	5
t_e (d, e)	53.86	5
$\Delta Hv/T_e$	19.29	5
d | 85 to	73.18	5
e | 200 °C	0.0939	5
d' | 25 to	71.29	5
e' | 85 °C	0.0718	5
d_c g/ml	0.456	5
v_c ml/g	2.193	5
t_c °C	419.7	5
P_c mm	28949.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9332	5
t_c	0.253	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 30 °C	0.78163	1
40	0.69285	1
60	0.56238	1
80	0.47080	1
B^v | 30 to	464.06	4
A^v | 90 °C	2.35897	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	35.47	1
30	34.16	1
40	33.04	1
Parachor [P] 20°C	296.95	4
30	296.77	4
40	296.93	4
Sugd.	297.0	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether	∞	3
n-Heptane		
Ethanol		
Water solid phase	0.011	1
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation, absorption

LITERATURE REFERENCES: 3 Lange

No. 144

NAME	1-Bromo-2-ethylbenzene o-Bromoethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 1	Molecular Formula C_8H_9Br — Molecular Weight 185.068

		Ref.
F.P. °C	-67.92	1
F.P. 100%	-67.89	1
B.P. °C		
760 mm	199.30	1
100	128.76	4
30	97.61	4
10	73.8	5
1	34.1	5
Pressure mm 25°C	0.5311	5
t_e	1263.	5
Density g/ml 20°C	1.35488	1
d_4^{t} 25	1.34917	1
30	1.34345	4
a	1.37772	4
b	-0.00114	4
Ref. Index n_D 20°C	1.54856	1
25	1.54624	1
30	1.53429	1
"C"	0.5295	4
MR (Obs.)	43.419	4
MR (Calc.)	43.308	5
(nD-d/2)	0.87112	4
Dielectric	4.580	1
A | 95 to	6.96150	4
B | 250 °C	1621.24	4
C	198.0	4
A* | 95 to	1.56782	5
B* | 235 °C	1533.46	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.30702	5
B' | 95 °C	1831.9	5
C'	216.6	5
A'* 15 to	1.89534	5
B'* 95 °C	1733.0	5
Ac | 250 to	7.3664	5
Bc | t_c °C	2006.3	5
Cc	248.6	5
Cryos. A°	0.01811	1
consts. B°		
t_e °C F	222.0	5

		Ref.
dt/dP °C/mm		
25°C	26.06	5
BP	0.0556	4
t_e	0.0374	5
30 mm	0.7803	4
ΔHm cal/g		
ΔHv cal/g		
25°C	68.99	5
30 mm	63.07	5
BP	52.75	5
t_e	50.70	5
t_e (d, e)	50.45	5
ΔHv/T_e	18.95	5
d | 95 to	72.98	5
e | 215 °C	0.1015	5
d' | 25 to	71.02	5
e' | 95 °C	0.0815	5
d_c g/ml	0.444	5
v_c ml/g	2.34	5
t_c °C	427.4	5
P_c mm	25030.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9346	5
t_e	0.9167	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.1677	1
40	0.8794	1
60	0.6969	1
80	0.5737	1
B^V | 30 to	513.03	4
A^V | 90 °C	Σ.30616	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h			
f' | | to			
g' | | °K			
h'			
m | | to			
n | | °K			
o			
m' | | to			
n' | | °K			
o'			
Surface tension dynes/cm.	20°C	35.02	1
γ	30	33.98	1
	40	32.95	1
Parachor [P]	20°C	332.3	4
	30	332.6	4
	40	332.6	4
	Sugd.	336.0	5
Exp. L.l.%/wt. u. Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water		0.0039	1
Water in			

T_R = 0.75 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE I. ALKYL AND HALO BENZENES

No. 145

NAME	1-Bromo-4-ethylbenzene p-Bromoethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 100.0	Ref. 1	Molecular Formula C_8H_9Br
		Molecular Weight 185.068

		Ref.
F.P. °C	-43.47	1
F.P. 100%		
B.P. °C		
760 mm	205.07	4
100	134.69	4
30	103.57	5
10	79.8	5
1	40.	5
Pressure		
mm 25°C	0.3424	5
t_e	1277.	5
Density		
g/ml 20°C	1.34226	1
d_4^t 25	1.33653	1
30	1.33079	4
a	1.36518	4
b	-0.00115	4
Ref. Index		
n_D 20°C	1.54475	1
25	1.54228	1
30	1.53981	4
"C"	0.5311	4
MR (Obs.)	43.73	4
MR (Calc.)	43.308	5
(nD-d/2)	0.87401	4
Dielectric		
A 105 to	6.98209	4
B 260 °C	1632.60	4
C	193.	4
A* 105 to	1.58901	5
B* 240 °C	1546.76	5
K		
c		
t_k to		
t_x °C		
A' 15 to	7.32890	5
B' 105 °C	1844.79	5
C'	212.	5
A'* 20 to	1.91928	5
B'* 105 °C	1748.3	5
Ac 260 to	7.3807	5
Bc t_c °C	2011.2	5
Cc	242.	5
Cryos. A*	0.01336	1
consts. B*		
t_e °C F	228.2	5

		Ref.
dt/dP		
°C/mm		
25°C	38.511	5
BP	0.0555	4
t_e	0.0370	5
30 mm	0.7799	4
ΔHm cal/g		
ΔHv cal/g		
25°C	72.40	5
30 mm	65.15	5
BP	54.17	5
t_e	51.95	5
t_e (d, e)	51.67	5
$\Delta Hv/T_e$	19.17	5
d 105 to	76.35	5
e 220 °C	0.1082	5
d' 25 to	74.71	5
e' 105 °C	0.0923	5
d_c g/ml	0.434	5
v_c ml/g	2.305	5
t_c °C	433.9	5
P_c mm	25545.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9338	5
t_e	0.9150	5
t_c	0.290	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	1.0545	1
40	0.8119	1
60	0.6574	1
80	0.5485	1
B^v 30 to	471.03	4
A^v 90 °C	Σ.40558	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	35.27	5
30	34.08	5
40	32.92	5
Parachor [P]		
20°C		
30		
40		
Sugd.	336.0	5
Exp. L.l.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	510.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 146

NAME	o-Bromocumene 1-Bromo-2-isopropylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.9	Ref. 1	Molecular Formula $C_9H_{11}Br$	Molecular Weight 199.904

		Ref.
F.P. °C	-59.27	1
F.P. 100%		
B.P. °C		
760 mm	210.24	4
100	138.77	4
30	107.13	4
10	83.0	5
1	42.5	5
Pressure mm 25°C	0.2899	5
t_e	1284.	5
Density g/ml 20°C	1.30195	1
d_4^{25}	1.29636	1
d_4^{30}	1.29076	5
a	1.32431	4
b	-0.00112	4
Ref. Index n_D 20°C	1.54084	1
25	1.53853	1
30	1.53592	4
"C"	0.5438	4
MR (Obs.)	48.07	4
MR (Calc.)	47.926	5
(nD-d/2)	0.89035	4
Dielectric		
A | 105 to	6.99354	4
B | 255 °C	1666.7	4
C	195.	4
A* | 105 to	1.63505	5
B* | 245 °C	1580.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.34107	5
B' | 105 °C	1883.32	5
C'	214.	5
A'* 20 to	1.95932	5
B'* 105 °C	1784.6	5
Ac | 255 to	7.3931	5
Bc | t_c °C	2043.	5
Cc	243.	5
Cryos. A° consts. B°		
t_e °C F	234.0	5

		Ref.
dt/dP °C/mm		
25°C	45.454	5
BP	0.0563	4
t_e	0.0374	5
30 mm	0.7929	4
ΔHm cal/g		
ΔHv cal/g		
25°C	67.09	5
30 mm	60.45	5
BP	50.21	5
t_e	48.10	5
t_e (d, e)	47.84	5
$\Delta Hv/T_e$	18.96	5
d | 105 to	71.10	5
e | 225 °C	0.0994	5
d' | 25 to	69.11	5
e' | 105 °C	0.0808	5
d_c g/ml	0.447	5
v_c ml/g	2.237	5
t_c °C	427.5	5
P_c mm	22157.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9294	5
t_e	0.9097	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	35.58	5
γ 30	34.37	5
40	33.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	375.0	5
Exp. L.1.%/wt. u. Dispersion		
Flash Point °C Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	1354.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	0.0013	1
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

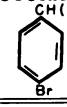
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 147

NAME	p-Bromocumene 1-Bromo-4-isopropylbenzene	STRUCTURAL FORMULA 
Mole % Pur. 99.95	Ref. 1	Molecular Formula $C_9H_{11}Br$ — Molecular Weight 199.904

		Ref.
F. P. °C	-22.37	1
F. P. 100%	-22.35	1
B. P. °C		
760 mm	219.02	1
100	146.37	4
30	114.12	4
10	89.45	5
1	48.1	5
Pressure mm 25°C	0.1969	5
t_e	1305.	5
Density		
g/ml 20°C	1.28535	1
d_4^{t} 25	1.27995	1
30	1.27454	4
a	1.30695	4
b	-0.00108	4
Ref. Index		
n_D 20°C	1.53617	1
25	1.53378	1
30	1.52233	1
"C"	0.5464	4
MR (Obs.)	48.508	4
MR (Calc.)	48.126	5
(nD-d/2)	0.89350	4
Dielectric	5.503	1
A | 115 to	7.04407	4
B | 260 °C	1732.0	4
C	197.0	5
A* | 115 to	1.67846	5
B* | 255 °C	1643.81	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.39479	5
B' | 115 °C	1957.11	5
C'	216.6	5
A'* 25 to	2.00476	5
B'* 115 °C	1855.29	5
Ac | 260 to	7.44774	5
Bc | t_c °C	2121.4	5
Cc	245.9	5
Cryos. A*	0.01707	1
consts. B*		
t_e °C F	243.9	5

		Ref.
dt/dP		
°C/mm		
25°C	65.79	5
BP	0.0571	5
t_e	0.0373	5
30 mm	0.8091	4
ΔHm cal/g	10.46	4
ΔHv cal/g		
25°C	68.24	5
30 mm	61.44	5
BP	51.23	5
t_e	49.05	5
t_e (d, e)	48.81	5
$\Delta Hv/T_e$	18.96	5
d | 115 to	72.55	5
e | 240 °C	0.0973	5
d' | 25 to	70.15	5
e' | 115 °C	0.0763	5
d_c g/ml	0.419	5
v_c ml/g	2.38	5
t_c °C	438.9	5
P_c mm	22384.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9278	5
t_e	0.9073	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	1.3148	1
40	0.9713	1
60	0.7621	1
80	0.6218	1
B^v | 30 to	535.69	4
A^v | 90 °C	2.27699	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension			
dynes/cm. 20°C		33.20	1
γ 30		32.19	1
40		31.19	1
Parachor [P]			
20°C		373.3	4
30		373.6	4
40		373.9	4
Sugd.		375.0	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 148

NAME	Iodobenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_5I — Molecular Weight 204.020

		Ref.
F. P. °C	-31.27	3²
F. P. 100%		
B. P. °C		
760 mm	188.33	3
100	118.27	4
30	87.46	4
10	64.0	5
1	24.9	5
Pressure		
mm 25°C	1.009	5
t_e	1270.	5
Density		
g/ml 20°C	1.8308	3¹
d_4^t 25	1.8229	4
30	1.8149	3¹
a	1.8624	4
b	-0.00158	4
Ref. Index		
n_D 20°C	1.6200	3⁵
25	1.6172	5
30	1.6142	5
"C"	0.4393	4
MR (Obs.)	39.15	4
MR (Calc.)	39.582	5
(nD-d/2)	0.7046	4
Dielectric	20° 4.63	3³
A | 85 to	6.89506	4
B | 270 °C	1562.87	4
C	201.0	5
A* | 85 to	1.51165	5
B* | 230 °C	1464.48	5
K	41.	4
c	-0.14003	4
t_k | 230 to	227.	4
t_x | 390 °C	520.	5
A' | 0 to	7.23639	4
B' | 85 °C	1765.99	4
C'	219.	5
A'* 15 to	1.87118	5
B'* 85 °C	1666.99	5
Ac | 270 to	7.53557	4
Bc | t_c °C	2341.	4
Cc	291.	4
Cryos. A°		
consts. B°		
t_e °C	211.22	4

		Ref.
dt/dP		
°C/mm		
25°C	14.533	5
BP	0.0554	4
t_e	0.0372	5
30 mm	0.7708	4
ΔHm cal/g	11.426	3
ΔHv cal/g		
25°C	58.09	4
30 mm	54.79	4
BP	46.27	3¹
t_e	44.47	4
t_e (d, e)	44.38	5
$\Delta Hv/T_e$	18.73	4
d | 85 to	62.18	5
e | 200 °C	0.0845	5
d' | 25 to	59.66	5
e' | 85 °C	0.0629	5
d_c g/ml	0.5814	3¹
v_c ml/g	1.720	3¹
t_c °C	448.	3¹
P_c mm	33912.	3¹
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9579	5
t_e	0.9421	5
t_c	0.2646	4
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm.	20°C	41.45	3⁴
γ	40	38.69	3⁴
	60	35.94	3⁴
Parachor [P]			
	20°C	282.8	4
	30	282.8	4
	40	282.6	4
	Sugd.	281.0	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		620.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3¹

PURIFICATION: 3¹

LITERATURE REFERENCES: 3 Timmermans; 3¹ Young; 3² JACS 59, 2726 (1937) D. R. Stull; 3³ NBS Circ. 514; 3⁴ Thesis, Bruxelles (1937) H. Bodson; 3⁵ Lange

No. 1

NAME	Styrene Vinylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.98	Ref. 1	Molecular Formula C_8H_8 — Molecular Weight 104.144

		Ref.
F.P. °C	-30.628	2
F.P. 100%		
B.P. °C		
760 mm	145.2	2
100	82.38	4
30	54.7	4
10	33.6	5
1	-1.6	5
Pressure		
mm 25°C	6.056	5
t_e	1147.	5
Density		
g/ml 20°C	0.90600	2
d_4^t 25	0.90122	2
30	0.89644	4
a	0.92511	4
b	-0.0_395	4
Ref. Index		
n_D 20°C	1.54682	2
25	1.54395	2
30	1.54093	4
"C"	0.7896	4
MR (Obs.)	36.444	2
MR (Calc.)	36.346	5
(nD-d/2)	1.09382	2
Dielectric	2.43	3
A | 55 to	6.92409	4
B | 205 °C	1420.0	4
C	206.	4
A* | 55 to	1.28861	5
B* | 180 °C	1330.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.26725	5
B' | 55 °C	1604.6	5
C'	222.	5
A'* 15 to	1.63073	5
B'* 55 °C	1509.4	5
Ac | 205 to	7.33218	5
Bc | t_c °C	1774.8	5
Cc	254.	5
Cryos. A*		
consts. B*		
t_e °C	161.45	5

		Ref.
dt/dP		
°C/mm		
25°C	2.7360	5
BP	0.0496	4
t_e	0.0360	5
30 mm	0.6929	4
ΔHm cal/g		
ΔHv cal/g		
25°C	102.40	5
30 mm	98.70	5
BP	84.69	5
t_e	82.31	5
t_e (d, e)	82.17	5
ΔHv/T_e	19.72	5
d | 55 to	107.16	5
e | 60 °C	0.1548	5
d' | 20 to	105.51	5
e' | 55 °C	0.1246	5
d_c g/ml		
v_c ml/g		
t_c °C	363.7	5
P_c mm	28912.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9603	5
t_e	0.9486	5
t_c		
ΔHc kcal/m	1018.83	2
ΔHf	35.22	2
ΔFf	51.10	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.28182	2
400	0.36795	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0543	4
n	600 °K	0.0013	4
o		-0.0_665	4
m'	700 to	0.0902	4
n'	1000 °K	0.0_388	4
o'		-0.0_632	4
Surface tension			
dynes/cm. 20°C		32.3	1
γ 30		30.98	5
40		29.67	5
Parachor [P]			
20°C		274.0	4
30			
40			
Sugd.		274.1	5
Exp. L.l.%/wt.		4.	3'
u.		19.	3'
Dispersion		265.	2
Flash Point °C		32.	3'
Fire Point			
M. Spec.		Yes	1
Ultra V.		Yes	1
X-Ray Dif.			
Infrared		824.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, API

PURIFICATION: Thermal cracking ethylbenzene and fractionation

LITERATURE REFERENCES: 3 NBS Circ. 514; 3' Nat. Fire Prot. Assoc. 325

No. 2

NAME	α-Methylstyrene Isopropenylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{10}
		Molecular Weight 118.170

		Ref.
F.P. °C	-23.21	2
F.P. 100%		
B.P. °C		
760 mm	165.38	2
100	99.59	4
30	70.60	4
10	48.5	5
1	11.6	5
Pressure		
mm 25°C	2.500	5
t_e	1201.	5
Density		
g/ml 20°C	0.9106	2
d_4^{25}	0.9062	2
d_4^{30}	0.9018	4
a	0.9282	4
b	-0.0_388	4
Ref. Index		
n_D 20°C	1.5386	2
25	1.5358	2
30	1.5321	4
"C"	0.7744	4
MR (Obs.)	40.63	2
MR (Calc.)	40.964	5
(nD-d/2)	1.0833	2
Dielectric	20° 2.2	3
A | 70 to	6.92366	4
B | 220 °C	1486.88	4
C	202.4	4
A* | 70 to	1.32891	5
B* | 195 °C	1395.14	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.26679	5
B' | 70 °C	1680.13	5
C'	219.6	5
A'* 20 to	1.67660	5
B'* 70 °C	1583.9	5
Ac | 220 to	7.3284	5
Bc | t_c °C	1847.	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_e °C	184.40	5

		Ref.
dt/dP		
°C/mm		
25°C	6.187	5
BP	0.0520	4
t_e	0.0364	5
30 mm	0.7256	4
ΔHm cal/g		
ΔHv cal/g		
25°C	96.69	5
30 mm	91.31	5
BP	78.0	5
t_e	75.49	5
t_e (d, e)	75.33	5
ΔHv/T_e	19.49	5
d | 70 to	101.22	5
e | 185 °C	0.1404	5
d' | 25 to	99.64	5
e' | 70 °C	0.1181	5
d_c g/ml		
v_c ml/g		
t_c °C	381.7	5
P_c mm	25547.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9569	5
t_e	0.9434	5
t_c		
ΔHc kcal/m	1162.46	2
ΔHf	27.00	2
ΔFf	49.84	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.29534	2
400	0.37912	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	300 to	-0.0166	4
n |	600 °K	0.0012	4
o		-0.0_651	4
m' |	700 to	0.1037	4
n' |	1000 °K	0.0_387	4
o'		-0.0_630	4
Surface tension			
dynes/cm. 20°C		33.88	5
γ 30		32.59	5
40		31.33	5
Parachor [P]			
20°C			
30			
40			
Sugd.		313.1	5
Exp. L.1.%/wt. u.			
Dispersion		265.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 ASTM 109

No. 3

NAME	β-Methylstyrene Propenylbenzene		STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula C_9H_{10}	Molecular Weight 118.170

		Ref.
F. P. °C	-52.25	2
F. P. 100%		
B. P. °C		
760 mm	170.	2
100	104.	4
30	74.	4
10	52.	5
1	15.	5
Pressure		
mm 25°C	2.006	5
t_e	1195.	5
Density		
g/ml 20°C	0.911	2
d_4^t 25	0.907	2
30	0.903	4
a	0.927	4
b	-0.0$_3$8	4
Ref. Index		
n_D 20°C	1.549	2
25	1.546	2
30	1.544	4
"C"	0.7881	4
MR (Obs.)	41.3	2
MR (Calc.)	40.964	5
(nD-d/2)	1.094	2
Dielectric	20° 2.7	3
A | 75 to	6.92339	4
B | 225 °C	1499.80	4
C	201.0	4
A* | 75 to	1.34680	5
B* | 200 °C	1413.57	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2665‡	5
B' | 75 °C	1694.73	5
C'	218.3	5
A'* 25 to	1.67510	5
B'* 75 °C	1598.7	5
Ac | 225 to	7.3273	5
Bc | t_c °C	1862.6	5
Cc	250.	5
Cryos. A*		
consts. B*		
t_e °C	188.97	5

		Ref.
dt/dP		
°C/mm		
25°C	7.565	5
BP	0.0524	4
t_e	0.0368	5
30 mm	0.7320	4
ΔHm cal/g		
ΔHv cal/g		
25°C	98.54	5
30 mm	92.52	5
BP	77.93	5
t_e	75.30	5
t_e (d, e)	75.04	5
ΔHv/T_e	19.25	5
d | 75 to	103.86	5
e | 185 °C	0.1526	5
d' | 25 to	101.58	5
e' | 75 °C	0.1219	5
d_c g/ml		
v_c ml/g		
t_c °C	389.5	5
P_c mm	25871.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9444	5
t_e	0.9295	5
t_c		
ΔHc kcal/m	1164.46	2
ΔHf	29.00	2
ΔFf	51.84	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.29703	2
400	0.38250	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0254	4
n	600 °K	0.0012	4
o		-0.0$_6$55	4
m'	700 to	0.0832	4
n'	1000 °K	0.0$_3$93	4
o'		-0.0$_6$34	4
Surface tension			
dynes/cm. 20°C		33.94	5
ϑ 30		32.77	5
40		31.62	5
Parachor [P]			
20°C			
30			
40			
Sugd.		313.1	5
Exp. L.1.%/wt.			
u.			
Dispersion		265.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

No. 4

NAME	o-Methylstyrene o-Methylvinylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{10}
		Molecular Weight 118.170

		Ref.
F.P. °C		
F.P. 100%	-68.57	3
B.P. °C		
760 mm	169.8	3
100	105.	5
30	76.	5
10	54.	5
1	16.	5
Pressure mm 25°C	1.806	5
t_e	1194.	5
Density g/ml 20°C	0.9036	1
d_4^{25}	0.8990	4
d_4^{30}	0.8944	4
a	0.9194	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.54654	4
25	1.54374	3
30	1.54094	4
"C"	0.7913	4
MR (Obs.)	41.44	4
MR (Calc.)	40.964	5
(nD-d/2)	1.0947	4
Dielectric		
A | 75 to	7.09235	4
B | 220 °C	1582.7	4
C	206.	5
A* | 75 to	1.51271	5
B* | 200 °C	1494.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.44611	5
B' | 75 °C	1788.4	5
C'	224.	5
A'* 20 to	1.84630	5
B'* 75 °C	1688.2	5
Ac | 220 to	7.5014	5
Bc | t_c °C	1950.	5
Cc	253.	5
Cryos. A°		
consts. B°		
t_e °C	188.1	5

		Ref.
dt/dP		
°C/mm		
25°C	8.320	5
BP	0.05099	4
t_e	0.0357	5
30 mm	0.7267	4
ΔHm cal/g		
ΔHv cal/g		
25°C	99.51	5
30 mm	93.99	5
BP	80.05	5
t_e	77.52	5
t_e (d, e)	77.33	5
$\Delta Hv/T_e$	19.86	5
d | 75 to	105.25	5
e | 190 °C	0.1484	5
d' | 25 to	102.22	5
e' | 75 °C	0.1086	5
d_c g/ml	0.3099	5
v_c ml/g	3.229	5
t_c °C	384.4	5
P_c mm	27617.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9442	5
t_e	0.9299	5
t_c	0.257	5
ΔHc kcal/m	1163.76	2
ΔHf	28.30	2
ΔFf	51.14	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.29534	2
400	0.37911	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0166	4
n | 600 °K		0.0012	4
o |		-0.0_651	4
m' | 700 to		0.1037	4
n' | 1000 °K		0.0_387	4
o' |		-0.0_630	4
Surface tension			
dynes/cm. 20°C		32.85	5
γ 30		31.54	5
40		30.26	5
Parachor [P]			
20°C			
30			
40			
Sugd.		313.1	5
Exp. L.1.%/wt. u.			
Dispersion		265.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3

PURIFICATION: 3

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1593 (1953) Clements et al.

TABLE II. STYRENES

No. 5

NAME	m-Methylstyrene m-Methylvinylbenzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{10}
		Molecular Weight 118.170

		Ref.
F. P. °C		
F. P. 100%	-86.34	3
B. P. °C		
760 mm	171.6	3
100	105.	4
30	76.	4
10	53.	5
1	15.	5
Pressure		
mm 25°C	1.9295	5
t_e	1199.	5
Density		
g/ml 20°C	0.9113	4
d_4^t 25	0.9067	3
30	0.9021	4
a	0.9297	4
b	-0.0_392	4
Ref. Index		
n_D 20°C	1.54390	4
25	1.54114	3
30	1.53834	4
"C"	0.7813	5
MR (Obs.)	40.962	4
MR (Calc.)	40.964	5
(nD-d/2)	1.0882	4
Dielectric		
A | 75 to	6.99468	4
B | 225 °C	1553.4	4
C	206.	5
A* | 75 to	1.41260	5
B* | 200 °C	1464.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.34229	5
B' | 75 °C	1755.3	5
C'	224.	5
A'* 20 to	1.74274	5
B'* 75 °C	1655.1	5
Ac | 225 to	7.4053	5
Bc | t_c °C	1926.	5
Cc	255.	5
Cryos. A°		
consts. B°		
t_e °C	190.7	5

		Ref.
dt/dP		
°C/mm		
25°C	7.9334	5
BP	0.05245	4
t_e	0.0367	5
30 mm	0.7387	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.68	5
30 mm	92.29	5
BP	78.45	5
t_e	75.90	5
t_e (d, e)	75.70	5
ΔHv/T_e	19.33	5
d | 75 to	103.17	5
e | 190 °C	0.1441	5
d' | 25 to	100.35	5
e' | 75 °C	0.1067	5
d_c g/ml	0.288	5
v_c ml/g	3.466	5
t_c °C	389.0	5
P_c mm	25910.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9441	5
t_e	0.9293	5
t_c	0.257	5
ΔHc kcal/m	1163.06	2
ΔHf	27.60	2
ΔFf	50.02	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.29534	2
400	0.37911	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0166	4
n	600 °K	0.0012	4
o		-0.0_651	4
m'	700 to	0.1037	4
n'	1000 °K	0.0_387	4
o'		-0.0_630	4
Surface tension			
dynes/cm. 20°C		33.99	5
30		32.64	5
40		31.32	5
Parachor [P]			
20°C			
30			
40			
Sugd.		313.1	5
Exp. L.l.%/wt. u.			
Dispersion		265.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

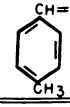
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3

PURIFICATION: 3

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1593 (1953) Clements et al.

No. 6

NAME	p-Methylstyrene p-Methylvinylbenzene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula C_9H_{10}	Molecular Weight 118.170

		Ref.
F. P. °C		
F. P. 100%	-34.15	3
B. P. °C		
760 mm	172.78	3
100	106.1	5
30	76.6	5
10	54.1	5
1	16.	5
Pressure		
mm 25°C	1.8112	5
t_e	1238.	5
Density		
g/ml 20°C	0.9106	4
d_4^t 25	0.9060	3
d_4^{30}	0.9014	4
a	0.9290	4
b	-0.0_392	4
Ref. Index		
n_D 20°C	1.54496	2
25	1.54202	3
30	1.53914	4
"C"	0.7831	4
MR (Obs.)	41.05	4
MR (Calc.)	40.964	5
(nD-d/2)	1.0897	4
Dielectric		
A | 75 to	7.00589	4
B | 225 °C	1562.5	4
C	206.	5
A* | 75 to	1.38211	5
B* | 205 °C	1461.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.35420	5
B' | 75 °C	1765.6	5
C'	223.8	5
A'* 15 to	1.75376	5
B'* 75 °C	1665.2	5
Ac | 225 to	7.4170	5
Bc | t_c °C	1938.0	5
Cc	255.	5
Cryos. A*		
consts. B*		
t_e °C	193.29	5

		Ref.
dt/dP		
°C/mm		
25°C	8.407	5
BP	0.05247	4
t_e	0.0358	5
30 mm	0.7400	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.20	5
30 mm	92.69	5
BP	80.73	5
t_e	78.21	5
t_e (d, e)	78.18	5
$\Delta Hv/T_e$	19.81	5
d | 75 to	102.23	5
e | 195 °C	0.1244	5
d' | 25 to	100.87	5
e' | 75 °C	0.1067	5
d_c g/ml	0.294	5
v_c ml/g	3.398	5
t_c °C	392.5	5
P_c mm	26569.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9667	5
t_e	0.9538	5
t_c	0.257	5
ΔHc kcal/m	1162.86	2
ΔHf	27.40	2
ΔFf	50.24	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300 °K	0.29534	2
400	0.37911	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	-0.0166	4
n | 600 °K	0.0012	4
o |	-0.0_651	4
m' | 700 to	0.1037	4
n' | 1000 °K	0.0_387	4
o' |	-0.0_630	4
Surface tension		
dynes/cm. 20°C	33.88	5
γ 30	32.53	5
40	31.22	5
Parachor [P]		
20°C		
30		
40		
Sugd.	313.1	5
Exp. L. 1. %/wt. u.		
Dispersion	265.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

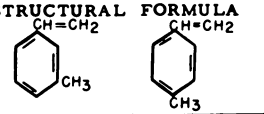
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: 3

PURIFICATION: 3

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1593 (1953) Clements et al.

No. 7

NAME	m- and p-Vinyltoluene (Commercial Product) m- and p-Methylstyrene	STRUCTURAL FORMULA 
Mole % Pur. 99.75	Ref. 1	Molecular Formula C_9H_{10}
Molecular Weight 118.170		

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	167.7	4
100	104.7	4
30	76.5	4
10	54.7	5
1	18.	5
Pressure		
mm 25°C	1.6396	5
t_e	1206.	5
Density		
g/ml 20°C	0.89768	1
d_4^t 25	0.89353	1
30	0.88938	4
a	0.91428	4
b	-0.0_383	4
Ref. Index		
n_D 20°C	1.54213	1
25	1.53949	1
30	1.53415	1
"C"	0.7905	4
MR (Obs.)	39.149	4
MR (Calc.)	40.964	5
(nD-d/2)	1.09329	4
Dielectric	2.56	1
A | 75 to	7.2421	4
B | 220 °C	1634.2	4
C	207.	5
A* | 75 to	1.6413	5
B* | 195 °C	1539.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.6053	5
B' | 75 °C	1846.6	5
C'	225.	5
A'* 15 to	2.0035	5
B'* 75 °C	1745.4	5
Ac | 220 to	7.6513	5
Bc | t_c °C	2001.0	5
Cc	252.3	5
Cryos. A°		
consts. B°		
t_e °C	185.75	5

		Ref.
dt/dP		
°C/mm		
25°C	8.955	5
BP	0.0491	5
t_e	0.0340	5
30 mm	0.7118	4
ΔHm cal/g		
ΔHv cal/g		
25°C	101.84	5
30 mm	96.28	5
BP	83.47	5
t_e	81.01	5
t_e (d, e)	80.93	5
ΔHv/T_e	20.86	5
d | 75 to	107.02	5
e | 185 °C	0.1405	5
d' | 25 to	104.55	5
e' | 75 °C	0.1080	5
d_c g/ml	0.30	5
v_c ml/g	3.33	5
t_c °C	382.	5
P_c mm	31557.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9441	5
t_c		
ΔHc kcal/m	1151.18	1
ΔHf	15.72	1
ΔFf		
Viscosity centistokes		
η 20 °C	0.9277	1
40	0.7263	1
60	0.5922	1
80	0.4970	1
B^v | 30 to	455.60	4
A^v | 90 °C	2.40647	4
(B^v) | to		
(A^v) | °C		
c_p liq. 20°C	0.410	1
40	0.428	4
c_p vap. 300°K	0.2953	2
400	0.3791	2
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | 300 to	-0.0166	4
n | 600 °K	0.0012	4
o	-0.0_651	4
m' | 700 to	0.1037	4
n' | 1000 °K	0.0_387	4
o'	-0.0_630	4
Surface tension		
dynes/cm. 20°C	31.53	1
30	30.44	1
40	29.38	1
Parachor [P]		
20°C	311.9	4
30	312.1	4
40	312.3	4
Sugd.	313.1	5
Exp. L. 1. %/wt. u.	≠ 1.9vol.	1
Dispersion		
Flash Point °C	60.	1
Fire Point	68.	1
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in †		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	0.0089	1
Water in	0.047	1

T_R = 0.75 T_c ≠ 70°C † grams/100 grams solvent

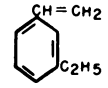
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 8

NAME	m-Ethylstyrene m-Ethylvinylbenzene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{12}$	Molecular Weight 132.196

		Ref.
F.P. °C	-101.3	1
F.P. 100%		
B.P. °C		
760 mm	190.12	4
100	122.3	4
30	92.18	4
10	69.1	5
1	30.5	5
Pressure		
mm 25°C	0.6776	5
t_e	1266.	5
Density		
g/ml 20°C	0.89449	1
d_4^{25}	0.89045	1
d_4^{30}	0.88641	4
a	0.91065	4
b	-0.03381	4
Ref. Index		
n_D 20°C	1.53512	1
25	1.53250	1
30	1.52992	4
"C"	0.7837	4
MR (Obs.)	46.02	4
MR (Calc.)	45.582	5
(nD-d/2)	1.08788	4
Dielectric		
A | 90 to	7.03928	4
B | 235 °C	1614.0	4
C	198.	4
A* | 90 to	1.47626	5
B* | 220 °C	1519.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.38970	5
B' | 90 °C	1823.8	5
C'	216.	5
A'* 20 to	1.8364	5
B'* 90 °C	1726.0	5
Ac | 235 to	7.4392	5
Bc | t_c °C	1978.1	5
Cc	244.	5
Cryos. A°		
consts. B°		
t_e °C	211.99	5

		Ref.
dt/dP		
°C/mm		
25°C	20.46	5
BP	0.0533	4
t_e	0.0357	5
30 mm	0.7552	4
ΔHm cal/g		
ΔHv cal/g		
25°C	96.42	5
30 mm	88.57	5
BP	75.54	5
t_e	72.81	5
t_e (d, e)	72.63	5
ΔHv/T_e	19.84	5
d | 90 to	100.84	5
e | 210 °C	0.1331	5
d' | 25 to	99.34	5
e' | 90 °C	0.1168	5
d_c g/ml	0.286	5
v_c ml/g	3.50	5
t_c °C	403.2	5
P_c mm	24200.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9535	5
t_e	0.9381	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.22	5
γ 30	31.07	5
40	29.95	5
Parachor [P]		
20°C		
30		
40		
Sugd.	352.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

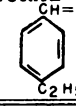
SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE II. STYRENES

No. 9

NAME	p-Ethylstyrene p-Ethylvinylbenzene	STRUCTURAL FORMULA 
Mole % Pur. 99.70	Ref. 1	Molecular Formula $C_{10}H_{12}$ — Molecular Weight 132.196

		Ref.
F. P. °C	-49.73	1
F. P. 100%		
B. P. °C		
760 mm	192.78	4
100	122.56	4
30	91.64	4
10	68.11	5
1	28.85	5
Pressure mm 25°C	0.7665	5
t_e	1275.	5
Density g/ml 20°C	0.89249	1
d_4^t 25	0.88845	1
30	0.88441	4
a	0.90865	4
b	-0.0_381	4
Ref. Index n_D 20°C	1.53763	1
25	1.53484	1
30	1.53231	4
"C"	0.7888	4
MR (Obs.)	46.032	4
MR (Calc.)	45.582	5
(nD-d/2)	1.09138	5
Dielectric	3.350	1
A 90 to	6.90071	4
B 240 °C	1570.9	4
C	198.	4
A* 90 to	1.33502	5
B* 225 °C	1475.3	5
K		
c		
t_k to		
t_x °C		
A' 15 to	7.24240	5
B' 90 °C	1775.1	5
C'	216.	5
A'* 20 to	1.68950	5
B'* 90 °C	1677.4	5
Ac 240 to	7.3025	5
Bc t_c °C	1940.5	5
Cc	247.	5
Cryos. A* consts. B*		
t_e °C	215.92	5

		Ref.
dt/dP °C/mm		
25°C	18.58	5
BP	0.0556	4
t_e	0.0371	5
30 mm	0.7731	4
ΔHm cal/g		
ΔHv cal/g		
25°C	93.87	5
30 mm	86.27	5
BP	73.33	5
t_e	70.56	5
t_e (d, e)	70.37	5
$\Delta Hv/T_e$	19.07	5
d 90 to	98.00	5
e 215 °C	0.1280	5
d' 25 to	96.72	5
e' 90 °C	0.1140	5
d_c g/ml	0.290	5
v_c ml/g	3.45	5
t_c °C	408.0	5
P_c mm	21761.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9531	5
t_e	0.9370	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	31.93	5
30	30.79	5
40	29.68	5
Parachor [P] 20°C		
30		
40		
Sugd.	352.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C	65.	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	562.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

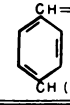
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 10

NAME	p-Isopropylstyrene p-Isopropylvinylbenzene	STRUCTURAL FORMULA 
Mole % Pur. 99.13	Ref. 1	Molecular Formula $C_{11}H_{14}$ — Molecular Weight 146.222

		Ref.
F.P. °C	-44.66	1
F.P. 100%		
B.P. °C		
760 mm	204.15	4
100	135.20	4
30	104.48	4
10	80.9	5
1	41.4	5
Pressure mm 25°C	0.3081	5
t_e	1300.	5
Density g/ml 20°C	0.88497	1
d_4^t 25	0.88101	1
30	0.87705	4
a	0.90081	4
b	-0.0$_3$79	4
Ref. Index n_D 20°C	1.52891	1
25	1.52650	1
30	1.52388	4
"C"	0.7835	4
MR (Obs.)	50.952	4
MR (Calc.)	50.200	5
(nD-d/2)	1.08642	4
Dielectric		
A | 105 to	7.09845	4
B | 245 °C	1683.5	4
C	195.0	4
A* | 105 to	1.5737	5
B* | 240 °C	1588.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.45259	5
B' | 105 °C	1902.3	5
C'	213.9	5
A'* 25 to	1.93717	5
B'* 105 °C	1804.1	5
Ac | 245 to	7.5338	5
Bc | t_c °C	2088.8	5
Cc	245.	5
Cryos. A°		
consts. B°		
t_e °C	227.52	5

		Ref.
dt/dP °C/mm		
25°C	42.27	5
BP	0.0541	4
t_e	0.0354	5
30 mm	0.7713	4
ΔHm cal/g		
ΔHv cal/g		
25°C	92.77	5
30 mm	83.78	5
BP	71.19	5
t_e	68.42	5
t_e (d, e)	68.24	5
$\Delta Hv/T_e$	19.98	5
d | 105 to	96.99	5
e | 230 °C	0.1264	5
d' | 25 to	95.60	5
e' | 105 °C	0.1131	5
d_c g/ml	0.288	5
v_c ml/g	3.48	5
t_c °C	409.2	5
P_c mm	21962.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9499	5
t_e	0.9333	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C	31.39	5
γ	30	30.28	5
	40	29.20	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	391.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

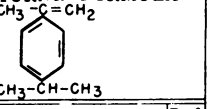
SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 11

NAME	p-Isopropyl-α-methylstyrene	STRUCTURAL FORMULA
Mole % Pur. 99.27	Ref. 1	Molecular Formula $C_{12}H_{16}$
		Molecular Weight 160.248



		Ref.
F. P. °C	-30.63	1
F. P. 100%		
B. P. °C		
760 mm	220.82	4
100	151.13	4
30	119.85	4
10	95.8	5
1	55.1	5
Pressure mm 25°C	0.1089	5
t_e	1345.	5
Density g/ml 20°C	0.89363	1
d_4^t 25	0.88974	1
30	0.88585	4
a	0.90919	4
b	-0.0_3378	4
Ref. Index n_D 20°C	1.52381	1
25	1.52155	1
30	1.51887	4
"C"	0.7689	4
MR (Obs.)	54.849	5
MR (Calc.)	54.818	5
(nD-d/2)	1.07700	5
Dielectric		
A 120 to	7.22972	4
B 260 °C	1799.7	4
C	193.0	4
A* 120 to	1.73186	5
B* 255 °C	1701.7	5
K c		
t_k to		
t_x °C		
A' 20 to	7.59213	5
B' 120 °C	2033.6	5
C'	212.7	5
A'* 25 to	2.10754	5
B'* 120 °C	1933.8	5
Ac 260 to	7.7033	5
Bc t_c °C	2256.6	5
Cc	247.5	5
Cryos. A° consts. B°		
t_e °C	245.85	5

		Ref.
dt/dP °C/mm		
25°C	110.78	5
BP	0.0544	5
t_e	0.0346	5
30 mm	0.7873	4
ΔHm cal/g		
ΔHv cal/g		
25°C	91.38	5
30 mm	81.11	5
BP	69.10	5
t_e	66.29	5
t_e (d, e)	66.12	5
$\Delta Hv/T_e$	20.46	5
d 120 to	95.37	5
e 245 °C	0.1190	5
d' 25 to	94.09	5
e' 120 °C	0.1082	5
d_c g/ml		
v_c ml/g		
t_c °C	422.3	5
P_c mm	21589.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9489	5
t_e	0.9315	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	32.85	5
γ 30	31.72	5
40	30.62	5
Parachor [P] 20°C		
30		
40		
Sugd.	429.3	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+]		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.77\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Cal[illegible]y formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE RFFERENCES:

No. 12

NAME	o-Chlorostyrene o-Chlorovinylbenzene	STRUCTURAL FORMULA
Mole % Pur. 100.0	Ref. 1	Molecular Formula C_8H_7Cl	Molecular Weight 138.593

		Ref.
F.P. °C	-63.15	1
F.P. 100%		
B.P. °C		
760 mm	188.66	4
100	118.68	4
30	87.95	4
10	64.6	5
1	25.6	5
Pressure mm 25°C	0.9566	5
t_e	1265.	5
Density		
g/ml 20°C	1.10001	1
d_4^t 25	1.09532	1
30	1.09063	4
a	1.11877	4
b	-0.03394	4
Ref. Index		
n_D 20°C	1.56487	1
25	1.56234	1
30	1.55974	4
"C"	0.6704	4
MR (Obs.)	40.985	4
MR (Calc.)	41.213	5
(nD-d/2)	1.01487	4
Dielectric		
A | 90 to	6.86644	4
B | 250 °C	1541.1	4
C	198.	4
A* | 90 to	1.32347	5
B* | 220 °C	1446.1	5
K		
c		
t_x | to		
t_x | °C		
A' | 15 to	7.20597	5
B' | 90 °C	1741.4	5
C'	216.	5
A'* 20 to	1.6767	5
B'* 90 °C	1644.6	5
Ac | 250 to	7.2722	5
Bc | t_c °C	1925.6	5
Cc	251.	5
Cryos. A* consts. B*		
t_e °C	211.41	5

		Ref.
dt/dP °C/mm		
25°C	15.145	5
BP	0.0554	4
t_e	0.0373	5
30 mm	0.7681	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.01	5
30 mm	81.16	5
BP	69.0	5
t_e	66.45	5
t_e (d, e)	66.25	5
$\Delta Hv/T_e$	19.00	5
d | 90 to	91.78	5
e | 210 °C	0.1207	5
d' | 25 to	90.73	5
e' | 90 °C	0.1088	5
d_c g/ml	0.368	5
v_c ml/g	2.72	5
t_c °C	423.6	5
P_c mm	26089.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9544	5
t_e	0.9385	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | to			
n | °K			
o |			
m' | to			
n' | °K			
o' |			
Surface tension			
dynes/cm. 20°C		37.27	5
γ 30		36.01	5
40		34.79	5
Parachor [P]			
20°C			
30			
40			
Sugd.		311.3	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.		Yes	
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

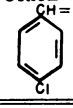
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 13

NAME	p-Chlorostyrene p-Chlorovinylbenzene	STRUCTURAL FORMULA 
Mole % Pur. 99.45	Ref. 1	Molecular Formula C_8H_7Cl — Molecular Weight 138.593

		Ref.
F. P. °C	-15.90	1
F. P. 100%		
B. P. °C		
760 mm	192.00	4
100	121.05	4
30	89.96	4
10	66.3	5
1	27.0	5
Pressure mm 25°C	0.8725	5
t_e	1279.	5
Density g/ml 20°C	1.08682	1
d_4^t 25	1.08214	1
30	1.07746	4
a	1.10554	4
b	-0.0394	4
Ref. Index n_D 20°C	1.56601	1
25	1.56343	1
30	1.56082	4
"C"	0.6797	4
MR (Obs.)	40.985	4
MR (Calc.)	41.213	5
(nD-d/2)	1.01487	4
Dielectric		
A 90 to	6.84248	4
B 250 °C	1545.00	4
C	198.	4
A* 90 to	1.29243	5
B* 225 °C	1448.02	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.18050	5
B' 90 °C	1745.8	5
C'	216.	5
A'* 25 to	1.64955	5
B'* 90 °C	1648.6	5
Ac 250 to	7.24901	5
Bc t_c °C	1932.8	5
Cc	251.	5
Cryos. A° consts. B°		
t_e °C	215.58	5

		Ref.
dt/dP °C/mm		
25°C	16.580	5
BP	0.0563	4
t_e	0.0376	5
30 mm	0.7770	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.14	5
30 mm	81.13	5
BP	69.10	5
t_e	66.53	5
t_e (d, e)	66.32	5
$\Delta Hv/T_e$	18.86	5
d 90 to	91.73	5
e 215 °C	0.1179	5
d' 25 to	90.84	5
e' 90 °C	0.1079	5
d_c g/ml	0.353	5
v_c ml/g	2.83	5
t_c °C	427.4	5
P_c mm	25202.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9403	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	35.51	5
γ 30	34.30	5
40	33.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	311.3	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.	Yes	
X-Ray Dif.		
Infrared		
Solubility in †		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

† grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 14

NAME	o-Bromostyrene o-Bromovinylbenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.87	Ref. 1	Molecular Formula C_8H_7Br	Molecular Weight 183.052

		Ref.
F.P. °C	-52.75	1
F.P. 100%		
B.P. °C		
760 mm	209.80	4
100	137.19	4
30	105.22	4
10	80.9	5
1	40.2	5
Pressure		
mm 25°C	0.3449	5
t_e	1319.	5
Density		
g/ml 20°C	1.41601	1
d_4^t 25	1.41024	1
30	1.40447	4
a	1.43909	4
b	-0.00115	4
Ref. Index		
n_D 20°C	1.59268	1
25	1.59014	1
30	1.58755	4
"C"	0.5446	4
MR (Obs.)	43.784	4
MR (Calc.)	44.111	5
(nD-d/2)	0.88468	5
Dielectric		
A | 105 to	6.91038	4
B | 270 °C	1631.2	4
C	195.	4
A* | 105 to	1.47612	5
B* | 245 °C	1533.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.25268	5
B' | 105 °C	1843.2	5
C'	214.	5
A'* 25 to	1.83421	5
B'* 105 °C	1744.9	5
Ac | 270 to	7.3159	5
Bc | t_c °C	2031.5	5
Cc	249.	5
Cryos. A°		
consts. B°		
t_e °C	235.38	5

		Ref.
dt/dP		
°C/mm		
25°C	38.989	5
BP	0.0574	5
t_e	0.0374	5
30 mm	0.7999	4
ΔHm cal/g		
ΔHv cal/g		
25°C	71.78	5
30 mm	64.78	5
BP	54.93	5
t_e	52.70	5
t_e (d, e)	52.52	5
ΔHv/T_e	18.97	5
d | 105 to	74.69	5
e | 230 °C	0.0942	5
d' | 25 to	73.96	5
e' | 105 °C	0.0872	5
d_c g/ml	0.459	5
v_c ml/g	2.18	5
t_c °C	453.0	5
P_c mm	26451.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9502	5
t_e	0.9322	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	39.95	5
γ 30	38.66	5
40	37.41	5
Parachor [P]		
20°C		
30		
40		
Sugd.	325.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 15

NAME	p-Bromostyrene p-Bromovinylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.70	Ref. 1	Molecular Formula C_8H_7Br — Molecular Weight 183.052

		Ref.
F. P. °C	7.67	1
F. P. 100%		
B. P. °C 760 mm	211.98	4
100	140.50	4
30	108.82	4
10	84.6	5
1	44.0	5
Pressure mm 25°C	0.2593	5
t_e	1324.	5
Density g/ml 20°C	1.39838	1
d_4^t 25	1.39263	1
30	1.38688	4
a	1.42138	4
b	-0.00115	4
Ref. Index n_D 20°C	1.59472	1
25	1.59212	1
30	1.58944	4
"C"	0.5532	4
MR (Obs.)	44.462	4
MR (Calc.)	44.111	5
(nD-d/2)	0.89553	4
Dielectric		
A | 110 to	7.01490	4
B | 270 °C	1682.5	4
C	195.	4
A* | 110 to	1.57884	5
B* | 250 °C	1584.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.36378	5
B' | 110 °C	1901.2	5
C'	214.	5
A'* 25 to	1.94243	5
B'* 110 °C	1802.0	5
Ac | 270 to	6.8754	5
Bc | t_c °C	1554.8	5
Cc	177.	5
Cryos. A° consts. B°		
t_e °C	237.19	5

		Ref.
dt/dP °C/mm		
25°C	50.385	5
BP	0.0563	5
t_e	0.0364	5
30 mm	0.7942	4
ΔHm cal/g		
ΔHv cal/g		
25°C	73.89	5
30 mm	67.34	5
BP	56.55	5
t_e	54.30	5
t_e (d, e)	53.91	5
$\Delta Hv/T_e$	19.47	5
d | 110 to	78.72	5
e | 235 °C	0.1046	5
d' | 25 to	75.85	5
e' | 110 °C	0.0782	5
d_c g/ml	0.45	5
v_c ml/g	2.22	5
t_c °C	453.4	5
P_c mm	25639.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9325	5
t_c	0.242	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g | to °K h			
f' g' | to °K h'			
m n | to °K o			
m' n' | to °K o'			
Surface tension dynes/cm. 20°C		38.00	5
γ 30		36.76	5
40		35.56	5
Parachor [P] 20°C			
30			
40			
Sugd.		325.0	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE III. THIAALKYL BENZENES

TABLE III. THIAALKYL BENZENES

No. 1

NAME	(1-Thiaethyl)-benzene Methyl phenyl sulfide	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula C_7H_8S — Molecular Weight 124.200

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	193.	2
100	127.	5
30	97.	5
10	74.	5
1	35.	5
Pressure mm 25°C	0.4886	5
t_e	1264.	5
Density g/ml 20°C	1.0579	2
d_4^t 25	1.0535	2
30	1.0491	4
a	1.0755	4
b	-0.0388	4
Ref. Index n_D 20°C	1.5868	2
25	1.5840	2
30	1.5815	4
"C"	0.7222	4
MR (Obs.)	39.445	2
MR (Calc.)	39.425≠	5
(nD-d/2)	1.0578	2
Dielectric		
A | 95 to	7.25779	5
B | 230 °C	1733.3	5
C	203.	5
A* | 95 to	1.67133	5
B* | 225 °C	1638.13	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.62197	5
B' | 95 °C	1958.58	5
C'	222.	5
A'* 20 to	2.03077	5
B'* 95 °C	1855.89	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	214.07	5

		Ref.
dt/dP °C/mm		
25°C	27.66	5
BP	0.0517	5
t_e	0.0345	5
30 mm	0.7509	5
ΔHm cal/g		
ΔHv cal/g		
25°C	105.26	5
30 mm	97.26	5
BP	83.58	5
t_e	80.78	5
t_e (d, e)	80.58	5
ΔHv/T_e	20.59	5
d | 97 to	111.03	5
e | 215 °C	0.1422	5
d' | 25 to	108.05	5
e' | 97 °C	0.1114	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9326	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		41.01	5
σ 30		39.66	5
40		38.35	5
Parachor [P] 20°C			
30			
40			
Sugd.		297.1	5
Exp. L.1.%/wt. u.			
Dispersion		221.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	(1-Thiapropyl)-benzene Ethyl phenyl sulfide	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}S$ — Molecular Weight 138.226

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	205.	2
100	138.	5
30	107.	5
10	84.	5
1	44.	5
Pressure		
mm 25°C	0.2455	5
t_e	1288.8	5
Density		
g/ml 20°C	1.0211	2
d_4^{25}	1.0166	2
d_4^{30}	1.0121	4
a	1.0391	4
b	-0.0390	4
Ref. Index		
n_D 20°C	1.5670	2
25	1.5644	2
30	1.5618	4
"C"	0.7247	4
MR (Obs.)	45.15	2
MR (Calc.)	44.043≠	5
(nD-d/2)	1.0564	2
Dielectric		
A | 105 to	7.30081	5
B | 240 °C	1790.1	5
C	200.	5
A* | 105 to	1.76163	5
B* | 235 °C	1696.53	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.66770	5
B' | 105 °C	2022.76	5
C'	219.	5
A'* 25 to	2.11869	5
B'* 105 °C	1920.08	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	227.17	5

		Ref.
dt/dP °C/mm		
25°C	52.22	5
BP	0.0524	5
t_e	0.03435	5
30 mm	0.7641	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.71	5
30 mm	90.84	5
BP	77.51	5
t_e	74.71	5
t_e (d, e)	74.48	5
ΔHv/T_e	20.64	5
d | 105 to	105.50	5
e | 225 °C	0.1366	5
d' | 25 to	102.40	5
e' | 105 °C	0.1077	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP		
t_e		
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	38.00	5
γ 30	36.68	5
40	35.39	5
Parachor [P]		
20°C		
30		
40		
Sugd.	336.1	5
Exp. L.1.%/wt. u.		
Dispersion	200.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

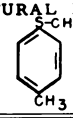
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE III. THIAALKYL BENZENES

No. 3

NAME	4-Methyl-(1-thiaethyl)-benzene p-Methyl-(1-thiaethyl)-benzene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}S$ — Molecular Weight 138.226

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	217.	2
100	149.	5
30	118.	5
10	94.	5
1	54.	5
Pressure		
mm 25°C	0.1184	5
t_e	1318.4	5
Density		
g/ml 20°C	1.027	2
d_4^t 25	1.023	2
30	1.019	4
a	1.043	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5733	2
25	1.5707	2
30	1.5681	4
"C"	0.7280	4
MR (Obs.)	44.369	2
MR (Calc.)	44.043≠	5
(nD-d/2)	1.060	2
Dielectric		
A | 120 to	7.37224	5
B | 255 °C	1863.9	5
C	198.	5
A* | 120 to	1.82724	5
B* | 250 °C	1769.65	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.74363	5
B' | 120 °C	2106.15	5
C'	218.	5
A'* 25 to	2.18922	5
B'* 120 °C	2002.80	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	240.34	5

		Ref.
dt/dP		
°C/mm		
25°C	102.74	5
BP	0.0528	5
t_e	0.0340	5
30 mm	0.7764	5
ΔHm cal/g		
ΔHv cal/g		
25°C	105.06	5
30 mm	94.54	5
BP	80.58	5
t_e	77.57	5
t_e (d, e)	77.28	5
$\Delta Hv/T_e$	20.88	5
d | 120 to	111.23	5
e | 240 °C	0.1413	5
d' | 25 to	107.88	5
e' | 120 °C	0.1129	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9399	5
t_e	0.8640	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	38.89	5
γ 30	37.69	5
40	36.52	5
Parachor [P]		
20°C		
30		
40		
Sugd.	336.1	5
Exp. L.l.%/wt. u.		
Dispersion	215.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	(1-Thiabutyl)-benzene n-Propyl phenyl sulfide	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}S$ — Molecular Weight 152.252

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	220.	2
100	152.	5
30	121.	5
10	97.	5
1	57.	5
Pressure		
mm 25°C	0.0972	5
t_e	1326.6	5
Density		
g/ml 20°C	0.9995	2
d_4^t 25	0.9952	2
30	0.9909	4
a	1.0167	4
b	$-0.0_3$86	4
Ref. Index		
n_D 20°C	1.5571	2
25	1.5551	2
30	1.5531	4
"C"	0.7279	4
MR (Obs.)	49.044	2
MR (Calc.)	48.661≠	5
(nD-d/2)	1.0574	2
Dielectric		
A 120 to	7.38536	5
B 260 °C	1878.4	5
C	197.	5
A* 120 to	1.88039	5
B* 255 °C	1783.98	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.75758	5
B' 120 °C	2122.53	5
C'	217.	5
A'* 25 to	2.24414	5
B'* 120 °C	2019.30	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	243.67	5

		Ref.
dt/dP		
°C/mm		
25°C	123.26	5
BP	0.0529	5
t_e	0.0338	5
30 mm	0.7790	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.83	5
30 mm	86.75	5
BP	73.88	5
t_e	71.04	5
t_e (d, e)	70.80	5
$\Delta Hv/T_e$	20.92	5
d 120 to	102.47	5
e 245 °C	0.1210	5
d' 25 to	99.46	5
e' 120 °C	0.1051	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9401	5
t_e	0.9225	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		36.77	5
30		35.52	5
40		34.30	5
Parachor [P]			
20°C			
30			
40			
Sugd.		375.1	5
Exp. L.1.%/wt. u.			
Dispersion		196.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

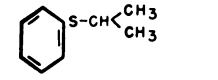
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE III. THIAALKYL BENZENES

No. 5

NAME	(2-Methyl-1-thiapropyl)-benzene Isopropyl phenyl sulfide	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}S$
		Molecular Weight 152.252

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	208.	2
100	141.	5
30	110.	5
10	87.	5
1	47.	5
Pressure		
mm 25°C	0.1982	5
t_e	1298.3	5
Density		
g/ml 20°C	0.9852	2
d_4^t 25	0.9810	2
30	0.9768	4
a	1.0020	4
b	-0.0_384	4
Ref. Index		
n_D 20°C	1.5464	2
25	1.5446	2
30	1.5428	4
"C"	0.7256	4
MR (Obs.)	48.964	2
MR (Calc.)	48.661≠	5
(nD-d/2)	1.0538	2
Dielectric		
A 110 to	7.32777	5
B 245 °C	1809.9	5
C	199.	5
A* 110 to	1.82706	5
B* 240 °C	1715.69	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.69636	5
B' 110 °C	2045.13	5
C'	218.	5
A'* 25 to	2.18833	5
B'* 110 °C	1942.58	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	230.46	5

		Ref.
dt/dP		
°C/mm		
25°C	63.52	5
BP	0.0523	5
t_e	0.0341	5
30 mm	0.7654	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.19	5
30 mm	83.62	5
BP	71.35	5
t_e	68.73	5
t_e (d, e)	68.53	5
$\Delta Hv/T_e$	20.78	5
d 110 to	97.48	5
e 230 °C	0.1256	5
d' 25 to	94.70	5
e' 110 °C	0.1004	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9430	5
t_e	0.9265	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	34.71	5
30	33.54	5
40	32.40	5
Parachor [P]		
20°C		
30		
40		
Sugd.	375.1	5
Exp. L.1.%/wt. u.		
Dispersion	192.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.	-	
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	3-Methyl-(1-thiapropyl)-benzene m-Methyl-(1-thiapropyl)-benzene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}S$	Molecular Weight 152.252

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	219.	2
100	151.	5
30	120.	5
10	96.	5
1	56.	5
Pressure mm 25°C	0.1022	5
t_e	1327.3	5
Density g/ml 20°C	0.9987	2
d_4^{t} 25	0.9947	2
30	0.9907	4
a	1.01470	4
b	-0.0080	4
Ref. Index n_D 20°C	1.5590	2
25	1.5570	2
30	1.5550	4
"C"	0.7312	4
MR (Obs.)	49.22	2
MR (Calc.)	48.661 ≠	5
(nD-d/2)	1.0596	2
Dielectric		
A | 120 to	7.38306	5
B | 255 °C	1872.9	5
C	197.	5
A* | 120 to	1.87513	5
B* | 250 °C	1777.50	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.75513	5
B' | 120 °C	2116.32	5
C'	217.	5
A'* 25 to	2.24240	5
B'* 120 °C	2013.29	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	242.64	5

		Ref.
dt/dP °C/mm		
25°C	117.63	5
BP	0.0528	5
t_e	0.0338	5
30 mm	0.7773	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.59	5
30 mm	86.59	5
BP	73.87	5
t_e	71.06	5
t_e (d,e)	70.83	5
ΔHv/T_e	20.98	5
d | 120 to	102.03	5
e | 240 °C	0.1286	5
d' | 25 to	99.22	5
e' | 120 °C	0.1052	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9420	5
t_e	0.9248	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		36.65	5
γ 30		35.49	5
40		34.36	5
Parachor [P]			
20°C			
30			
40			
Sugd.		375.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

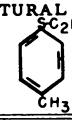
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	4-Methyl-(1-thiapropyl)-benzene p-Methyl-(1-thiapropyl)-benzene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_9H_{12}S$ Molecular Weight 152.252	

		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | | to		
F.P. 100%			25°C	123.26	5	g | _ _ _ °K		
B.P. °C			BP	0.0529	5	h		
760 mm	220.	2	t_e	0.0338	5	f' | | to		
100	152.	5	30 mm	0.7790	5	g' | _ _ _ °K		
30	121.	5	ΔHm cal/g			h'		
10	97.	5	ΔHv cal/g			m | | to		
1	57.	5	25°C	96.83	5	n | _ _ _ °K		
Pressure mm 25°C	0.0972	5	30 mm	86.75	5	o		
t_e	1329.8	5	BP	74.03	5	m' | | to		
Density g/ml 20°C	0.9996	2	t_e	71.19	5	n' | _ _ _ °K		
d_4^t 25	0.9956	2	t_e (d, e)	70.98	5	o'		
30	0.9916	4	ΔHv/T_e	20.97	5	Surface tension dynes/cm. 20°C	36.78	5
a	1.0156	4	d | 120 to	102.3	5	δ 30	35.62	5
b	-0.0380	4	e | 245 °C	0.1284	5	40	34.48	5
Ref. Index n_D 20°C	1.555	2	d' | 25 to	99.46	5	Parachor [P] 20°C		
25	1.553	2	e' | 120 °C	0.1051	5	30		
30	1.551	4	d_c g/ml			40		
"C"	0.7253	4	v_c ml/g			Sugd.	375.1	5
MR (Obs.)	48.9	2	t_c °C			Exp. L.1.%/wt.		
MR (Calc.)	48.661≠	5	P_c mm			u.		
(nD-d/2)	1.055	2	PV/RT 25°C	1.0000	5	Dispersion		
Dielectric			30 mm	1.0000	5	Flash Point °C		
A | 120 to	7.38535	5	BP	0.9420	5	Fire Point		
B | 260 °C	1878.4	5	t_e	0.9245	5	M. Spec.		
C	197.	5	t_c			Ultra V.		
A* | 120 to	1.87685	5	ΔHc kcal/m			X-Ray Dif.		
B* | 255 °C	1782.86	5	ΔHf			Infrared		
K			ΔFf			Solubility in +		
c			Viscosity centistokes			Acetone		
t_k | _ _ to			η °C			Carbon tet.		
t_x | °C						Benzene		
A' | 25 to	7.75757	5	B^v | to			Ether		
B' | 120 °C	2122.53	5	A^v | °C			n-Heptane		
C'	217.	5	(B^v) | to			Ethanol		
A'* 25 to	2.24413	5	(A^v) | °C			Water		
B'* 120 °C	2019.30	5	c_p liq. °K			Water in		
Ac | to			c_p vap. °K					
Bc | t_c °C			c_v vap.					
Cc _ _ _								
Cryos. A° consts. B°								
t_e °C	243.78	5						

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

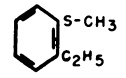
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	2-Ethyl-(1-thiaethyl)-benzene o-Ethyl-(1-thiaethyl)-benzene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}S$ — Molecular Weight 152.252



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	228.	2
100	159.	5
30	128.	5
10	104.	5
1	63.	5
Pressure		
mm 25°C	0.0602	5
t_e	1349.1	5
Density		
g/ml 20°C	1.025	2
d_4^t 25	1.021	2
30	1.017	4
a	1.0410	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5708	2
25	1.5688	2
30	1.5668	4
"C"	0.7264	4
MR (Obs.)	48.8	2
MR (Calc.)	48.661≠	5
(nD-d/2)	1.058	2
Dielectric		
A | 130 to	7.42660	5
B | 270 °C	1927.4	5
C	196.	5
A* | 130 to	1.91448	5
B* | 265 °C	1831.36	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.80142	5
B' | 130 °C	2177.90	5
C'	216.	5
A'* 25 to	2.28373	5
B'* 130 °C	2073.90	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	252.59	5

		Ref.
dt/dP		
°C/mm		
25°C	192.95	5
BP	0.0533	5
t_e	0.0336	5
30 mm	0.7883	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.87	5
30 mm	88.82	5
BP	75.75	5
t_e	72.79	5
t_e (d, e)	72.54	5
$\Delta Hv/T_e$	67.73	5
d | 130 to	105.54	5
e | 255 °C	0.1307	5
d' | 25 to	102.55	5
e' | 130 °C	0.1073	5
d_c g/ml		
v_c ml/g		
t_c °C	452.61	5
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9402	5
t_e	0.9223	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	40.67	5
ϑ 30	39.41	5
40	38.19	5
Parachor [P]		
20°C		
30		
40		
Sugd.	375.1	5
Exp. L.l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ C-S-C, S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE IV. THIOPHENES

No. 1

NAME	Thiophene		STRUCTURAL FORMULA
Mole % Pur. 99.989	Ref. 2	Molecular Formula C_4H_4S	Molecular Weight 84.138

		Ref.
F. P. °C	-38.21	2
F. P. 100%	-38.252	2
B. P. °C		
760 mm	84.16	2
100	29.90	4
30	5.94	4
10	-12.3	4
1	-42.	5
Pressure		
mm 25°C	79.68	4
t_e	970.8	5
Density		
g/ml 20°C	1.06485	2
d_4^t 25	1.05887	2
30	1.05309	2
a	1.08877	4
b	-0.00118	4
Ref. Index		
n_D 20°C	1.52890	2
25	1.52572	2
30	1.52257	2
"C"	0.6512	4
MR (Obs.)	24.365	2
MR (Calc.)	24.738	5
(nD-d/2)	0.99648	2
Dielectric		
A | 5 to	6.95926	2
B | 155 °C	1246.038	2
C	221.354	2
A* | 5 to	1.29199	5
B* | 110 °C	1166.16	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 155 to	7.13243	4
Bc | t_c °C	1378.58	4
Cc	241.	4
Cryos. A*	0.0114	3'
consts. B*		
t_e °C	92.34	5

		Ref.
dt/dP		
°C/mm		
25°C	0.2655	5
BP	0.0428	2
t_e	0.03533	5
30 mm	0.6002	4
ΔHm cal/g		
ΔHv cal/g		
25°C	99.10	5
30 mm	102.20	5
BP	89.40	2
t_e	87.49	5
t_e (d, e)	88.06	5
$\Delta Hv/T_e$	20.14	5
d | 5 to	103.17	5
e | 90 °C	0.1636	5
d' | to		
e' | °C		
d_c g/ml	0.337	3
v_c ml/g	2.97	3
t_c °C	297.	3
P_c mm	37164.	3
PV/RT		
25°C	0.9985	5
30 mm	1.0000	5
BP	0.9612	4
t_e	0.9545	5
t_c	0.2612	4
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. 288 °K	0.3470	2
308	0.3569	2
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	33.89	5
30	32.37	5
40	30.89	5
Parachor [P]		
20°C		
30		
40		
S = 48.5 Sugd.	190.7	5
Exp. L.1.%/wt. u.		
Dispersion	162.7	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952) White et al.

No. 2

NAME	2-Methylthiophene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_5H_6S	Molecular Weight 98.164

		Ref.
F.P. °C	-63.38	2
F.P. 100%		
B.P. °C		
760 mm	112.56	3,2
100	54.26	4
30	28.55	5
10	9.20	5
1	-23.3	5
Pressure mm 25°C	24.89	5
t_e	1061.	5
Density g/ml 20°C	1.0193	2
d_4^t 25	1.0139	2
30	1.0084	4
a	1.0410	4
b	-0.00108	4
Ref. Index n_D 20°C	1.5203	2
25	1.5174	2
30	1.5144	4
"C"	0.6699	4
MR (Obs.)	29.29	2
MR (Calc.)	29.356	5
(nD-d/2)	1.0106	2
Dielectric		
A | 28 to	6.93897	3
B | 180 °C	1326.474	3
C	214.309	3
A* | 0 to	1.29767	5
B* | 28 °C	1239.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.14504	5
B' | 28 °C	1428.6	5
C'	223.3	5
A'* to		
B'* °C		
Ac | 180 to	7.35668	5
Bc | t_c °C	1677.7	5
Cc	263.6	5
Cryos. A°	0.025	3'
consts. B°		
t_e °C	124.66	5

		Ref.
dt/dP °C/mm		
25°C	0.7533	5
BP	0.0460	2
t_e	0.0354	5
30 mm	0.6437	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.83	5
30 mm	95.46	5
BP	83.00	5
t_e	81.38	5
t_e (d, e)	81.20	5
$\Delta Hv/T_e$	20.08	5
d | 25 to	99.69	5
e | 125 °C	0.1483	5
d' | to		
e' | °C		
d_c g/ml	0.351	5
v_c ml/g	2.846	5
t_c °C	333.0	5
P_c mm	35048.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9585	5
t_c	0.259	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.30	5
γ 30	30.94	5
40	29.62	5
Parachor [P]		
20°C		
30		
40		
S = 48.5 Sugd.	229.6	5
Exp. L.1.%/wt. u.		
Dispersion	160.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

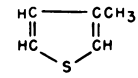
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White, et al.

No. 3

NAME	3-Methylthiophene	STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 3'	Molecular Formula C_5H_6S
		Molecular Weight 98.164



		Ref.
F. P. °C	-68.97	3'
F. P. 100%		
B. P. °C		
760 mm	115.44	3
100	56.75	4
30	30.79	5
10	10.96	5
1	-22.2	5
Pressure mm 25°C	22.15	5
t_e	1063.	5
Density g/ml 20°C	1.02183	2
d_4^t 25	1.01647	2
30	1.01110	4
a	1.04326	4
b	-0.001067	4
Ref. Index n_D 20°C	1.52942	2
25	1.51758	2
30	1.51467	4
"C"	0.6684	4
MR (Obs.)	29.225	2
MR (Calc.)	29.356	5
(nD-d/2)	1.0095	2
Dielectric		
A | 30 to	6.98611	3
B | 185 °C	1363.862	3
C	216.784	3
A* | 30 to	1.34753	5
B* | 140 °C	1276.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.33318	5
B' | 30 °C	1541.1	5
C'	232.38	5
A'* 10 to	1.67608	5
B'* 30 °C	1443.4	5
Ac | 185 to	7.40824	5
Bc | t_c °C	1724.0	5
Cc	266.7	5
Cryos. A°	0.0304	3²
consts. B°		
t_e °C	127.66	5

		Ref.
dt/dP °C/mm		
25°C	0.8426	5
BP	0.0462	2
t_e	0.0355	5
30 mm	0.6506	5
ΔHm cal/g	25.65	3'
ΔHv cal/g		
25°C	96.42	5
30 mm	95.85	5
BP	83.40	3²
t_e	81.66	5
t_e (d, e)	81.60	5
ΔHv/T_e	20.00	5
d | 30 to	100.38	5
e | 130 °C	0.1471	5
d' | 0 to	98.85	5
e' | 30 °C	0.0982	5
d_c g/ml	0.357	5
v_c ml/g	2.799	5
t_c °C	337.6	5
P_c mm	35908.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9619	5
t_e	0.9529	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	0.676	2
25	0.637	2
30	0.599	2
B^v | 10 to	303.20	4
A^v | 40 °C	Σ.79584	4
(B^v) | to		
(A^v) | °C		
c_p liq. 293°K	0.3642	3'
c_p vap. 125°K	0.3096	3'
200	0.3477	3'
c_v vap.		

			Ref.
f	to		
g |	°K		
h			
f'	to		
g' |	°K		
h'			
m	to		
n |	°K		
o			
m'	to		
n' |	°K		
o'			
Surface tension dynes/cm.	20°C	32.62	5
γ	30	31.27	5
	40	29.95	5
Parachor [P]	20°C		
	30		
	40		
S = 48.5	Sugd.	229.6	5
Exp. L.1.%/wt. u.			
Dispersion		159.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

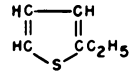
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al.;
3' J.A.C.S. 75, 5075 (1953), McCullough et al.

No. 4

NAME	2-Ethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_8S — Molecular Weight 112.190



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	134.	2
100	72.	4
30	45.33	5
10	24.	5
1	-10.	5
Pressure		
mm 25°C	10.39	5
t_e	1114.	5
Density		
g/ml 20°C	0.9930	2
d_4^t 25	0.9880	2
30	0.9830	4
a	1.0130	4
b	-0.00100	4
Ref. Index		
n_D 20°C	1.5122	2
25	1.5094	2
30	1.5066	4
"C"	0.6776	4
MR (Obs.)	33.913	2
MR (Calc.)	33.974#	5
(nD-d/2)	1.0157	2
Dielectric		
A | 45 to	6.9563	5
B | 195 °C	1414.2	5
C	213.0	5
A* | 45 to	1.3601	5
B* | 160 °C	1324.29	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.30149	5
B' | 45 °C	1598.0	5
C'	229.	5
A'* 20 to	1.69543	5
B'* 45 °C	1499.7	5
Ac | 195 to	7.37327	5
Bc | t_c °C	1774.2	5
Cc	261.9	5
Cryos. A°		
consts. B°		
t_e °C	148.76	5

		Ref.
dt/dP		
°C/mm		
25°C	1.691	5
BP	0.04865	2
t_e	0.0361	5
30 mm	0.6832	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.64	5
30 mm	87.69	5
BP	75.95	5
t_e	74.04	5
t_e (d, e)	74.00	5
$\Delta Hv/T_e$	19.68	5
d | 45 to	93.69	5
e | 150 °C	0.1324	5
d' | 20 to	92.04	5
e' | 45 °C	0.0959	5
d_c g/ml		
v_c ml/g		
t_c °C	350.0	5
P_c mm	29781.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9493	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.99	5
30	30.72	5
40	29.49	5
Parachor [P]		
20°C		
30		
40		
Sugd.	268.7	5
Exp. L.1.%/wt. u.		
Dispersion	154.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

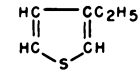
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	3-Ethylthiophene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_8S	Molecular Weight 112.190



		Ref.
F.P. °C	-89.1	2
F.P. 100%		
B.P. °C		
760 mm	136.	2
100	74.	4
30	46.48	5
10	26.	5
1	-9.	5
Pressure mm 25°C	9.679	5
t_e	1120.	5
Density g/ml 20°C	0.9980	2
d_4^t 25	0.9931	2
30	0.9882	4
a	1.0176	4
b	-0.0_3977	4
Ref. Index n_D 20°C	1.5146	2
25	1.5120	2
30	1.5092	4
"C"	0.6771	4
MR (Obs.)	33.88	2
MR (Calc.)	33.974#	5
(nD-d/2)	1.0156	2
Dielectric		
A | 45 to	6.9530	5
B | 200 °C	1422.0	5
C	213.2	5
A* | 45 to	1.3538	5
B* | 160 °C	1331.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.2980	5
B' | 45 °C	1606.8	5
C'	229.0	5
A'* 20 to	1.6903	5
B'* 45 °C	1508.0	5
Ac | 200 to	7.3711	5
Bc | t_c °C	1786.2	5
Cc	262.8	5
Cryos. A*		
consts. B*		
t_e °C	151.07	5

		Ref.
dt/dP °C/mm		
25°C	1.809	5
BP	0.0490	5
t_e	0.0362	5
30 mm	0.6865	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.92	5
30 mm	87.89	5
BP	76.15	5
t_e	74.19	5
t_e (d, e)	74.18	5
$\Delta Hv/T_e$	20.33	5
d | 45 to	93.98	5
e | 150 °C	0.1311	5
d' | 20 to	92.28	5
e' | 45 °C	0.0945	5
d_c g/ml		
v_c ml/g		
t_c °C	354.	5
P_c mm	30020.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9488	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	32.64	5
σ 30	31.34	5
40	30.14	5
Parachor [P] 20°C		
30		
40		
Sugd.	268.7	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.75 T_c # C-S-C, S = 7.2 + grams/100 grams solvent

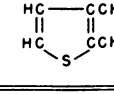
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	2,3-Dimethylthiophene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_8S	Molecular Weight 112.190	

		Ref.
F.P. °C	-49.0	2
F.P. 100%		
B.P. °C		
760 mm	141.6	2
100	78.4	5
30	50.49	5
10	29.3	5
1	-6.2	5
Pressure		
mm 25°C	7.8498	5
t_e	1137.1	5
Density		
g/ml 20°C	1.0021	2
d_4^t 25	0.9970	2
30	0.9919	4
a	1.0225	4
b	-0.02102	4
Ref. Index		
n_D 20°C	1.5192	2
25	1.5166	2
30	1.5137	4
"C"	0.6801	4
MR (Obs.)	33.99	2
MR (Calc.)	33.974#	5
(nD-d/2)	1.0182	2
Dielectric		
A | 80 to	6.9249	5
B | 200 °C	1430.0	5
C	212.	5
A* | 80 to	1.3204	5
B* | 170 °C	1338.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2681	5
B' | 80 °C	1615.9	5
C'	229.	5
A'* 25 to	1.6587	5
B'* 80 °C	1517.	5
Ac | 200 to	7.3425	5
Bc | t_c °C	1797.9	5
Cc	262.	5
Cryos. A°		
consts. B°		
t_e °C	157.59	5

		Ref.
dt/dP °C/mm		
25°C	2.201	5
BP	0.04996	5
t_e	0.0365	5
30 mm	0.6975	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.16	5
30 mm	88.69	5
BP	76.76	5
t_e	74.73	5
t_e (d,e)	74.67	5
$\Delta Hv/T_e$	19.46	5
d | 80 to	95.30	5
e | 160 °C	0.1309	5
d' | 25 to	93.59	5
e' | 80 °C	0.0970	5
d_c g/ml		
v_c ml/g		
t_c °C	362.0	5
P_c mm	29100.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9602	5
t_e	0.9487	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		33.18	5
30		31.85	5
40		30.56	5
Parachor [P]			
20°C			
30			
40			
Sugd.		268.7	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

C-S-C, S = 7.2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

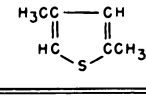
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	2,4-Dimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_6H_8S	Molecular Weight 112.190



		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	140.7	2
100	78.5	5
30	50.96	5
10	29.9	5
1	-5.3	5
Pressure		
mm 25°C	7.5284	5
t_e	1108.2	5
Density		
g/ml 20°C	0.9956	2
d_4^t 25	0.9905	2
30	0.9854	4
a	1.0160	4
b	-0.0_2102	4
Ref. Index		
n_D 20°C	1.5104	2
25	1.5078	2
30	1.5048	4
"C"	0.6736	4
MR (Obs.)	33.73	2
MR (Calc.)	33.974#	5
(nD-d/2)	1.0126	2
Dielectric		
A 50 to	6.9939	5
B 220 °C	1450.7	5
C	212.0	5
A* 50 to	1.42330	5
B* 165 °C	1367.90	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.3415	5
B' 50 °C	1639.2	5
C'	229.	5
A'* 25 to	1.7316	5
B'* 50 °C	1540.3	5
Ac 220 to	7.4100	5
Bc t_c °C	1814.	5
Cc	261.	5
Cryos. A°		
consts. B°		
t_e °C	155.33	5

		Ref.
dt/dP		
°C/mm		
25°C	2.2627	5
BP	0.0490	5
t_e	0.0365	5
30 mm	0.6900	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.46	5
30 mm	89.91	5
BP	76.44	5
t_e	74.41	5
t_e (d, e)	74.24	5
$\Delta Hv/T_e$	19.48	5
d 50 to	97.56	5
e 155 °C	0.1501	5
d' 25 to	94.91	5
e' 50 °C	0.0982	5
d_c g/ml		
v_c ml/g		
t_c °C	358.	5
P_c mm	30110.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9419	5
t_e	0.9295	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	32.33	5
30	31.02	5
40	29.76	5
Parachor [P]		
20°C		
30		
40		
Sugd.	268.7	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	2,5-Dimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_8S — Molecular Weight 112.190

		Ref.
F.P. °C	-62.6	2
F.P. 100%		
B.P. °C 760 mm	136.7	2
100	74.6	5
30	47.14	5
10	26.2	5
1	-8.8	5
Pressure mm 25°C	9.3366	5
t_e	1121.8	5
Density g/ml 20°C	0.9850	2
d_4^{25}	0.9799	2
d_4^{30}	0.9748	4
a	1.0054	4
b	-0.00102	4
Ref. Index n_D 20°C	1.5129	2
25	1.5104	2
30	1.5072	4
"C"	0.6839	4
MR (Obs.)	34.23	2
MR (Calc.)	33.974	5
(nD-d/2)	1.0204	2
Dielectric		
A | 50 to	6.9611	5
B | 195 °C	1427.7	5
C	213.2	5
A* | 50 to	1.3621	5
B* | 160 °C	1337.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3066	5
B' | 50 °C	1613.3	5
C'	230.	5
A'* 25 to	1.6984	5
B'* 50 °C	1514.3	5
Ac | 195 to	7.3785	5
Bc | t_c °C	1789.6	5
Cc	262.	5
Cryos. A° consts. B°		
t_e °C	151.83	5

		Ref.
dt/dP °C/mm		
25°C	1.8690	5
BP	0.0490	5
t_e	0.0361	5
30 mm	0.6872	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.25	5
30 mm	88.16	5
BP	76.38	5
t_e	74.45	5
t_e (d,e)	74.39	5
$\Delta Hv/T_e$	19.65	5
d | 50 to	94.36	5
e | 150 °C	0.1315	5
d' | 25 to	92.62	5
e' | 50 °C	0.0946	5
d_c g/ml		
v_c ml/g		
t_c °C	352.	5
P_c mm	29180.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9597	5
t_e	0.9487	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension dynes/cm.	20°C	30.97	5
γ	30	29.71	5
	40	28.42	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	268.7	5
Exp. L.1.%/wt. u.			
Dispersion		162.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	3,4-Dimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_8S	Molecular Weight 112.190

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	145.	2
100	81.	5
30	53.38	5
10	32.	5
1	-4.	5
Pressure mm 25°C	6.705	5
t_e	1117.5	5
Density g/ml 20°C	1.008	2
d_4^{25}	1.003	2
30	0.998	4
a	1.0280	4
b	-0.0_3998	4
Ref. Index n_D 20°C	1.5212	2
25	1.5187	2
30	1.5157	4
"C"	0.6785	4
MR (Obs.)	33.9	2
MR (Calc.)	33.974#	5
(nD-d/2)	1.017	2
Dielectric		
A | 55 to	6.9389	5
B | 205 °C	1446.7	5
C	211.5	5
A* | 55 to	1.3675	5
B* | 170 °C	1363.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2830	5
B' | 55 °C	1634.7	5
C'	228.	5
A'* 25 to	1.67182	5
B'* 55 °C	1535.5	5
Ac | 205 to	7.3562	5
Bc | t_c °C	1817.0	5
Cc	262.	5
Cryos. A°		
consts. B°		
t_e °C	160.34	5

		Ref.
dt/dP °C/mm		
25°C	2.5399	5
BP	0.0502	5
t_e	0.0371	5
30 mm	0.7021	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.48	5
30 mm	89.69	5
BP	75.98	5
t_e	73.88	5
t_e (d, e)	73.68	5
$\Delta Hv/T_e$	19.12	5
d | 55 to	97.68	5
e | 60 °C	0.1497	5
d' | 25 to	94.94	5
e' | 55 °C	0.0983	5
d_c g/ml		
v_c ml/g		
t_c °C	367.	5
P_c mm	29310.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9265	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	33.97	5
ϑ 30	32.72	5
40	31.36	5
Parachor [P] 20°C		
30		
40		
Sugd.	268.7	5
Exp. L.1.%/wt. u.		
Dispersion	156.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	2-Propyltniophene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	158.5	2
100	92.7	5
30	63.72	5
10	41.6	5
1	4.8	5
Pressure		
mm 25°C	3.849	5
t_e	1182.8	5
Density		
g/ml 20°C	0.9687	2
d_4^t 25	0.9639	2
30	0.9591	4
a	0.9879	4
b	-0.0_396	4
Ref. Index		
n_D 20°C	1.5049	2
25	1.5023	2
30	1.4995	4
"C"	0.6855	4
MR (Obs.)	38.639	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0206	2
Dielectric		
A | 65 to	6.9194	5
B | 210 °C	1484.2	5
C	209.	5
A* | 65 to	1.3536	5
B* | 185 °C	1390.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2623	5
B' | 65 °C	1677.10	5
C'	226.	5
A'* 25 to	1.6970	5
B'* 65 °C	1577.4	5
Ac | 210 to	7.3325	5
Bc | t_c °C	1850.4	5
Cc	258.	5
Cryos. A°		
consts. B°		
t_e °C	176.86	5

		Ref.
dt/dP		
°C/mm		
25°C	4.2441	5
BP	0.0520	5
t_e	0.0368	5
30 mm	0.7254	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.69	5
30 mm	82.12	5
BP	70.79	5
t_e	68.67	5
t_e (d, e)	68.60	5
$\Delta Hv/T_e$	19.26	5
d | 65 to	89.74	5
e | 175 °C	0.1195	5
d' | 25 to	87.99	5
e' | 65 °C	0.0922	5
d_c g/ml		
v_c ml/g		
t_c °C	371.	5
P_c mm	24502.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9577	5
t_e	0.9446	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.22	5
30	30.00	5
40	28.81	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L.1.%/wt. u.		
Dispersion	149.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

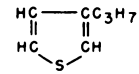
PURIFICATION: API

LITERATURE REFERENCES:

TABLE IV. THIOPHENES

No. 11

NAME	3-Propylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	161.	2
100	95.	5
30	65.64	5
10	43.	5
1	6.	5
Pressure		
mm 25°C	3.4670	5
t_e	1151.03	5
Density		
g/ml 20°C	0.9716	2
d_4^t 25	0.9669	2
30	0.9622	4
a	0.9904	4
b	-0.0_3394	4
Ref. Index		
n_D 20°C	1.5057	2
25	1.5031	2
30	1.5005	4
"C"	0.6843	4
MR (Obs.)	38.58	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0199	2
Dielectric		
A | 65 to	6.9146	5
B | 210 °C	1490.1	5
C	208.4	5
A* | 65 to	1.3572	5
B* | 190 °C	1398.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2572	5
B' | 65 °C	1683.8	5
C'	226.	5
A'* 25 to	1.6911	5
B'* 65 °C	1584.	5
Ac | 210 to	7.3274	5
Bc | t_c °C	1858.3	5
Cc	258.	5
Cryos. A°		
consts. B°		
t_e °C	179.41	5

		Ref.
dt/dP		
°C/mm		
25°C	4.675	5
BP	0.05233	5
t_e	0.03711	5
30 mm	0.7296	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.38	5
30 mm	82.59	5
BP	70.71	5
t_e	68.53	5
t_e (d, e)	68.42	5
$\Delta Hv/T_e$	19.11	5
d | 65 to	90.76	5
e | 180 °C	0.1246	5
d' | 25 to	88.72	5
e' | 65 °C	0.0934	5
d_c g/ml		
v_c ml/g		
t_c °C	375.0	5
P_c mm	24530.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9517	5
t_e	0.9379	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.60	5
30	30.39	5
40	29.22	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L.1.%/wt. u.		
Dispersion	148.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	2-Isopropylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	153.	2
100	88.	5
30	59.46	5
10	38.	5
1	1.	5
Pressure		
mm 25°C	4.844	5
t_e	1191.0	5
Density		
g/ml 20°C	0.9678	2
d_4^t 25	0.9633	2
30	0.9588	4
a	0.9858	4
b	-0.0_390	4
Ref. Index		
n_D 20°C	1.5038	2
25	1.5013	2
30	1.4988	4
"C"	0.6846	4
MR (Obs.)	38.61	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0199	2
Dielectric		
A | 60 to	6.9243	5
B | 205 °C	1467.8	5
C	210.	5
A* | 60 to	1.3607	5
B* | 180 °C	1374.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2675	5
B' | 60 °C	1658.57	5
C'	227.	5
A'* 25 to	1.70438	5
B'* 60 °C	1559.10	5
Ac | 205 to	7.3595	5
Bc | t_c °C	1851.	5
Cc	261.	5
Cryos. A°		
consts. B°		
t_e °C	170.6	5

		Ref.
dt/dP		
°C/mm		
25°C	3.432	5
BP	0.05130	5
t_e	0.0360	5
30 mm	0.7161	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.21	5
30 mm	81.10	5
BP	71.10	5
t_e	69.29	5
t_e (d, e)	69.21	5
$\Delta Hv/T_e$	19.70	5
d | 60 to	87.45	5
e | 170 °C	0.1069	5
d' | 25 to	86.4	5
e' | 60 °C	0.09	5
d_c g/ml		
v_c ml/g		
t_c °C	364.	5
P_c mm	25000.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9467	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.11	5
γ 30	29.97	5
40	28.85	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L.1.%/wt. u.		
Dispersion	150.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	3-Isopropylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	157.	2
100	91.	5
30	62.51	5
10	41.	5
1	4.	5
Pressure		
mm 25°C	4.1105	5
t_e	1169.0	5
Density		
g/ml 20°C	0.9733	2
d_4^t 25	0.9688	2
30	0.9643	4
a	0.9913	4
b	-0.0_390	4
Ref. Index		
n_D 20°C	1.5052	2
25	1.5027	2
30	1.5002	4
"C"	0.6825	4
MR (Obs.)	38.48	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0186	2
Dielectric		
A | 65 to	6.9174	5
B | 210 °C	1478.2	5
C	209.2	5
A* | 65 to	1.3401	5
B* | 185 °C	1381.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2601	5
B' | 65 °C	1670.3	5
C'	226.	5
A'* 25 to	1.6956	5
B'* 65 °C	1570.7	5
Ac | 210 to	7.3310	5
Bc | t_c °C	1845.	5
Cc	258.	5
Cryos. A*		
consts. B*		
t_e °C	175.55	5

		Ref.
dt/dP		
°C/mm		
25°C	3.9952	5
BP	0.05184	5
t_e	0.0366	5
30 mm	0.7230	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.25	5
30 mm	81.81	5
BP	71.06	5
t_e	68.99	5
t_e (d, e)	68.95	5
$\Delta Hv/T_e$	19.40	5
d | 65 to	88.92	5
e | 175 °C	0.1137	5
d' | 25 to	87.54	5
e' | 65 °C	0.0918	5
d_c g/ml		
v_c ml/g		
t_c °C	371.0	5
P_c mm	25050.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9650	5
t_e	0.9528	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.82	5
30	30.66	5
40	29.52	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L.1.%/wt. u.		
Dispersion	145.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

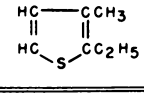
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	2-Ethyl-3-methylthiophene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	161.	2
100	95.	5
30	65.79	5
10	44.	5
1	7.	5
Pressure		
mm 25°C	3.4246	5
t_e	1190.6	5
Density		
g/ml 20°C	0.9815	2
d_4^{t} 25	0.9769	2
30	0.9723	4
a	0.9999	4
b	-0.0_392	4
Ref. Index		
n_D 20°C	1.5105	2
25	1.5080	2
30	1.5053	4
"C"	0.6834	4
MR (Obs.)	38.49	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0198	2
Dielectric		
A | 65 to	6.9171	5
B | 210 °C	1489.4	5
C	208.	5
A* | 65 to	1.3488	5
B* | 190 °C	1395.1	5
K		
c		
t_x | to		
t_x | °C		
A' | 25 to	7.2598	5
B' | 65 °C	1683.	5
C'	225.	5
A'* 25 to	1.6942	5
B'* 65 °C	1583.6	5
Ac | 210 to	7.3298	5
Bc | t_c °C	1858.7	5
Cc	257.	5
Cryos. A* consts. B*		
t_e °C	179.73	5

		Ref.
dt/dP		
°C/mm		
25°C	4.7190	5
BP	0.05224	5
t_e	0.3682	5
30 mm	0.7286	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.63	5
30 mm	82.77	5
BP	71.31	5
t_e	69.14	5
t_e (d, e)	69.06	5
$\Delta Hv/T_e$	19.27	5
d | 25 to	90.69	5
e | 180 °C	0.1204	5
d' | 25 to	88.996	5
e' | 65 °C	0.0946	5
d_c g/ml		
v_c ml/g		
t_c °C	377.	5
P_c mm	25200.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9448	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	32.91	5
γ 30	31.69	5
40	30.50	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

C-S-C, S = 7.2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE IV. THIOPHENES

No. 15

NAME	3-Ethyl-2-methylthiophene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	157.	2
100	91.	5
30	62.51	5
10	41.	5
1	4.	5
Pressure		
mm 25°C	4.1105	5
t_e	1172.78	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	38.292#	5
(nD-d/2)		
Dielectric		
A | 60 to	6.9174	5
B | 190 °C	1478.2	5
C	209.2	5
A* | 60 to	1.3598	5
B* | 185 °C	1386.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2601	5
B' | 60 °C	1670.3	5
C'	226.3	5
A'* 25 to	1.6956	5
B'* 60 °C	1570.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	174.93	5

		Ref.
dt/dP		
°C/mm		
25°C	3.9952	5
BP	0.05184	5
t_e	0.03696	5
30 mm	0.7230	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.25	5
30 mm	81.81	5
BP	70.54	5
t_e	68.40	5
t_e (d, e)	70.70	5
ΔHv/T_e		
d | 60 to	89.26	5
e | 175 °C	0.1192	5
d' | 25 to	87.55	5
e' | 60 °C	0.09186	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9538	5
t_e	0.9406	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
γ 30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

C-S-C, S = 7.2

+ grams/100 grams solvent

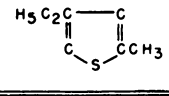
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	4-Ethyl-2-methylthiophene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F.P. °C	-59.	2
F.P. 100%		
B.P. °C		
760 mm	163.	2
100	96.	5
30	67.10	5
10	45.	5
1	8.	5
Pressure mm 25°C	3.209	5
t_e	1198.1	5
Density g/ml 20°C	0.9742	2
d_4^t 25	0.9696	2
30	0.9650	4
a	0.9926	4
b	-0.0392	4
Ref. Index n_D 20°C	1.5098	2
25	1.5073	2
30	1.5046	4
"C"	0.6876	4
MR (Obs.)	38.74	2
MR (Calc.)	38.272#	5
(nD-d/2)	1.0227	2
Dielectric		
A | 65 to	6.9072	5
B | 210 °C	1493.8	5
C	208.	5
A* | 65 to	1.3348	5
B* | 195 °C	1398.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2493	5
B' | 65 °C	1685.	5
C'	225.	5
A'* 25 to	1.6826	5
B'* 65 °C	1588.2	5
Ac | 210 to	7.3203	5
Bc | t_c °C	1864.9	5
Cc	258.	5
Cryos. A° consts. B°		
t_e °C	182.16	5

		Ref.
dt/dP °C/mm		
25°C	5.0237	5
BP	0.05265	5
t_e	0.0369	5
30 mm	0.7334	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.83	5
30 mm	82.87	5
BP	71.48	5
t_e	69.28	5
t_e (d, e)	69.21	5
$\Delta Hv/T_e$	19.20	5
d | 65 to	90.83	5
e | 185 °C	0.1187	5
d' | 25 to	89.18	5
e' | 65 °C	0.0942	5
d_c g/ml		
v_c ml/g		
t_c °C	379.	5
P_c mm	24750.1	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9457	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm. 20°C		31.94	5
γ 30		30.75	5
40		29.59	5
Parachor [P] 20°C			
30			
40			
Sugd.		307.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

C-S-C, S = 7.2

+ grams/100 grams solvent

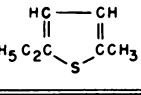
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 17

NAME	5-Ethyl-2-methylthiophene			STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216	

		Ref.
F.P. °C	-68.5	2
F.P. 100%		
B.P. °C		
760 mm	160.1	2
100	94.02	5
30	64.92	5
10	42.8	5
1	5.7	5
Pressure		
mm 25°C	3.6078	5
t_e	1189.6	5
Density		
g/ml 20°C	0.9661	2
d_4^t 25	0.9618	2
30	0.9575	4
a	0.9833	4
b	$-0.0_3 86$	4
Ref. Index		
n_D 20°C	1.5073	2
25	1.5048	2
30	1.5033	4
"C"	0.6903	4
MR (Obs.)	38.90	2
MR (Calc.)	38.242#	5
(nD-d/2)	1.0242	2
Dielectric		
A 65 to	6.9128	5
B 210 °C	1486.2	5
C	208.5	5
A* 65 to	1.3432	5
B* 190 °C	1391.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.2552	5
B' 65 °C	1679.4	5
C'	225.7	5
A'* 25 to	1.6897	5
B'* 65 °C	1579.8	5
Ac 210 to	7.3260	5
Bc t_c °C	1854.8	5
Cc	258.	5
Cryos. A°		
consts. B°		
t_e °C	178.79	5

		Ref.
dt/dP		
°C/mm		
25°C	4.5061	5
BP	0.05224	5
t_e	0.03685	5
30 mm	0.7282	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.12	5
30 mm	82.39	5
BP	71.09	5
t_e	68.94	5
t_e (d, e)	68.87	5
$\Delta Hv/T_e$	19.25	5
d 65 to	90.10	5
e 180 °C	0.1188	5
d' 25 to	88.45	5
e' 65 °C	0.09326	5
d_c g/ml	0.3104	5
v_c ml/g	3.222	5
t_c °C	375.00	5
P_c mm	24840.1	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9460	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		30.89	5
30		29.80	5
40		28.74	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

C-S-C, S = 7.2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	2,3,4-Trimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$
		Molecular Weight 126.216

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	172.7	2
100	104.5	5
30	74.45	5
10	51.6	5
1	13.5	5
Pressure		
mm 25°C	2.1577	5
t_e	1221.92	5
Density		
g/ml 20°C	0.995	2
d_4^t 25	0.991	2
30	0.987	4
a	1.0101	4
b	0.0_3380	4
Ref. Index		
n_D 20°C	1.5208	2
25	1.5183	2
30	1.5164	4
"C"	0.6869	4
MR (Obs.)	38.6	2
MR (Calc.)	38.242#	5
(nD-d/2)	1.023	2
Dielectric		
A | 75 to	6.8900	5
B | 230 °C	1519.1	5
C	206.2	5
A* | 75 to	1.31375	5
B* | 205 °C	1423.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2310	5
B' | 75 °C	1716.5	5
C'	224.	5
A'* 25 to	1.6607	5
B'* 75 °C	1616.5	5
Ac | 230 to	7.3039	5
Bc | t_c °C	1903.0	5
Cc	258.	5
Cryos. A° consts. B°		
t_e °C	193.25	5

		Ref.
dt/dP		
°C/mm		
25°C	7.2632	5
BP	0.054	5
t_e	0.0373	5
30 mm	0.7506	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.33	5
30 mm	84.50	5
BP	72.61	5
t_e	70.24	5
t_e (d, e)	70.12	5
$\Delta Hv/T_e$	19.01	5
d | 75 to	93.52	5
e | 195 °C	0.1211	5
d' | 25 to	91.78	5
e' | 75 °C	0.0977	5
d_c g/ml		
v_c ml/g		
t_c °C	400.	5
P_c mm	25806.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9415	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		34.76	5
γ 30		33.65	5
40		32.57	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.7	5
Exp. L. 1. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$ # C-S-C, S = 7.2 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	2,3,5-Trimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_{10}S$	Molecular Weight 126.216

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	164.5	2
100	98.2	5
30	69.04	4
10	46.8	5
1	9.6	5
Pressure		
mm 25°C	2.8192	5
t_e	1200.6	5
Density		
g/ml 20°C	0.9753	2
d_4^t 25	0.9708	2
30	0.9663	4
a	0.9933	4
b	-0.0_3390	4
Ref. Index		
n_D 20°C	1.5112	2
25	1.5088	2
30	1.5061	4
"C"	0.6886	4
MR (Obs.)	38.78	2
MR (Calc.)	38.292#	5
(nD-d/2)	1.0236	2
Dielectric		
A | 70 to	6.9251	5
B | 210 °C	1498.4	5
C	206.	5
A* | 70 to	1.3546	5
B* | 195 °C	1404.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.2683	5
B' | 70 °C	1693.1	5
C'	223.3	5
A'* 25 to	1.7029	5
B'* 70 °C	1594.5	5
Ac | 210 to	7.3354	5
Bc | t_c °C	1866.6	5
Cc	255.3	5
Cryos. A°		
consts. B°		
t_e °C	183.63	5

		Ref.
dt/dP		
°C/mm		
25°C	5.6107	5
BP	0.05235	5
t_e	0.03665	5
30 mm	0.7308	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.51	5
30 mm	84.11	5
BP	72.31	5
t_e	70.06	5
t_e (d, e)	69.95	5
$\Delta Hv/T_e$	19.36	5
d | 70 to	92.64	5
e | 185 °C	0.1236	5
d' | 25 to	91.01	5
e' | 70 °C	0.09994	5
d_c g/ml		
v_c ml/g		
t_c °C	382.	5
P_c mm	25450.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9446	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	32.08	5
30	30.91	5
40	29.77	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.7	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

C-S-C, S = 7.2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 1

NAME	Naphthalene	STRUCTURAL FORMULA
Mole % Pur. 99.4	Ref. 1	Molecular Formula $C_{10}H_8$ — Molecular Weight 128.164

		Ref.
F.P. °C	80.21	1
F.P. 100%	80.55	1
B.P. °C 760 mm	217.955	2
100	144.31	2
30	112.0	4
10	87.5	5
1	46.6	5
Pressure mm 25°C	0.2129	5
t_e	1326.	5
Density g/ml 20°C	1.0253	5
d_4^t 25	1.0116	5
30	0.9979	5
a	1.0801	5
b	-0.00274	5
Ref. Index n_D 20°C		
25		
85	1.5898	2
"C"	0.7872	4
MR (Obs.)85°	44.34	2
MR (Calc.)	44.185	5
(nD-d/2)85°	1.1022	2
Dielectric	2.54	3
A 110 to	6.84577	2
B 280 °C	1606.529	2
C	187.227	2
A* 110 to	1.27158	5
B* 260 °C	1516.4	5
K		
c		
t_k to		
t_x °C		
A' 10 to	7.18400	5
B' 110 °C	1815.3	5
C'	206.1	5
A'* 10 to	1.61585	5
B'* 110 °C	1721.4	5
Ac 280 to	8.04266	5
Bc t_c °C	2930.8	5
Cc	352.3	5
Cryos. A° consts. B°	0.01740	1
t_e °C F	244.24	5

		Ref.
dt/dP °C/mm		
25°C	60.010	5
BP	0.0584	2
t_e	0.0380	5
30 mm	0.8069	4
ΔHm cal/g	33.67	1
ΔHv cal/g 25°C	107.93	5
30 mm	95.05	5
BP	78.66	5
t_e	74.89	5
t_e (d, e)	74.60	5
$\Delta Hv/T_e$	18.55	5
d 110 to	112.37	5
e 250 °C	0.1546	5
d' 20 to	111.63	5
e' 110 °C	0.1480	5
d_c g/ml	0.314	3[1]
v_c ml/g	3.1847	4
t_c °C	469.00	3[2]
P_c mm	29792.	3[3]
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9208	5
t_c	0.261	4
ΔHc kcal/m	1230.7	3[4]
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	0.969	3[5]
121	0.4647	3[2]
205	0.401	3[5]
360	0.262	3[5]
B^v 80 to	1082.71	4
A^v 220 °C	4.92089	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 25 °C	0.3130	4
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm	121°C	29.3	3[6]
γ	30	35.23	5
	40	31.52	5
Parachor [P]	121°C	314.1	4
	30		
	40		
	Sugd.	312.9	5
Exp. L.1.%/wt. u.			
Dispersion 85°C		297.	2
Flash Point °C		87.78	3[7]
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		69.16	1
Carbon tet.		26.82	1
Benzene		65.71	1
Ether		57.12	1
n-Heptane		19.82	1
Ethanol		12.10	1
Water		0.0040	1
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514; 3[1] Z. Physik. Chem. B49, 272 (1941) E. Schroer; 3[2] Can. J. Res. 19, 73 (1941), Campbell and Campbell; 3[3] Ind. Eng. Chem. 34, 52 (1942), Meisner and Reading; 3[4] J. Chim. Phys. 28, 457 (1931), L. J. P. Keffler; 3[5] C.A. 44, 8721 (1950), Golik and Rarrkovich; 3[6] J. Phys. Chem. 38, 761 (1934), Lee Ward; 3[7] Lange

No. 2

NAME	1-Methylnaphthalene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{10}$	Molecular Weight 142.190

		Ref.
F.P. °C	-30.57	2
F.P. 100%		
B.P. °C		
760 mm	244.642	2
100	167.776	2
30	133.6	4
10	107.4	5
1	63.5	5
Pressure mm 25°C	0.0671	5
t_e	1400.8	5
Density g/ml 20°C	1.02015	2
d_4^t 25	1.01630	2
30	1.01245	4
a	1.03555	4
b	-0.0_377	4
Ref. Index n_D 20°C	1.6174	2
25	1.6149	2
30	1.6124	4
"C"	0.7852	4
MR (Obs.)	48.795	2
MR (Calc.)	48.803	5
(nD-d/2)	1.1073	2
Dielectric	2.71	3
A | 130 to	7.06899	2
B | 305 °C	1852.674	2
C	197.716	2
A* | 130 to	1.50733	5
B* | 290 °C	1749.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.42128	5
B' | 130 °C	2093.5	5
C'	218.6	5
A'* 10 to	1.86734	5
B'* 130 °C	1986.9	5
Ac | 305 to	7.48224	5
Bc | t_c °C	2290.2	5
Cc	253.8	5
Cryos. A° consts. B°		
t_e °C F	274.59	5

		Ref.
dt/dP °C/mm		
25°C	183.3	5
BP	0.0604	2
t_e	0.0373	5
30 mm	0.8577	4
ΔHm cal/g		
ΔHv cal/g		
25°C	100.96	5
30 mm	89.88	5
BP	76.45	5
t_e	73.14	5
t_e (d, e)	72.83	5
$\Delta Hv/T_e$	18.98	5
d | 90 to	106.04	5
e | 270 °C	0.1210	5
d' | 10 to	103.51	5
e' | 90 °C	0.1020	5
d_c g/ml	0.319	5
v_c ml/g	3.13	5
t_c °C	496.	5
P_c mm	26765.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9397	5
t_e	0.9191	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension dynes/cm.	20°C	40.68	5
γ	30	39.46	5
	40	38.28	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	352.0	5
Exp. L.1.%/wt. u.			
Dispersion		295.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

No. 3

NAME	2-Methylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Molecular Formula $C_{11}H_{10}$	Molecular Weight 142.190

		Ref.
F.P. °C	34.58	2
F.P. 100%		
B.P. °C		
760 mm	241.052	2
100	164.684	2
30	130.7	4
10	104.7	5
1	61.1	5
Pressure mm 25°C	0.0800	5
t_e	1393.	5
Density g/ml 20°C	1.0058≠	4
d_4^{t} 25	1.0020≠	4
40	0.99045	3
a	1.0210	4
b	-0.0376	4
Ref. Index n_D 20°C		
25		
40	1.6019	2
"C"	0.7823	4
MR (Obs.)	48.77≠	4
MR (Calc.)	48.803	5
(nD-d/2)	1.1067≠	4
Dielectric	40° 2.57	5
A | 130 to	7.06850	2
B | 300 °C	1840.268	2
C	198.395	2
A* | 130 to	1.50750	5
B* | 290 °C	1737.4	5
K		
c		
t_k to		
t_x °C		
A' | 15 to	7.42076	5
B' | 130 °C	2079.4	5
C'	219.1	5
A'* 15 to	1.86810	5
B'* 130 °C	1973.0	5
Ac | 300 to	7.48161	5
Bc | t_e °C	2273.4	5
Cc	253.8	5
Cryos. A* consts. B*		
t_e °C F	270.51	5

		Ref.
dt/dP °C/mm		
25°C	155.6	5
BP	0.0600	2
t_e	0.0373	5
30 mm	0.8521	4
ΔHm cal/g	20.11	3'
ΔHv cal/g		
25°C	99.84	5
30 mm	89.20	5
BP	75.98	5
t_e	72.73	5
t_e (d, e)	72.45	5
$\Delta Hv/T_e$	19.02	5
d | 130 to	104.86	5
e | 270 °C	0.1198	5
d' | 20 to	102.36	5
e' | 130 °C	0.1006	5
d_c g/ml		
v_c ml/g		
t_c °C	488.7	5
P_c mm	26274.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9410	5
t_e	0.9207	5
t_c		
ΔHc kcal/m	1383.9	3²
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	38.44	5
30	37.29	5
40	36.16	5
Parachor [P] 20°C		
30		
40		
Sugd.	352.0	5
Exp. L.l.%/wt. u.		
Dispersion 40°C	293.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$ ≠ extrapolated + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 J. Res. N.B.S. 24, 395 (1940) Mair and Streiff; 3' JACS 53, 3876 (1931) Huffman, Parks and Barmore; 3² JACS 61, 3543 (1939) Richardson and Parks

No. 4

NAME	1-Ethylnaphthalene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$	Molecular Weight 156.216

		Ref.
F.P. °C	-13.88	2
F.P. 100%		
B.P. °C		
760 mm	258.67	2
100	180.68	2
30	146.2	4
10	120.0	5
1	76.	5
Pressure		
mm 25°C	0.0225	5
t_e	1435.2	5
Density		
g/ml 20°C	1.00816	2
d_4^t 25	1.00446	2
30	1.00076	4
a	1.02296	4
b	-0.00074	4
Ref. Index		
n_D 20°C	1.6062	2
25	1.6040	2
30	1.6005	4
"C"	0.7800	4
MR (Obs.)	53.452	2
MR (Calc.)	53.421	5
(nD-d/2)	1.1021	2
Dielectric	2.58	5
A | 145 to	6.9599	2
B | 310 °C	1791.4	2
C	180.5	2
A* | 145 to	1.44271	5
B* | 300 °C	1695.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.30532	5
B' | 145 °C	2024.2	5
C'	201.1	5
A'* 15 to	1.80518	5
B'* 145 °C	1928.3	5
Ac | 310 to	7.35228	5
Bc | t_c °C	2195.7	5
Cc	232.9	5
Cryos. A°		
consts. B°		
t_e °C F	290.54	5

		Ref.
dt/dP		
°C/mm		
25°C	487.72	5
BP	0.0615	2
t_e	0.0375	5
30 mm	0.8627	4
ΔHm cal/g		
ΔHv cal/g		
25°C	103.15	5
30 mm	86.47	5
BP	71.78	5
t_e	68.17	5
t_e (d, e)	67.61	5
$\Delta Hv/T_e$	18.89	5
d | 145 to	105.57	5
e | 290 °C	0.1306	5
d' | 15 to	106.59	5
e' | 145 °C	0.1376	5
d_c g/ml	0.325	5
v_c ml/g	3.077	5
t_c °C	502.4	5
P_c mm	23234.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9370	5
t_e	0.9150	5
t_c	0.248	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	40.54	5
30	39.37	5
40	38.21	5
Parachor [P]		
20°C		
30		
40		
Sugd.	391.0	5
Exp. L.1.%/wt. u.		
Dispersion	285.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

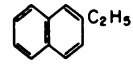
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	2-Ethylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$	Molecular Weight 156.216

		Ref.
F. P. °C	-7.4	2
F. P. 100%		
B. P. °C		
760 mm	257.9	2
100	180.1	2
30	145.5	4
10	119.0	5
1	74.	5
Pressure mm 25°C	0.0282	5
t_e	1439.5	5
Density g/ml 20°C	0.9922	2
d_4^t 25	0.9885	2
30	0.9848	4
a	1.0070	4
b	-0.0_374	4
Ref. Index n_D 20°C	1.5999	2
25	1.5977	2
30	1.5951	4
"C"	0.7860	4
MR (Obs.)	53.85	2
MR (Calc.)	53.421	5
(nD-d/2)	1.1038	2
Dielectric	2.260	5
A, B 145 to 305 °C	7.0819, 1886.	2, 2
C	191.0	2
A*, B* 145 to 300 °C	1.55230, 1782.9	5, 5
K		
c		
t_k, t_x to °C		
A', B' 15 to 145 °C	7.4350, 2131.1	5, 5
C'	212.2	5
A'* 15 to	1.92177	5
B'* 145 °C	2027.3	5
Ac 305 to	7.4859	5
Bc t_c °C	2308.7	5
Cc	243.8	5
Cryos. A* consts. B*		
t_e °C F	289.67	5

		Ref.
dt/dP °C/mm		
25°C	406.37	5
BP	0.0611	4
t_e	0.0370	5
30 mm	0.8691	4
ΔHm cal/g		
ΔHv cal/g		
25°C	98.66	5
30 mm	85.53	5
BP	72.42	5
t_e	69.01	5
t_e (d, e)	68.71	5
$\Delta Hv/T_e$	19.15	5
d, e 145 to 280 °C	102.50, 0.1166	5, 5
d', e' 15 to 145 °C	101.38, 0.1089	5, 5
d_c g/ml		
v_c ml/g		
t_c °C	498.6	5
P_c mm	23788.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9411	5
t_e	0.9192	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m, n, o	to °K		
m', n', o'	to °K		
Surface tension dynes/cm.	20°C	38.04	5
γ	30	36.91	5
	40	35.82	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	391.0	5
Exp. L.l.%/wt. u.			
Dispersion		285.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

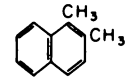
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	1,2-Dimethylnaphthalene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$	Molecular Weight 156.216

		Ref.
F.P. °C	-1.0	2
F.P. 100%		
B.P. °C		
760 mm	266.	2
100	188.2	5
30	153.7	5
10	127.	5
1	83.	5
Pressure		
mm 25°C	0.0127	5
t_e	1469.	5
Density		
g/ml 20°C	1.013	2
d^t_4 25	1.009	2
30	1.005	4
a	1.029	4
b	-0.0_38	4
Ref. Index		
n_D 20°C	1.6164	2
25	1.6142	2
30	1.6111	4
"C"	0.7896	4
MR (Obs.)	53.9	2
MR (Calc.)	53.421	5
(nD-d/2)	1.110	2
Dielectric	2.613	5
A | 150 to	7.0512	5
B | 315 °C	1860.	5
C	180.	5
A* | 150 to	1.5148	5
B* | 300 °C	1758.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.4024	5
B' | 150 °C	2102.	5
C'	201.	5
A'* 20 to	1.8972	5
B'* 150 °C	2005.	5
Ac | 315 to	7.4435	5
Bc | t_c °C	2269.	5
Cc	232.	5
Cryos. A°		
consts. B°		
t_e °C F	298.88	5

		Ref.
dt/dP		
°C/mm		
25°C	831.7	5
BP	0.0611	5
t_e	0.0364	5
30 mm	0.8666	5
ΔHm cal/g		
ΔHv cal/g		
25°C	107.16	5
30 mm	89.16	5
BP	74.89	5
t_e	71.14	5
t_e (d, e)	70.71	5
$\Delta Hv/T_e$	19.43	5
d | 150 to	108.70	5
e | 290 °C	0.1271	5
d' | 20 to	110.65	5
e' | 150 °C	0.1398	5
d_c g/ml	0.330	5
v_c ml/g	3.03	5
t_c °C	511.	5
P_c mm	24536.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9448	5
t_e	0.9232	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	41.33	5
30	40.04	5
40	38.78	5
Parachor [P]		
20°C		
30		
40		
Sugd.	391.0	5
Exp. L.1.%/wt. u.		
Dispersion	290.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

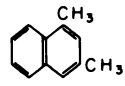
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 7

NAME	1,3-Dimethylnaphthalene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216

		Ref.
F.P. °C	-4.0	2
F.P. 100%		
B.P. °C		
760 mm	263.	2
100	185.7	5
30	151.4	5
10	125.	5
1	81.	5
Pressure mm 25°C	0.0146	5
t_e	1463.	5
Density g/ml 20°C	1.0063	2
d_4^t 25	1.0026	2
30	0.9989	4
a	1.0211	4
b	-0.0374	4
Ref. Index n_D 20°C	1.6090	2
25	1.6068	2
30	1.6042	4
"C"	0.7860	4
MR (Obs.)	53.75	2
MR (Calc.)	53.421	5
(nD-d/2)	1.1058	2
Dielectric	2.589	4
A, B, C (150 to 313 °C)	7.0469, 1845.6, 180.	5
A*, B* (150 to 300 °C)	1.51108, 1743.97	5
K		
c		
t_k, t_x to °C		
A', B', C' (20 to 150 °C)	7.3978, 2085., 200.9	5
A'*, B'* (20 to 150 °C)	1.8944, 1989.	5
Ac, Bc, Cc (313 to t_c °C)	7.4389, 2252., 232.	5
Cryos. A* consts. B*		
t_e °C F	295.47	5

		Ref.
dt/dP °C/mm		
25°C	726.7	5
BP	0.0608	5
t_e	0.0364	5
30 mm	0.8612	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.46	5
30 mm	88.74	5
BP	74.50	5
t_e	70.88	5
t_e (d, e)	70.36	5
$\Delta Hv/T_e$	19.47	5
d, e (150 to 295 °C)	108.05, 0.1276	5
d', e' (15 to 150 °C)	109.97, 0.1402	5
d_c g/ml	0.330	5
v_c ml/g	3.03	5
t_c °C	508.	5
P_c mm	24833.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9451	5
t_e	0.9247	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f, g, h	to °K		
f', g', h'	to °K		
m, n, o	to °K		
m', n', o'	to °K		
Surface tension dynes/cm.	20°C	40.25	5
γ	30	39.07	5
	40	37.93	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	391.0	5
Exp. L.l.%/wt. u.			
Dispersion		290.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

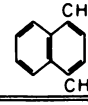
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1,4-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216



		Ref.
F.P. °C	7.66	2
F.P. 100%		
B.P. °C		
760 mm	268.	2
100	189.9	5
30	155.2	5
10	129.	5
1	84.	5
Pressure		
mm 25°C	0.0116	5
t_e	1473.	5
Density		
g/ml 20°C	1.0166	2
d_4^t 25	1.0129	2
30	1.0092	4
a	1.0314	4
b	-0.0_374	4
Ref. Index		
n_D 20°C	1.6127	2
25	1.6105	2
30	1.6079	4
"C"	0.7824	4
MR (Obs.)	53.47	2
MR (Calc.)	53.421	5
(nD-d/2)	1.1044	2
Dielectric	2.601	5
A | 155 to	7.0527	5
B | 320 °C	1869.0	5
C	180.	5
A* | 155 to	1.5160	5
B* | 310 °C	1767.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.4040	5
B' | 155 °C	2112.	5
C'	201.	5
A'* 20 to	1.8982	5
B'* 155 °C	2015.	5
Ac | 320 to	7.4460	5
Bc | t_c °C	2283.	5
Cc	233.	5
Cryos. A°		
consts. B°		
t_e °C F	301.16	5

		Ref.
dt/dP		
°C/mm		
25°C	907.1	5
BP	0.0614	5
t_e	0.0365	5
30 mm	0.8703	5
ΔHm cal/g		
ΔHv cal/g		
25°C	107.58	5
30 mm	89.42	5
BP	74.94	5
t_e	71.30	5
t_e (d, e)	70.68	5
$\Delta Hv/T_e$	19.39	5
d | 155 to	109.34	5
e | 300 °C	0.1284	5
d' | 20 to	111.07	5
e' | 155 °C	0.1395	5
d_c g/ml	0.333	5
v_c ml/g	3.003	5
t_c °C	517.	5
P_c mm	25219.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9422	5
t_e	0.9221	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	41.92	5
γ 30	40.71	5
40	39.53	5
Parachor [P]		
20°C		
30		
40		
Sugd.	391.0	5
Exp. L.1.%/wt. u.		
Dispersion	290.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

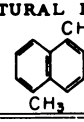
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 9

NAME	1,5-Dimethylnaphthalene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216

		Ref.
F. P. °C	82.0	2
F. P. 100%		
B. P. °C		
760 mm	265.	2
100	187.4	5
30	152.9	5
10	126.5	5
1	82.	5
Pressure mm 25°C	146.2	5
t_e	1467.	5
Density g/ml 20°C	1.003 ?	5
d_4^t 25	0.999 ?	5
30	0.995	5
a	1.0190	5
b	-0.0380	5
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	53.421	5
MR (Calc.) (nD-d/2)		
Dielectric		
A 150 to	7.0493	5
B 313 °C	1855.	5
C	180.	5
A* 150 to	1.5133	5
B* 300 °C	1753.	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.4003	5
B' 150 °C	2096.1	5
C'	200.97	5
A'* 20 to	1.8958	5
B'* 150 °C	1999.2	5
Ac 313 to	7.4411	5
Bc t_c °C	2261.2	5
Cc	231.3	5
Cryos. A* consts. B*		
t_e °C F	297.74	5

		Ref.
dt/dP °C/mm		
25°C	794.3	5
BP	0.06076	5
t_e	0.0364	5
30 mm	0.8649	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.91	5
30 mm	89.02	5
BP	74.71	5
t_e	71.02	5
t_e (d, e)	70.53	5
$\Delta Hv/T_e$	19.43	5
d 150 to	108.5	5
e 290 °C	0.1276	5
d' 15 to	110.4	5
e' 150 °C	0.1399	5
d_c g/ml	0.330	5
v_c ml/g	3.03	5
t_c °C	508.1	5
P_c mm	24142.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9444	5
t_e	0.9235	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	39.72	5
σ 30	38.47	5
40	37.25	5
Parachor [P] 20°C		
30		
40		
Sugd.	391.0	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1,6-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216

		Ref.
F.P. °C	-14.	2
F.P. 100%		
B.P. °C 760 mm	263.	2
100	185.7	5
30	151.4	5
10	125.	5
1	81.	5
Pressure mm 25°C	0.0146	5
t_e	1463.	5
Density g/ml 20°C	1.003	2
d_4^t 25	0.999	2
30	0.995	4
a	1.019	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.6073	2
25	1.6051	2
30	1.6021	4
"C"	0.7865	4
MR (Obs.)	53.8	2
MR (Calc.)	53.421	5
(nD-d/2)	1.1058	2
Dielectric	2.583	5
A | 150 to	7.0478	5
B | 310 °C	1846.	5
C	180.	5
A* | 150 to	1.5118	5
B* | 300 °C	1744.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.3988	5
B' | 150 °C	2086.	5
C'	201.	5
A'* 20 to	1.8953	5
B'* 150 °C	1989.	5
Ac | 310 to	7.4392	5
Bc | t_c °C	2250.	5
Cc	231.	5
Cryos. A*		
consts. B*		
t_e °C F	295.47	5

		Ref.
dt/dP °C/mm		
25°C	728.2	5
BP	0.0607	5
t_e	0.0363	5
30 mm	0.8611	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.49	5
30 mm	88.76	5
BP	74.62	5
t_e	70.89	5
t_e (d, e)	70.51	5
$\Delta Hv/T_e$	19.47	5
d | 150 to	107.93	5
e | 290 °C	0.1267	5
d' | 20 to	109.99	5
e' | 150 °C	0.1403	5
d_c g/ml	0.330	5
v_c ml/g	3.025	5
t_c °C	505.	5
P_c mm	24170.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9465	5
t_e	0.9249	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	39.72	5
γ 30	38.47	5
40	37.25	5
Parachor [P] 20°C		
30		
40		
Sugd.	391.0	2
Exp. L.1.%/wt. u.		
Dispersion	290.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 11

NAME	1,7-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216

		Ref.
F.P. °C	-13.≠	2
F.P. 100%		
B.P. °C		
760 mm	263.	2
100	185.7	5
30	151.4	5
10	125.	5
1	81.	5
Pressure		
mm 25°C	0.0146	5
t_e	1463.	5
Density		
g/ml 20°C	1.003	2
d_4^t 25	0.999	2
30	0.995	4
a	1.019	4
b	-0.038	4
Ref. Index		
n_D 20°C	1.607	2
25	1.605	2
30	1.602	4
"C"	0.7865	4
MR (Obs.)	53.8	2
MR (Calc.)	53.421	5
(nD-d/2)	1.105	2
Dielectric	2.58	5
A | 150 to	7.0478	5
B | 310 °C	1846.	5
C	180.	5
A* | 150 to	1.5118	5
B* | 300 °C	1744.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.3988	5
B' | 150 °C	2086.	5
C'	201.	5
A'* 20 to	1.8953	5
B'* 150 °C	1989.	5
Ac | 310 to	7.4392	5
Bc | t_c °C	2250.	5
Cc	231.	5
Cryos. A*		
consts. B*		
t_e °C F	295.47	5

		Ref.
dt/dP		
°C/mm		
25°C	728.2	5
BP	0.0608	5
t_e	0.0363	5
30 mm	0.8611	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.49	5
30 mm	88.76	5
BP	74.62	5
t_e	70.89	5
t_e (d, e)	70.51	5
$\Delta Hv/T_e$	19.47	5
d | 150 to	107.93	5
e | 290 °C	0.1267	5
d' | 20 to	109.99	5
e' | 150 °C	0.1403	5
d_c g/ml	0.330	5
v_c ml/g	3.025	5
t_c °C	505.	5
P_c mm	24170.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9465	5
t_e	0.9249	5
t_c	0.24	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	39.72	5
30	38.47	5
40	37.25	5
Parachor [P]		
20°C		
30		
40		
Sugd.	391.0	5
Exp. L.1.%/wt. u.		
Dispersion	290.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

≠ for metastable crystalline form, freezing point is -28. °C

No. 12

NAME	1,8-Dimethylnaphthalene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ — Molecular Weight 156.216

		Ref.
F.P. °C	65.	2
F.P. 100%		
B.P. °C		
760 mm	270.	2
100	191.6	5
30	156.8	5
10	130.1	5
1	85.4	5
Pressure		
mm 25°C	0.0105	5
t_e	1478.	5
Density		
g/ml 20°C	1.003 ?	5
d_4^t 25	0.999 ?	5
30	0.995 ?	5
a	1.0190 ?	5
b	-0.0_380 ?	5
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	53.421	5
(nD-d/2)		
Dielectric		
A | 150 to	7.0564	5
B | 320 °C	1879.	5
C	180.	5
A* | 150 to	1.51925	5
B* | 310 °C	1777.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.40789	5
B' | 150 °C	2123.2	5
C'	201.2	5
A'* 25 to	1.90067	5
B'* 150 °C	2025.6	5
Ac | 320 to	7.45003	5
Bc | t_c °C	2291.6	5
Cc	232.0	5
Cryos. A*		
consts. B*		
t_e °C F	303.43	5

		Ref.
dt/dP		
°C/mm		
25°C	994.6	5
BP	0.0616	5
t_e	0.0366	5
30 mm	0.8738	5
ΔHm cal/g		
ΔHv cal/g		
25°C	108.06	5
30 mm	89.71	5
BP	75.34	5
t_e	71.47	5
t_e (d, e)	71.10	5
$\Delta Hv/T_e$	19.36	5
d | 160 to	109.61	5
e | 300 °C	0.1269	5
d' | 15 to	111.55	5
e' | 160 °C	0.1393	5
d_c g/ml	0.30	5
v_c ml/g	3.333	5
t_c °C	515.	5
P_c mm	24145.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9439	5
t_e	0.9211	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	39.72	5
γ 30	38.47	5
40	37.25	5
Parachor [P]		
20°C		
30		
40		
Sugd.	391.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 13

NAME	2,3-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$	Molecular Weight 156.216	

		Ref.
F.P. °C	105.0	2
F.P. 100%		
B.P. °C		
760 mm	268.	2
100	189.9	5
30	155.2	5
10	128.7	5
1	84.1	5
Pressure mm 25°C	0.0116	5
t_e	1473.	5
Density g/ml 20°C	1.003	5
d_4^t 25	0.999	5
30	0.995	5
a	1.019	5
b	-0.038	5
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	53.421	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 155 to	7.0527	5
B | 315 °C	1869.	5
C	180.	5
A* | 155 to	1.51601	5
B* | 310 °C	1767.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.40396	5
B' | 155 °C	2111.9	5
C'	201.1	5
A'* 20 to	1.89816	5
B'* 155 °C	2014.7	5
Ac | 315 to	7.44557	5
Bc | t_c °C	2279.	5
Cc	231.7	5
Cryos. A*		
consts. B*		
t_e °C F	301.16	5

		Ref.
dt/dP °C/mm		
25°C	907.1	5
BP	0.0614	5
t_e	0.0365	5
30 mm	0.8703	5
ΔHm cal/g		
ΔHv cal/g		
25°C	107.58	5
30 mm	89.42	5
BP	74.92	5
t_e	71.28	5
t_e (d, e)	70.66	5
$\Delta Hv/T_e$	19.39	5
d | 155 to	109.36	5
e | 300 °C	0.1285	5
d' | 15 to	111.07	5
e' | 155 °C	0.1395	5
d_c g/ml	0.304	5
v_c ml/g	3.29	5
t_c °C	512.	5
P_c mm	24129.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9422	5
t_e	0.9221	5
t_c	0.253	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		39.72	5
γ 30		38.47	5
40		37.25	5
Parachor [P] 20°C			
30			
40			
Sugd.		391.0	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	2,6-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{12}$ Molecular Weight 156.216

		Ref.
F.P. °C	112.0	2
F.P. 100%		
B.P. °C		
760 mm	262.	2
100	184.84	5
30	150.6	5
10	124.4	5
1	80.4	5
Pressure mm 25°C	0.1531	5
t_e	1461.	5
Density g/ml 20°C	1.003	5
d_4^t 25	0.999	5
30	0.995	5
a	1.019	5
b	-0.038	5
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	53.421	5
Dielectric		
A | 150 to	7.0460	5
B | 310 °C	1841.	5
C	180.	5
A* | 150 to	1.5101	5
B* | 310 °C	1739.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.3968	5
B' | 150 °C	2080.3	5
C'	200.8	5
A'* 20 to	1.8940	5
B'* 150 °C	1983.8	5
Ac | 310 to	7.4372	5
Bc | t_c °C	2243.9	5
Cc	230.9	5
Cryos. A° consts. B°		
t_e °C F	294.33	5

		Ref.
dt/dP °C/mm		
25°C	0.0695	5
BP	0.0606	5
t_e	0.0363	5
30 mm	0.8594	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.25	5
30 mm	88.61	5
BP	74.51	5
t_e	70.80	5
t_e (d, e)	70.42	5
$\Delta Hv/T_e$	19.49	5
d | 150 to	107.67	5
e | 300 °C	0.1266	5
d' | 20 to	109.80	5
e' | 150 °C	0.1404	5
d_c g/ml	0.308	5
v_c ml/g	3.25	5
t_c °C	504.	5
P_c mm	24165.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9469	5
t_e	0.9255	5
t_c	0.253	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm. 20°C		39.72	5
γ 30		38.47	5
40		37.25	5
Parachor [P] 20°C			
30			
40			
Sugd.		391.0	5
Exp. L.1.%/wt. u. Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 15

NAME	2,7-Dimethylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{12}$	Molecular Weight 156.216

		Ref.
F.P. °C	98.0	2
F.P. 100%		
B.P. °C 760 mm	263.	2
100	185.7	5
30	151.4	5
10	125.1	5
1	81.0	5
Pressure mm 25°C	0.0146	5
t_e	1463.	5
Density g/ml 20°C	1.003	5
d_4^t 25	0.999	5
30	0.995	5
a	1.019	5
b	-0.0_38	5
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	53.421	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 150 to	7.0478	5
B | 310 °C	1846.	5
C	180.	5
A* | 150 to	1.51179	5
B* | 300 °C	1744.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.39875	5
B' | 150 °C	2085.9	5
C'	200.9	5
A'* 25 to	1.89535	5
B'* 150 °C	1989.3	5
Ac | 310 to	7.43919	5
Bc | t_c °C	2250.0	5
Cc	231.0	5
Cryos. A* consts. B*		
t_e °C F	295.47	5

		Ref.
dt/dP °C/mm		
25°C	728.2	5
BP	0.0607	5
t_e	0.0363	5
30 mm	0.8611	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.49	5
30 mm	88.76	5
BP	74.62	5
t_e	70.89	5
t_e (d, e)	70.51	5
$\Delta Hv/T_e$	19.47	5
d | 150 to	107.93	5
e | 300 °C	0.1267	5
d' | 15 to	109.99	5
e' | 150 °C	0.1403	5
d_c g/ml	0.308	5
v_c ml/g	3.25	5
t_c °C	505.	5
P_c mm	24170.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9465	5
t_e	0.9249	5
t_c	0.253	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	39.72	5
σ 30	38.47	5
40	37.25	5
Parachor [P] 20°C		
30		
40		
Sugd.	391.0	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	1-n-Propylnaphthalene		STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{13}H_{14}$	Molecular Weight 170.242

		Ref.
F. P. °C	-10.	2
F. P. 100%		
B. P. °C		
760 mm	272.5	2
100	193.7	5
30	158.7	5
10	131.9	5
1	86.9	5
Pressure		
mm 25°C	0.0094	5
t_e	1483.	5
Density		
g/ml 20°C	0.9918	2
d_4^t 25	0.9882	2
30	0.9846	4
a	1.0062	4
b	-0.0_372	4
Ref. Index		
n_D 20°C	1.5952	2
25	1.5930	2
30	1.5904	4
"C"	0.7804	4
MR (Obs.)	58.34	2
MR (Calc.)	58.039	5
(nD-d/2)	1.0993	2
Dielectric	2.545	5
A | 155 to	7.0594	5
B | 335 °C	1890.8	5
C	180.	5
A* | 155 to	1.55935	5
B* | 320 °C	1788.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.41108	5
B' | 155 °C	2136.5	5
C'	201.3	5
A'* 20 to	1.93970	5
B'* 155 °C	2038.6	5
Ac | 335 to	7.58084	5
Bc | t_c °C	2467.5	5
Cc	253.5	5
Cryos. A*		
consts. B*		
t_e °C F	306.27	5

		Ref.
dt/dP		
°C/mm		
25°C	1111.96	5
BP	0.0619	5
t_e	0.0366	5
30 mm	0.8784	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.68	5
30 mm	82.63	5
BP	69.36	5
t_e	65.72	5
t_e (d, e)	65.42	5
$\Delta Hv/T_e$	19.31	5
d | 160 to	101.15	5
e | 310 °C	0.1166	5
d' | 25 to	102.86	5
e' | 160 °C	0.1275	5
d_c g/ml	0.30	5
v_c ml/g	3.33	5
t_c °C	508.	5
P_c mm	21914.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9432	5
t_e	0.9196	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	39.38	5
γ 30	38.25	5
40	37.14	5
Parachor [P]		
20°C		
30		
40		
Sugd.	430.0	5
Exp. L. 1. %/wt. u.		
Dispersion	265.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.78\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

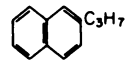
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 17

NAME	2-n-Propylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{13}H_{14}$	Molecular Weight 170.242

		Ref.
F. P. °C	-3.	2
F. P. 100%		
B. P. °C 760 mm	273.5	2
100	194.6	5
30	159.5	5
10	132.6	5
1	87.6	5
Pressure mm 25°C	0.0089	5
t_e	1485.	5
Density g/ml 20°C	0.9770	2
d_4^t 25	0.9734	2
30	0.9698	4
a	0.9914	4
b	-0.0372	4
Ref. Index n_D 20°C	1.5872	2
25	1.5850	2
30	1.5825	4
"C"	0.7825	4
MR (Obs.)	58.58	2
MR (Calc.)	58.039	5
(nD-d/2)	1.0987	2
Dielectric	2.519	5
A | 160 to	7.0605	5
B | 335 °C	1895.5	5
C	180.	5
A* | 160 to	1.56041	5
B* | 315 °C	1793.6	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.41227	5
B' | 160 °C	2141.9	5
C'	201.4	5
A'* 20 to	1.94025	5
B'* 160 °C	2043.7	5
Ac | 335 to	7.58130	5
Bc | t_c °C	2470.1	5
Cc	252.9	5
Cryos. A*		
consts. B*		
t_e °C F	307.41	5

		Ref.
dt/dP °C/mm		
25°C	1162.6	5
BP	0.0620	5
t_e	0.0367	5
30 mm	0.8802	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.88	5
30 mm	82.76	5
BP	69.37	5
t_e	65.77	5
t_e (d, e)	65.38	5
$\Delta Hv/T_e$	19.29	5
d | 160 to	101.49	5
e | 310 °C	0.1174	5
d' | 25 to	103.06	5
e' | 160 °C	0.1273	5
d_c g/ml	0.302	5
v_c ml/g	3.31	5
t_c °C	506.9	5
P_c mm	21370.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9417	5
t_e	0.9190	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	37.08	5
σ 30	36.00	5
40	34.95	5
Parachor [P] 20°C		
30		
40		
Sugd.	430.0	5
Exp. L.1.%/wt. u.		
Dispersion	265.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.78\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	1-n-Butylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{16}$	Molecular Weight 184.268

		Ref.
F.P. °C	-19.76	2
F.P. 100%		
B.P. °C		
760 mm	289.34	2
100	208.0	5
30	171.8	5
10	144.1	5
1	97.5	5
Pressure		
mm 25°C	0.0042	5
t_e	1516.	5
Density		
g/ml 20°C	0.97673	2
d_4^{25}	0.97324	2
d_4^{30}	0.96975	4
a	0.99069	4
b	-0.03698	4
Ref. Index		
n_D 20°C	1.5819	2
25	1.5798	2
30	1.5774	4
"C"	0.7761	4
MR (Obs.)	62.953	2
MR (Calc.)	62.657	5
(nD-d/2)	1.0935	2
Dielectric	2.502	5
A | 170 to	7.0814	5
B | 345 °C	1971.5	5
C	180.	5
A* | 170 to	1.61376	5
B* | 335 °C	1869.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.43447	5
B' | 170 °C	2227.7	5
C'	202.2	5
A'* 25 to	1.98763	5
B'* 170 °C	2127.1	5
Ac | 345 to	7.60666	5
Bc | t_c °C	2561.0	5
Cc	253.3	5
Cryos. A*		
consts. B*		
t_e °C F	325.43	5

		Ref.
dt/dP		
°C/mm		
25°C	2370.9	5
BP	0.0638	5
t_e	0.0371	5
30 mm	0.9087	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.32	5
30 mm	78.33	5
BP	65.37	5
t_e	61.84	5
t_e (d, e)	61.39	5
$\Delta Hv/T_e$	19.03	5
d | 170 to	97.27	5
e | 330 °C	0.1103	5
d' | 20 to	98.22	5
e' | 170 °C	0.1158	5
d_c g/ml	0.302	5
v_c ml/g	3.31	5
t_c °C	518.6	5
P_c mm	19440.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9346	5
t_e	0.9104	5
t_c	0.240	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm 20°C	38.19	5
γ 30	37.11	5
40	36.06	5
Parachor [P]		
20°C		
30		
40		
Sugd.	469.0	5
Exp. L.1.%/wt. u.		
Dispersion	253.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.78\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 19

NAME	2-n-Butylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{14}H_{16}$	Molecular Weight 184.268

		Ref.
F.P. °C	-5.	2
F.P. 100%		
B.P. °C		
760 mm	292.	2
100	210.2	5
30	173.9	5
10	146.0	5
1	99.2	5
Pressure		
mm 25°C	0.0037	5
t_e	1521.	5
Density		
g/ml 20°C	0.9659	2
d_4^t 25	0.9624	2
30	0.9589	4
a	0.9799	4
b	-0.0370	4
Ref. Index		
n_D 20°C	1.5776	2
25	1.5755	2
30	1.5731	4
"C"	0.7794	4
MR (Obs.)	63.27	2
MR (Calc.)	62.657	5
(nD-d/2)	1.0946	2
Dielectric	2.489	5
A | 170 to	7.0848	5
B | 345 °C	1984.3	5
C	180.	5
A* | 170 to	1.61725	5
B* | 330 °C	1882.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.43808	5
B' | 170 °C	2242.2	5
C'	202.3	5
A'* 25 to	1.98974	5
B'* 170 °C	2141.2	5
Ac | 345 to	7.60749	5
Bc | t_c °C	2571.9	5
Cc	252.8	5
Cryos. A*		
consts. B*		
t_e °C F	328.45	5

		Ref.
dt/dP		
°C/mm		
25°C	2673.0	5
BP	0.0642	5
t_e	0.0372	5
30 mm	0.9135	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.83	5
30 mm	78.65	5
BP	65.52	5
t_e	62.00	5
t_e (d, e)	61.47	5
ΔHv/T_e	18.99	5
d | 175 to	97.96	5
e | 330 °C	0.1111	5
d' | 20 to	98.72	5
e' | 175 °C	0.1155	5
d_c g/ml	3.01	5
v_c ml/g	3.31	5
t_c °C	520.2	5
P_c mm	19060.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9325	5
t_e	0.9087	5
t_c	0.235	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	36.53	5
γ 30	35.48	5
40	34.46	5
Parachor [P]		
20°C		
30		
40		
Sugd.	469.0	5
Exp. L.1.%/wt. u.		
Dispersion	253.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.78 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	1-n-Pentylnaphthalene	STRUCTURAL FORMULA
		C_5H_{11} 

Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{18}$	Molecular Weight 198.294

		Ref.
F. P. °C	-22.	2
F. P. 100%		
B. P. °C		
760 mm	307.	2
100	224.1	5
30	187.3	5
10	159.1	5
1	112.	5
Pressure mm 25°C	0.0011	5
t_e	1565.	5
Density		
g/ml 20°C	0.9656	2
d_4^{t} 25	0.9622	2
30	0.9588	4
a	0.9792	4
b	-0.0368	4
Ref. Index		
n_D 20°C	1.5725	2
25	1.5704	2
30	1.5681	4
"C"	0.7732	4
MR (Obs.)	67.62	2
MR (Calc.)	67.275	5
(nD-d/2)	1.0897	2
Dielectric	2.473	5
A | 185 to	7.0743	5
B | 360 °C	2000.	5
C	170.	5
A* | 185 to	1.6294	5
B* | 355 °C	1899.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.4269	5
B' | 185 °C	2260.	5
C'	193.	5
A'* 25 to	2.0131	5
B'* 185 °C	2164.	5
Ac | 360 to	7.6385	5
Bc | t_c °C	2645.	5
Cc	250.	5
Cryos. A*		
consts. B*		
t_e °C F	345.51	5

		Ref.
dt/dP		
°C/mm		
25°C	8350.	5
BP	0.0650	5
t_e	0.0369	5
30 mm	0.9242	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.01	5
30 mm	76.66	5
BP	63.34	5
t_e	59.73	5
t_e (d, e)	59.06	5
$\Delta Hv/T_e$	19.14	5
d | 185 to	97.50	5
e | 340 °C	0.1113	5
d' | 25 to	101.30	5
e' | 185 °C	0.1316	5
d_c g/ml	0.296	5
v_c ml/g	3.38	5
t_c °C	531.0	5
P_c mm	17802.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9328	5
t_e	0.9094	5
t_c	0.230	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	37.45	5
γ 30	36.40	5
40	35.38	5
Parachor [P]		
20°C		
30		
40		
Sugd.	508.0	5
Exp. L.1.%/wt. u.		
Dispersion	243.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.79\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 21

NAME	2-n-Pentylnaphthalene 2-n-Amylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{18}$
		Molecular Weight 198.294

		Ref.
F.P. °C	-4.	2
F.P. 100%		
B.P. °C		
760 mm	310.	2
100	226.4	5
30	189.3	5
10	160.9	5
1	113.2	5
Pressure		
mm 25°C	0.0_399	5
t_e	1565.	5
Density		
g/ml 20°C	0.9561	2
d_4^t 25	0.9527	2
30	0.9493	4
a	0.9697	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.5694	2
25	1.5673	2
30	1.5650	4
"C"	0.7770	4
MR (Obs.)	67.99	2
MR (Calc.)	67.275	5
(nD-d/2)	1.0914	2
Dielectric	2.463	5
A | 190 to	7.0600	5
B | 370 °C	2005.9	5
C	170.	5
A* | 190 to	1.6206	5
B* | 360 °C	1906.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4117	5
B' | 190 °C	2266.6	5
C'	192.6	5
A'* 25 to	1.9965	5
B'* 190 °C	2170.2	5
Ac | 370 to	7.6924	5
Bc | t_c °C	2750.	5
Cc	262.6	5
Cryos. A°		
consts. B°		
t_e °C F	348.92	5

		Ref.
dt/dP		
°C/mm		
25°C	9137.5	5
BP	0.0656	5
t_e	0.0373	5
30 mm	0.9317	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.19	5
30 mm	76.69	5
BP	63.25	5
t_e	59.41	5
t_e (d, e)	58.91	5
$\Delta Hv/T_e$	18.94	5
d | 190 to	97.79	5
e | 350 °C	0.1114	5
d' | 25 to	101.46	5
e' | 190 °C	0.1308	5
d_c g/ml	0.296	5
v_c ml/g	3.38	5
t_c °C	533.2	5
P_c mm	17251.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9310	5
t_e	0.9041	5
t_c	0.230	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	35.99	5
γ 30	34.98	5
40	33.99	5
Parachor [P]		
20°C		
30		
40		
Sugd.	508.0	5
Exp. L.1.%/wt. u.		
Dispersion	243.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 22

NAME	1-n-Hexylnaphthalene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{20}$	Molecular Weight 212.320

		Ref.
F. P. °C	-18.	2
F. P. 100%		
B. P. °C		
760 mm	322.	2
100	237.0	5
30	199.2	5
10	170.2	5
1	121.4	5
Pressure		
mm 25°C	0.0_351	5
t_e	1593.	5
Density		
g/ml 20°C	0.9566	2
d_4^{25}	0.9532	2
d_4^{30}	0.9498	4
a	0.9702	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.5647	2
25	1.5626	2
30	1.5604	4
"C"	0.7706	4
MR (Obs.)	72.26	2
MR (Calc.)	71.895	5
(nD-d/2)	1.0864	2
Dielectric	2.448	5
A | 200 to	7.1003	5
B | 375 °C	2076.	5
C	170.	5
A* | 200 to	1.6850	5
B* | 375 °C	1975.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4546	5
B' | 200 °C	2345.8	5
C'	193.3	5
A'* 25 to	2.0620	5
B'* 200 °C	2247.6	5
Ac | 375 to	7.7326	5
Bc | t_c °C	2825.	5
Cc	261.1	5
Cryos. A* consts. B*		
t_e °C F	362.57	5

		Ref.
dt/dP		
°C/mm		
25°C	17328.	5
BP	0.0666	5
t_e	0.0372	5
30 mm	0.9504	5
ΔHm cal/g		
ΔHv cal/g		
25°C	94.37	5
30 mm	73.25	5
BP	60.43	5
t_e	56.66	5
t_e (d, e)	56.20	5
$\Delta Hv/T_e$	18.92	5
d | 200 to	94.03	5
e | 365 °C	0.1043	5
d' | 25 to	97.40	5
e' | 200 °C	0.1213	5
d_c g/ml	0.292	5
v_c ml/g	3.42	5
t_c °C	539.3	5
P_c mm	15949.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9288	5
t_e	0.9006	5
t_c	0.228	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	36.89	5
γ 30	35.85	5
40	34.84	5
Parachor [P]		
20°C		
30		
40		
Sugd.	547.0	5
Exp. L.1.%/wt. u.		
Dispersion	234.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	2-n-Hexylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{20}$	Molecular Weight 212.320

		Ref.
F.P. °C	-3.	2
F.P. 100%		
B.P. °C 760 mm	324.	2
100	238.8	5
30	200.9	5
10	171.7	5
1	122.8	5
Pressure mm 25°C	0.0_345	5
t_e	1598.	5
Density g/ml 20°C	0.9479	2
d_4^t 25	0.9445	2
30	0.9411	4
a	0.9615	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.5620	2
25	1.5599	2
30	1.5577	4
"C"	0.7742	4
MR (Obs.)	72.64	2
MR (Calc.)	71.895	5
(nD-d/2)	1.0880	2
Dielectric	2.440	5
A | 200 to	7.1075	5
B | 380 °C	2088.	5
C	170.	5
A* | 200 to	1.69103	5
B* | 370 °C	1986.86	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.46221	5
B' | 200 °C	2359.38	5
C'	193.4	5
A'* 25 to	2.06849	5
B'* 200 °C	2261.	5
Ac | 380 to	7.7367	5
Bc | t_c °C	2834.	5
Cc	260.3	5
Cryos. A°		
consts. B°		
t_e °C F	364.85	5

		Ref.
dt/dP °C/mm		
25°C	19318.	5
BP	0.0668	5
t_e	0.0372	5
30 mm	0.9535	5
ΔHm cal/g		
ΔHv cal/g		
25°C	94.82	5
30 mm	73.53	5
BP	60.64	5
t_e	56.87	5
t_e (d, e)	56.36	5
$\Delta Hv/T_e$	18.93	5
d | 200 to	94.55	5
e | 365 °C	0.1047	5
d' | 25 to	97.85	5
e' | 200 °C	0.1211	5
d_c g/ml	0.292	5
v_c^c ml/g	3.42	5
t_c °C	540.2	5
P_c mm	15734.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9280	5
t_e	0.9002	5
t_c	0.228	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		35.57	5
30		34.56	5
40		33.57	5
Parachor [P] 20°C			
30			
40			
Sugd.		547.0	5
Exp. L.1.%/wt. u.			
Dispersion		234.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	1-n-Heptylnaphthalene	STRUCTURAL FORMULA C_7H_{15} 

Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{22}$	Molecular Weight 226.346

		Ref.
F.P. °C	-8.	2
F.P. 100%		
B.P. °C 760 mm	340.	2
100	253.0	5
30	214.1	5
10	184.2	5
1	133.9	5
Pressure mm 25°C	0.0_318	5
t_e	1637.	5
Density g/ml 20°C	0.9491	2
d_4^t 25	0.9458	2
30	0.9425	4
a	0.9623	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.5582	2
25	1.5561	2
30	1.5540	4
"C"	0.7684	4
MR (Obs.)	76.901	2
MR (Calc.)	76.513	5
(nD-d/2)	1.0836	2
Dielectric	2.428	5
A | 215 to	7.1631	5
B | 405 °C	2184.	5
C	170.	5
A* | 215 to	1.7673	5
B* | 395 °C	2081.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.5213	5
B' | 215 °C	2467.9	5
C'	194.2	5
A'* 25 to	2.1461	5
B'* 215 °C	2366.9	5
Ac | 405 to	7.9748	5
Bc | t_c °C	3216.	5
Cc	292.6	5
Cryos. A° consts. B°		
t_e °C F	383.04	5

		Ref.
dt/dP		
°C/mm		
25°C	46169.	5
BP	0.0681	5
t_e	0.0372	5
30 mm	0.9779	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.33	5
30 mm	71.06	5
BP	58.69	5
t_e	54.93	5
t_e (d, e)	54.46	5
$\Delta Hv/T_e$	18.95	5
d | 215 to	92.11	5
e | 385 °C	0.0983	5
d' | 25 to	95.14	5
e' | 215 °C	0.1125	5
d_c g/ml	0.291	5
v_c ml/g	3.43	5
t_c °C	553.1	5
P_c mm	14865.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9256	5
t_e	0.8965	5
t_c	0.224	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension dynes/cm. 20°C	36.45	5
γ 30	35.45	5
40	34.47	5
Parachor [P] 20°C		
30		
40		
Sugd.	586.0	5
Exp. L.1.%/wt. u.		
Dispersion	226.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 25

NAME	2-n-Heptylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{22}$ — Molecular Weight 226.346

		Ref.
F.P. °C	1.	2
F.P. 100%		
B.P. °C 760 mm	341.	2
100	253.9	5
30	214.9	5
10	185.0	5
1	134.6	5
Pressure mm 25°C	0.0_317	5
t_e	1640.	5
Density g/ml 20°C	0.9410	2
d_4^{t} 25	0.9377	2
30	0.9344	4
a	0.9542	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.5556	2
25	1.5535	2
30	1.5514	4
"C"	0.7716	4
MR (Obs.)	77.27	2
MR (Calc.)	76.513	5
(nD-d/2)	1.0851	2
Dielectric	2.420	5
A | 215 to	7.1665	5
B | 405 °C	2190.	5
C	170.	5
A* | 215 to	1.77003	5
B* | 395 °C	2087.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.5249	5
B' | 215 °C	2474.6	5
C'	194.3	5
A'* 25 to	2.1492	5
B'* 215 °C	2373.5	5
Ac | 405 to	7.9712	5
Bc | t_c °C	3211.3	5
Cc	291.1	5
Cryos. A* consts. B*		
t_e °C F	384.18	5

			Ref.
dt/dP °C/mm			
25°C	48753.		5
BP	0.0681		5
t_e	0.0371		5
30 mm	0.9794		5
ΔHm cal/g			
ΔHv cal/g			
25°C	92.54		5
30 mm	71.19		5
BP	58.81		5
t_e	55.03		5
t_e (d, e)	54.57		5
$\Delta Hv/T_e$	18.95		5
d | 215 to	92.30		5
e | 385 °C	0.0982		5
d' | 25 to	95.35		5
e' | 215 °C	0.1124		5
d_c g/ml	0.291		5
v_c ml/g	3.43		5
t_c °C	552.8		5
P_c mm	14649.		5
PV/RT 25°C	1.0000		5
30 mm	1.0000		5
BP	0.9257		5
t_e	0.8964		5
t_c	0.224		5
ΔHc kcal/m			
ΔHf			
ΔFf			
Viscosity centistokes η °C			
B^v | to			
A^v | °C			
(B^v) | to			
(A^v) | °C			
c_p liq. °K			
c_p vap. °K			
c_v vap.			

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	35.23	5
γ 30	34.25	5
40	33.29	5
Parachor [P] 20°C		
30		
40		
Sugd.	586.0	5
Exp. L.1.%/wt. u.		
Dispersion	226.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 26

NAME	1-n-Octylnaphthalene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{18}H_{24}$	Molecular Weight 240.372

		Ref.
F.P. °C	-2.	2
F.P. 100%		
B.P. °C		
760 mm	356.	2
100	268.	4
30	228.	4
10	198.	5
1	146.	5
Pressure		
mm 25°C	0.0_4535	5
t_e	1681.	5
Density		
g/ml 20°C	0.9427	2
d_4^t 25	0.9394	2
30	0.9361	4
a	0.9559	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.5526	2
25	1.5505	2
30	1.5485	4
"C"	0.7663	4
MR (Obs.)	81.54	2
MR (Calc.)	81.131	5
(nD-d/2)	1.0812	2
Dielectric		
A | 230 to	7.1956	5
B | 430 °C	2248.	5
C	165.	5
A* | 230 to	1.8164	5
B* | 410 °C	2144.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.5558	5
B' | 230 °C	2540.	5
C'	190.	5
A'* 25 to	2.2032	5
B'* 230 °C	2441.	5
Ac | 430 to	8.28106	5
Bc | t_c °C	3725.7	5
Cc	336.0	5
Cryos. A* consts. B*		
t_e °C F	401.24	5

		Ref.
dt/dP		
°C/mm		
25°C	$1.47x10^5$	5
BP	0.0690	5
t_e	0.0369	5
30 mm	0.9952	5
ΔHm cal/g		
ΔHv cal/g		
25°C	93.22	5
30 mm	69.59	5
BP	57.37	5
t_e	53.52	5
t_e (d, e)	53.05	5
ΔHv/T_e	19.08	5
d | 230 to	91.38	5
e | 400 °C	0.0955	5
d' | 25 to	96.13	5
e' | 230 °C	0.1163	5
d_c g/ml		
v_c ml/g		
t_c °C	563.3	5
P_c mm	13752.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9258	5
t_e	0.8958	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		36.10	5
γ 30		35.10	5
40		34.12	5
Parachor [P]			
20°C			
30			
40			
Sugd.		625.0	5
Exp. L. 1. %/wt. u.			
Dispersion		219.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.84\ T_c$

+ grams/100 grams solvent

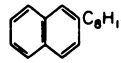
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	2-n-Octylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{18}H_{24}$ Molecular Weight 240.372	

		Ref.
F.P. °C	12.	2
F.P. 100%		
B.P. °C		
760 mm	357.	2
100	267.3	5
30	227.6	5
10	197.2	5
1	145.8	5
Pressure		
mm 25°C	0.0_458	5
t_e	1705.	5
Density		
g/ml 20°C	0.9350	2
d_4^t 25	0.9317	2
30	0.9284	4
a	0.9482	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.5501	2
25	1.5480	2
30	1.5459	4
"C"	0.7694	4
MR (Obs.)	81.91	2
MR (Calc.)	81.131	5
(nD-d/2)	1.0826	2
Dielectric	2.403	5
A 230 to	7.1745	5
B 410 °C	2237.	5
C	165.	5
A* 230 to	1.7759	5
B* 410 °C	2125.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.5334	5
B' 230 °C	2527.7	5
C'	189.7	5
A'* 25 to	2.1811	5
B'* 230 °C	2428.2	5
Ac 410 to	8.0941	5
Bc t_c °C	3444.	5
Cc	306.1	5
Cryos. A* consts. B*		
t_e °C F	402.38	5

		Ref.
dt/dP °C/mm		
25°C	137028.	5
BP	0.0693	5
t_e	0.0366	5
30 mm	0.9977	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.79	5
30 mm	69.29	5
BP	56.73	5
t_e	53.90	5
t_e (d, e)	52.33	5
$\Delta Hv/T_e$	19.18	5
d 230 to	91.37	4
e 400 °C	0.0970	4
d' 25 to	95.69	4
e' 230 °C	0.1160	4
d_c g/ml	0.283	5
v_c ml/g	3.53	5
t_c °C	562.9	5
P_c mm	13516.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9172	5
t_e	0.9073	5
t_c	0.220	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		34.93	5
γ 30		33.96	5
40		33.00	5
Parachor [P]			
20°C			
30			
40			
Sugd.		625.0	5
Exp. L.l.%/wt. u.			
Dispersion		219.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.83\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	1-n-Nonylnaphthalene	STRUCTURAL FORMULA C_9H_{19} 

Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{26}$	Molecular Weight 254.398

		Ref.
F.P. °C	8.	2
F.P. 100%		
B.P. °C		
760 mm	372.	2
100	281.5	5
30	240.9	5
10	209.7	5
1	157.	5
Pressure		
mm 25°C	0.0_423	5
t_e	1713.	5
Density		
g/ml 20°C	0.9371	2
d_4^{t} 25	0.9339	2
30	0.9307	4
a	0.9499	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.5477	2
25	1.5456	2
30	1.5437	4
"C"	0.7645	4
MR (Obs.)	86.19	2
MR (Calc.)	85.747	5
(nD-d/2)	1.0792	2
Dielectric	2.395	5
A | 240 to	7.2272	5
B | 445 °C	2334.	5
C	165.	5
A* | 240 to	1.8708	5
B* | 430 °C	2230.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.5895	5
B' | 240 °C	2637.4	5
C'	190.6	5
A'* 25 to	2.2528	5
B'* 240 °C	2535.	5
Ac | 445 to	8.3669	5
Bc | t_c °C	3924.6	5
Cc	345.3	5
Cryos. A° consts. B°		
t_e °C F	419.44	5

		Ref.
dt/dP		
°C/mm		
25°C	337693.	5
BP	0.0706	5
t_e	0.0371	5
30 mm	1.0219	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.77	5
30 mm	67.34	5
BP	55.36	5
t_e	51.51	5
t_e (d, e)	51.02	5
ΔHv/T_e	18.92	5
d | 240 to	89.36	5
e | 420 °C	0.0914	5
d' | 25 to	93.48	5
e' | 240 °C	0.1085	5
d_c g/ml	0.284	5
v_c ml/g	3.52	5
t_c °C	575.2	5
P_c mm	12682.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9203	5
t_e	0.8887	5
t_c	0.215	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	35.79	5
γ 30	34.82	5
40	33.87	5
Parachor [P]		
20°C		
30		
40		
Sugd.	664.	5
Exp. L.1.%/wt. u.		
Dispersion	212.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.84\,T_c$

+ grams/100 grams solvent

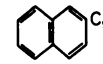
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 29

NAME	2-n-Nonylnaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{19}H_{26}$ Molecular Weight 254.398	

		Ref.
F.P. °C	12.	2
F.P. 100%		
B.P. °C		
760 mm	372.	2
100	281.5	5
30	240.9	5
10	209.7	5
1	157.	5
Pressure mm 25°C	0.0_423	5
t_e	1713.	5
Density g/ml 20°C	0.9298	2
d_4^t 25	0.9266	2
30	0.9234	4
a	0.9426	4
b	-0.0_364	4
Ref. Index n_D 20°C	1.5454	2
25	1.5433	2
30	1.5424	4
"C"	0.7688	4
MR (Obs.)	86.56	2
MR (Calc.)	85.747	5
(nD-d/2)	1.0805	2
Dielectric	2.388	5
A | 240 to	7.2272	5
B | 440 °C	2334.	5
C	165.	5
A* | 240 to	1.8708	5
B* | 430 °C	2230.	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.5895	5
B' | 240 °C	2637.4	5
C'	190.6	5
A'* 25 to	2.2528	5
B'* 240 °C	2535.4	5
Ac | 440 to	8.3581	5
Bc | t_c °C	3905.8	5
Cc	342.9	5
Cryos. A* consts. B*		
t_e °C F	419.44	5

		Ref.
dt/dP °C/mm		
25°C	337693.	5
BP	0.0706	5
t_e	0.0371	5
30 mm	1.0219	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.77	5
30 mm	67.34	5
BP	55.36	5
t_e	51.50	5
t_e (d,e)	51.02	5
$\Delta Hv/T_e$	18.92	5
d | 240 to	89.37	5
e | 420 °C	0.0914	5
d' | 25 to	93.48	5
e' | 240 °C	0.1085	5
d_c g/ml	0.284	5
v_c ml/g	3.52	5
t_c °C	573.6	5
P_c mm	12486.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9203	5
t_e	0.8887	5
t_c	0.215	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	34.69	5
γ 30	33.74	5
40	32.82	5
Parachor [P] 20°C		
30		
40		
Sugd.	664.	5
Exp. L.1.%/wt. u.		
Dispersion	212.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.84\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	1-n-Decylnaphthalene	STRUCTURAL FORMULA $C_{10}H_{21}$ 

Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{28}$	Molecular Weight 268.424

		Ref.
F.P. °C	15.	2
F.P. 100%		
B.P. °C		
760 mm	387.	2
100	295.	5
30	253.	5
10	222.	5
1	168.	5
Pressure		
mm 25°C	0.0_5915	5
t_e	1750.	5
Density		
g/ml 20°C	0.9322	2
d_4^{25}	0.9290	2
d_4^{30}	0.9258	4
a	0.9450	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.5435	2
25	1.5414	2
30	1.5396	4
"C"	0.7631	4
MR (Obs.)	90.83	2
MR (Calc.)	90.365	5
(nD-d/2)	1.0774	2
Dielectric	2.382	5
A | 255 to	7.2812	5
B | 450 °C	2429.	5
C	165.	5
A* | 255 to	1.9404	5
B* | 445 °C	2323.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.6469	5
B' | 255 °C	2745.	5
C'	191.	5
A'* 25 to	2.3253	5
B'* 255 °C	2641.	5
Ac | 450 to	8.4631	5
Bc | t_c °C	4108.	5
Cc	350.	5
Cryos. A*		
consts. B*		
t_e °C F	436.5	5

		Ref.
dt/dP		
°C/mm		
25°C	$8.1x10^5$	5
BP	0.0717	5
t_e	0.0370	5
30 mm	1.0438	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.87	5
30 mm	65.58	5
BP	54.00	5
t_e	50.14	5
t_e (d, e)	49.71	5
$\Delta Hv/T_e$	18.96	5
d | 255 to	87.58	5
e | 430 °C	0.0868	5
d' | 25 to	91.42	5
e' | 255 °C	0.1019	5
d_c g/ml	0.252	5
v_c ml/g	3.962	5
t_c °C	584.5	5
P_c mm	11737.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9189	5
t_e	0.8861	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	35.53	5
30	34.56	5
40	33.62	5
Parachor [P]		
20°C		
30		
40		
Sugd.	703.0	5
Exp. L.1.%/wt. u.		
Dispersion	207.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

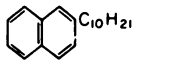
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 31

NAME	2-n-Decylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{28}$	Molecular Weight 268.424

		Ref.
F. P. °C	20.	2
F. P. 100%		
B. P. °C		
760 mm	387.	2
100	294.9	5
30	253.5	5
10	221.6	5
1	168.	5
Pressure		
mm 25°C	0.0_592	5
t_e	1750.	5
Density		
g/ml 20°C	0.9253	2
d_4^t 25	0.9221	2
30	0.9189	4
a	0.9381	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.5413	2
25	1.5392	2
30	1.5374	4
"C"	0.7658	4
MR (Obs.)	91.20	2
MR (Calc.)	90.365	5
(nD-d/2)	1.0786	2
Dielectric	2.376	5
A 255 to	7.2812	5
B 450 °C	2429.	5
C	165.	5
A* 255 to	1.9404	5
B* 445 °C	2323.1	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.6469	5
B' 255 °C	2744.7	5
C'	191.4	5
A'* 25 to	2.3253	5
B'* 255 °C	2640.6	5
Ac 450 to	8.4540	5
Bc t_c °C	4088.2	5
Cc	348.1	5
Cryos. A*		
consts. B*		
t_e °C F	436.50	5

		Ref.
dt/dP		
°C/mm		
25°C	809594.	5
BP	0.0717	5
t_e	0.0370	5
30 mm	1.0438	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.87	5
30 mm	65.58	5
BP	54.00	5
t_e	50.13	5
t_e (d, e)	49.70	5
$\Delta Hv/T_e$	18.96	5
d 255 to	87.59	5
e 435 °C	0.0868	5
d' 25 to	91.42	5
e' 255 °C	0.1019	5
d_c g/ml	0.282	5
v_c ml/g	3.55	5
t_c °C	582.9	5
P_c mm	11557.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9189	5
t_e	0.8861	5
t_c	0.206	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		34.49	5
30		33.54	5
40		32.62	5
Parachor [P]			
20°C			
30			
40			
Sugd.		703.0	5
Exp. L.1.%/wt. u.			
Dispersion		207.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 32

NAME	1-n-Undecylnaphthalene	STRUCTURAL FORMULA $C_{11}H_{23}$ 

Mole % Pur.	Ref.	Molecular Formula $C_{21}H_{30}$	Molecular Weight 282.450

		Ref.
F.P. °C	23.	2
F.P. 100%		
B.P. °C		
760 mm	401.	2
100	307.4	5
30	265.2	5
10	232.6	5
1	177.	5
Pressure		
mm 25°C	0.0_54	5
t_e	1783.	5
Density		
g/ml 20°C	0.9279*	2
d_4^{t} 25	0.9248	2
30	0.9217	4
a	0.9403	4
b	-0.0_362	4
Ref. Index		
n_D 20°C	1.5399*	2
25	1.5379	2
30	1.5359	4
"C"	0.7616	4
MR (Obs.)	95.49	2
MR (Calc.)	94.983	5
(nD-d/2)	1.0760	2
Dielectric	2.371	5
A | 265 to	7.3278	5
B | 475 °C	2517.	5
C	165.	5
A* | 265 to	2.0032	5
B* | 460 °C	2409.7	5
K		
c		
t_x | to		
t_x | °C		
A' | 25 to	7.6964	5
B' | 265 °C	2844.1	5
C'	192.1	5
A'* 25 to	2.3894	5
B'* 265 °C	2738.1	5
Ac | 475 to	8.5591	5
Bc | t_c °C	4301.2	5
Cc	357.9	5
Cryos. A°		
consts. B°		
t_e °C F	452.42	5

		Ref.
dt/dP		
°C/mm		
25°C	1824546.	5
BP	0.0727	5
t_e	0.0369	5
30 mm	1.0645	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.92	5
30 mm	63.86	5
BP	52.59	5
t_e	48.77	5
t_e (d, e)	48.32	5
$\Delta Hv/T_e$	18.98	5
d | 265 to	85.89	5
e | 450 °C	0.0830	5
d' | 25 to	89.32	5
e' | 265 °C	0.0960	5
d_c g/ml	0.280	5
v_c ml/g	3.57	5
t_c °C	594.4	5
P_c mm	11030.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9164	5
t_e	0.8832	5
t_c	0.206	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	35.31	5
γ 30	34.37	5
40	33.46	5
Parachor [P]		
20°C		
30		
40		
Sugd.	742.0	5
Exp. L.1.%/wt. u.		
Dispersion	201.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\,T_c$ * for undercooled liquid + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 33

NAME	2-n-Undecylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{21}H_{30}$	Molecular Weight 282.450

		Ref.
F.P. °C	20.	2
F.P. 100%		
B.P. °C		
760 mm	401.	2
100	307.4	5
30	265.2	5
10	232.6	5
1	177.	5
Pressure mm 25°C	0.0_5394	5
t_e	1783.	5
Density g/ml 20°C	0.9213	2
d_4^t 25	0.9182	2
30	0.9151	4
a	0.9337	4
b	-0.0_362	4
Ref. Index n_D 20°C	1.5376	2
25	1.5356	2
30	1.5336	4
"C"	0.7641	4
MR (Obs.)	95.83	2
MR (Calc.)	94.983	5
(nD-d/2)	1.0770	2
Dielectric	2.364	5
A | 265 to	7.3278	5
B | 460 °C	2517.	5
C	165.	5
A* | 265 to	2.0032	5
B* | 460 °C	2409.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.6964	5
B' | 265 °C	2844.1	5
C'	192.1	5
A'* 25 to	2.3894	5
B'* 265 °C	2738.1	5
Ac | 460 to	8.5498	5
Bc | t_c °C	4280.7	5
Cc	355.5	5
Cryos. A*		
consts. B*		
t_e °C F	452.42	5

		Ref.
dt/dP		
°C/mm		
25°C	1824546.	5
BP	0.0727	5
t_e	0.0369	5
30 mm	1.0645	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.92	5
30 mm	63.86	5
BP	52.58	5
t_e	48.76	5
t_e (d, e)	48.31	5
$\Delta Hv/T_e$	18.98	5
d | 265 to	85.89	5
e | 450 °C	0.0831	5
d' | 25 to	89.32	5
e' | 265 °C	0.0960	5
d_c g/ml	0.280	5
v_c ml/g	3.57	5
t_c °C	592.9	5
P_c mm	10864.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9164	5
t_e	0.8832	5
t_c	0.206	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		34.31	5
γ 30		33.40	5
40		32.50	5
Parachor [P]			
20°C			
30			
40			
Sugd.		742.0	5
Exp. L.1.%/wt. u.			
Dispersion		201.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	1-n-Dodecylnaphthalene	STRUCTURAL FORMULA $C_{12}H_{25}$ 

Mole % Pur.	Ref.	Molecular Formula $C_{22}H_{32}$	Molecular Weight 296.476

		Ref.
F.P. °C	27.	2
F.P. 100%		
B.P. °C		
760 mm	415.	2
100	320.0	5
30	277.0	5
10	243.8	5
1	187.	5
Pressure		
mm 25°C	$0.0_5 17$	5
t_e	1818.	5
Density		
g/ml 20°C	0.9240*	2
d_4^t 25	0.9209*	2
30	0.9178	4
a	0.9364	4
b	$-0.0_3 62$	4
Ref. Index		
n_D 20°C	1.5364*	2
25	1.5344*	2
30	1.5325	4
"C"	0.7603	4
MR (Obs.)	100.11	2
MR (Calc.)	99.601	5
(nD-d/2)	1.0744	2
Dielectric	2.361	5
A | 275 to	7.3774	5
B | 470 °C	2608.	5
C	165.	5
A* | 275 to	2.0669	5
B* | 470 °C	2498.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7491	5
B' | 275 °C	2947.0	5
C'	192.8	5
A'* 25 to	2.4557	5
B'* 275 °C	2838.9	5
Ac | 470 to	8.6510	5
Bc | t_c °C	4482.7	5
Cc	363.1	5
Cryos. A°		
consts. B°		
t_e °C F	468.34	5

		Ref.
dt/dP		
°C/mm		
25°C	4200115.	5
BP	0.0737	5
t_e	0.0367	5
30 mm	1.0845	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.22	5
30 mm	62.37	5
BP	51.42	5
t_e	47.60	5
t_e (d, e)	47.19	5
$\Delta Hv/T_e$	19.03	5
d | 275 to	84.35	5
e | 470 °C	0.0793	5
d' | 25 to	87.49	5
e' | 275 °C	0.0907	5
d_c g/ml	0.278	5
v_c ml/g	3.6	5
t_c °C	602.7	5
P_c mm	10228.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9151	5
t_e	0.8811	5
t_c	0.20	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	35.10	5
γ 30	34.17	5
40	33.26	5
Parachor [P]		
20°C		
30		
40		
Sugd.	781.	5
Exp. L.1.%/wt. u.		
Dispersion	196.*	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.85\ T_c$

* for undercooled liquid

\+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

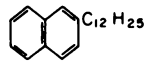
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE V. ALKYL NAPHTHALENES

No. 35

NAME	2-n-Dodecylnaphthalene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{22}H_{32}$	Molecular Weight 296.476

		Ref.
F. P. °C	26.	2
F. P. 100%		
B. P. °C		
760 mm	414.	2
100	319.1	5
30	276.2	5
10	243.0	5
1	187.	5
Pressure mm 25°C	0.0_518	5
t_e	1815.	5
Density g/ml 20°C	0.9177	2
d_4^t 25	0.9146	2
30	0.9115	4
a	0.9301	4
b	-0.0_362	4
Ref. Index n_D 20°C	1.5343	2
25	1.5323	2
30	1.5305	4
"C"	0.7628	4
MR (Obs.)	100.47	2
MR (Calc.)	99.601	5
(nD-d/2)	1.0754	2
Dielectric	2.354	5
A | 275 to	7.3730	5
B | 470 °C	2601.	5
C	165.	5
A* | 275 to	2.0635	5
B* | 470 °C	2492.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7444	5
B' | 275 °C	2939.0	5
C'	192.8	5
A'* 25 to	2.4516	5
B'* 275 °C	2831.1	5
Ac | 470 to	8.6301	5
Bc | t_c °C	4439.4	5
Cc	359.3	5
Cryos. A*		
consts. B*		
t_e °C F	467.20	5

		Ref.
dt/dP		
°C/mm		
25°C	3943913.	5
BP	0.0737	5
t_e	0.0368	5
30 mm	1.0832	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.03	5
30 mm	62.25	5
BP	51.31	5
t_e	47.48	5
t_e (d, e)	47.09	5
$\Delta Hv/T_e$	19.01	5
d | 275 to	84.16	5
e | 465 °C	0.0793	5
d' | 25 to	87.30	5
e' | 275 °C	0.0907	5
d_c g/ml	0.278	5
v_c ml/g	3.6	5
t_c °C	600.1	5
P_c mm	10061.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9153	5
t_e	0.8809	5
t_c	0.20	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		34.15	5
γ 30		33.24	5
40		32.35	5
Parachor [P]			
20°C			
30			
40			
Sugd.		781.	5
Exp. L. 1. %/wt. u.			
Dispersion		196.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

TABLE VI. TETRAHYDRONAPHTHALENES

No. 1

NAME	1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{12}$ — Molecular Weight 132.196

		Ref.
F.P. °C	-35.790	2
F.P. 100%		
B.P. °C		
760 mm	207.57	2
100	135.51	5
30	103.66	5
10	79.36	5
1	38.70	5
Pressure mm 25°C	0.3869	5
t_e	1320.0	5
Density g/ml 20°C	0.9702	2
d_4^t 25	0.9662	2
30	0.9622	4
a	0.9862	4
b	-0.0_3380	4
Ref. Index n_D 20°C	1.54135	2
25	1.53919	2
30	1.53703	4
"C"	0.7304	4
MR (Obs.)	42.84	2
MR (Calc.)	42.58	5
(nD-d/2)	1.05625	2
Dielectric		
A | 105 to	6.96965	4
B | 265 °C	1662.4	4
C	199.	5
A* | 105 to	1.38581	5
B* | 245 °C	1561.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.31568	5
B' | 105 °C	1878.46	5
C'	218.	5
A'* 25 to	1.75162	5
B'* 105 °C	1777.38	5
Ac | 265 to	7.37894	5
Bc | t_c °C	2064.90	5
Cc	252.	5
Cryos. A*		
consts. B*		
t_e °C	232.9	5

		Ref.
dt/dP °C/mm		
25°C	35.31	5
BP	0.0568	5
t_e	0.0369	5
30 mm	0.7977	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.86	5
30 mm	89.21	5
BP	76.45	5
t_e	73.55	5
t_e (d, e)	73.63	5
ΔHv/T_e	19.21	5
d | 105 to	101.93	5
e | 240 °C	0.1228	5
d' | 25 to	100.61	5
e' | 105 °C	0.110	5
d_c g/ml	0.309	5
v_c ml/g	3.24	5
t_c °C	446.	5
P_c mm	26364.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9374	5
t_c	0.252	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm	21.5°C	35.46	3
σ	50	32.48	3
	40	34.19	5
Parachor [P]	21.5°C	332.9	4
	50	333.3	4
	40		
	Sugd.	334.9	5
Exp. L.1.%/wt. u.			
Dispersion		166.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Phys. Chem. 101, 269 (1922) Herz and Schuftan

No. 2

NAME	1-Methyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{14}$ — Molecular Weight 146.222

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	219.	2
100	146.	5
30	113.	5
10	88.	5
1	47.	5
Pressure mm 25°C	0.2173	5
t_e	1349.88	5
Density g/ml 20°C	0.9580	2
d_4^t 25	0.9543	2
30	0.9506	4
a	0.9728	4
b	-0.0_374	4
Ref. Index n_D 20°C	1.5357	2
25	1.5336	2
30	1.5312	4
"C"	0.7325	4
MR (Obs.)	47.57	2
MR (Calc.)	47.197	5
(nD-d/2)	1.0567	2
Dielectric		
A | 115 to	6.99355	5
B | 260 °C	1710.9	5
C	197.	5
A* | 115 to	1.44653	5
B* | 255 °C	1608.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.34109	5
B' | 115 °C	1933.3	5
C'	217.	5
A'* 25 to	1.81602	5
B'* 115 °C	1831.7	5
Ac | 260 to	7.39905	5
Bc | t_c °C	2107.3	5
Cc	248.	5
Cryos. A° consts. B°		
t_e °C	245.87	5

		Ref.
dt/dP °C/mm		
25°C	60.3	5
BP	0.0578	5
t_e	0.0368	5
30 mm	0.8139	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.21	5
30 mm	83.08	5
BP	71.05	5
t_e	68.17	5
t_e (d, e)	68.00	5
$\Delta Hv/T_e$	19.2	5
d | 115 to	95.93	5
e | 245 °C	0.1136	5
d' | 25 to	94.8	5
e' | 115 °C	0.1036	5
d_c g/ml	0.302	5
v_c ml/g	3.31	5
t_c °C	446.	5
P_c mm	23063.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9525	5
t_e	0.9347	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	36.05	5
γ 30	34.95	5
40	33.87	5
Parachor [P] 20°C		
30		
40		
Sugd.	374.0	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 3

NAME	2-Methyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{14}$ — Molecular Weight 146.222

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	218.	2
100	145.	5
30	112.	5
10	87.	5
1	46.	5
Pressure		
mm 25°C	0.2368	5
t_e	1347.47	5
Density		
g/ml 20°C	0.952	2
d_4^t 25	0.948	2
30	0.944	4
a	0.968	4
b	-0.0380	4
Ref. Index		
n_D 20°C	1.531	2
25	1.529	2
30	1.526	4
"C"	0.7311	4
MR (Obs.)	47.5	2
MR (Calc.)	47.197	5
(nD-d/2)	1.055	2
Dielectric		
A | 110 to	6.9885	5
B | 260 °C	1708.8	5
C	198.	5
A* | 110 to	1.44133	5
B* | 255 °C	1606.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.33572	5
B' | 110 °C	1930.9	5
C'	216.	5
A'* 25 to	1.81016	5
B'* 110 °C	1828.7	5
Ac | 260 to	7.39465	5
Bc | t_c °C	2103.9	5
Cc	249.	5
Cryos. A° consts. B°		
t_e °C	244.81	5

		Ref.
dt/dP °C/mm		
25°C	55.873	5
BP	0.0578	5
t_e	0.037	5
30 mm	0.8144	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.34	5
30 mm	82.56	5
BP	70.68	5
t_e	67.83	5
t_e (d, e)	67.67	5
$\Delta Hv/T_e$	19.15	5
d | 110 to	95.12	5
e | 245 °C	0.1121	5
d' | 25 to	93.86	5
e' | 110 °C	0.1009	5
d_c g/ml	0.292	5
v_c ml/g	3.42	5
t_c °C	442.	5
P_c mm	22270.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9526	5
t_e	0.935	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		35.15	5
30		33.99	5
40		32.85	5
Parachor [P]			
20°C			
30			
40			
Sugd.		374.0	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

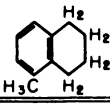
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	5-Methyl-1, 2, 3, 4-tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{14}$ — Molecular Weight 146.222



		Ref.
F. P. °C	-22.90	2
F. P. 100%		
B. P. °C		
760 mm	234.35	2
100	159.4	5
30	126.14	5
10	100.71	5
1	58.06	5
Pressure		
mm 25°C	0.0953	5
t_e	1379.9	5
Density		
g/ml 20°C	0.9720	2
d_4^{25}	0.9683	2
d_4^{30}	0.9646	4
a	0.9868	4
b	$-0.0_3$74	4
Ref. Index		
n_D 20°C	1.54395	2
25	1.54190	2
30	1.53985	4
"C"	0.7323	4
MR (Obs.)	47.48	2
MR (Calc.)	47.20	5
(nD-d/2)	1.05795	2
Dielectric		
A | 125 to	7.03372	5
B | 280 °C	1778.9	5
C	194.	5
A* | 125 to	1.48795	5
B* | 275 °C	1678.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38379	5
B' | 125 °C	2010.1	5
C'	214.	5
A'* 25 to	1.85270	5
B'* 125 °C	1908.06	5
Ac | 280 to	7.43838	5
Bc | t_c °C	2187.1	5
Cc	246.	5
Cryos. A*		
consts. B*		
t_e °C	262.85	5

		Ref.
dt/dP		
°C/mm		
25°C	129.63	5
BP	0.05894	5
t_e	0.0369	5
30 mm	0.8341	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.78	5
30 mm	86.62	5
BP	73.50	5
t_e	70.32	5
t_e (d, e)	70.05	5
$\Delta Hv/T_e$	19.18	5
d | 125 to	101.90	5
e | 265 °C	0.1212	5
d' | 25 to	100.54	5
e' | 125 °C	0.1104	5
d_c g/ml	0.293	5
v_c ml/g	3.41	5
t_c °C	470.	5
P_c mm	24250.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9448	5
t_e	0.9252	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm.	20°C	38.20	5
γ	30	37.05	5
	40	35.93	5
Parachor [P]			
	20°C		
	30		
	40		
	Sugd.	373.9	5
Exp. L. 1. %/wt. u.			
Dispersion		164.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	6-Methyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{14}$ — Molecular Weight 146.222

		Ref.
F.P. °C	-39.75	2
F.P. 100%		
B.P. °C		
760 mm	229.	2
100	155.	5
30	122.	5
10	96.	5
1	54.	5
Pressure		
mm 25°C	0.1274	5
t_e	1373.38	5
Density		
g/ml 20°C	0.9537	2
d_4^{25}	0.9500	2
d_4^{30}	0.9463	4
a	0.9685	4
b	-0.0_374	4
Ref. Index		
n_D 20°C	1.53572	2
25	1.53365	2
30	1.53122	4
"C"	0.7358	4
MR (Obs.)	47.79	2
MR (Calc.)	47.197	5
(nD-d/2)	1.05887	2
Dielectric		
A | 120 to	7.01848	5
B | 270 °C	1754.5	5
C	195.	5
A* | 120 to	1.46801	5
B* | 265 °C	1651.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.36759	5
B' | 120 °C	1982.5	5
C'	215.	5
A'* 25 to	1.83858	5
B'* 120 °C	1880.6	5
Ac | 270 to	7.42299	5
Bc | t_c °C	2156.8	5
Cc	246.	5
Cryos. A* consts. B*		
t_e °C	257.13	5

		Ref.
dt/dP °C/mm		
25°C	98.987	5
BP	0.0586	5
t_e	0.0368	5
30 mm	0.8272	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.82	5
30 mm	85.37	5
BP	72.81	5
t_e	69.74	5
t_e (d, e)	69.52	5
$\Delta Hv/T_e$	19.23	5
d | 120 to	99.6	5
e | 255 °C	0.117	5
d' | 25 to	98.52	5
e' | 120 °C	0.1081	5
d_c g/ml	0.303	5
v_c ml/g	3.30	5
t_c °C	460.	5
P_c mm	23374.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9498	5
t_e	0.9311	5
t_c	0.247	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	35.41	5
30	34.32	5
40	33.26	5
Parachor [P]		
20°C		
30		
40		
Sugd.	374.0	5
Exp. L.1.%/wt. u.		
Dispersion	166.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

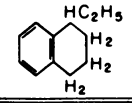
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	1-Ethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	236.	2
100	161.	5
30	127.	5
10	102.	5
1	59.	5
Pressure		
mm 25°C	0.08854	5
t_e	1394.39	5
Density		
g/ml 20°C	0.9535	2
d_4^t 25	0.9498	2
30	0.9461	4
a	0.7896	4
b	-0.0374	4
Ref. Index		
n_D 20°C	1.5321	2
25	1.5300	2
30	1.5278	4
"C"	0.7314	4
MR (Obs.)	52.08	2
MR (Calc.)	51.815	5
(nD-d/2)	1.0553	2
Dielectric		
A | 125 to	7.03639	5
B | 280 °C	1786.9	5
C	194.	5
A* | 125 to	1.51917	5
B* | 275 °C	1682.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38662	5
B' | 125 °C	2019.1	5
C'	214.	5
A'* 25 to	1.89434	5
B'* 125 °C	1916.8	5
Ac | 280 to	7.47391	5
Bc | t_c °C	2229.9	5
Cc	250.	5
Cryos. A° consts. B°		
t_e °C	265.12	5

		Ref.
dt/dP		
°C/mm		
25°C	139.05	5
BP	0.0591	5
t_e	0.0367	5
30 mm	0.837	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.56	5
30 mm	79.26	5
BP	67.63	5
t_e	64.69	5
t_e (d, e)	64.51	5
$\Delta Hv/T_e$	19.26	5
d | 125 to	92.92	5
e | 265 °C	0.1072	5
d' | 25 to	92.08	5
e' | 125 °C	0.1006	5
d_c g/ml	0.303	5
v_c ml/g	3.30	5
t_c °C	458.	5
P_c mm	21103.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9501	5
t_e	0.931	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	36.47	5
γ 30	35.35	5
40	34.26	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
B. ene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

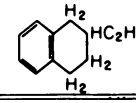
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 7

NAME	2-Ethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	235.	2
100	160.	5
30	127.	5
10	101.	5
1	58.	5
Pressure		
mm 25°C	0.0928	5
t_e	1391.094	5
Density		
g/ml 20°C	0.938	2
d_4^t 25	0.934	2
30	0.930	4
a	0.954	4
b	-0.0_3380	4
Ref. Index		
n_D 20°C	1.523	2
25	1.521	2
30	1.518	4
"C"	0.7315	4
MR (Obs.)	52.2	2
MR (Calc.)	51.815	5
(nD-d/2)	1.054	2
Dielectric		
A | 125 to	7.03372	5
B | 300 °C	1781.6	5
C	194.	5
A* | 125 to	7.14946	5
B* | 275 °C	1677.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38379	5
B' | 125 °C	2013.2	5
C'	214.	5
A'* 25 to	1.89217	5
B'* 125 °C	1911.03	5
Ac | 300 to	7.47328	5
Bc | t_c °C	2225.3	5
Cc	250.	5
Cryos. A*		
consts. B*		
t_p °C	263.95	5

		Ref.
dt/dP		
°C/mm		
25°C	133.0	5
BP	0.059	5
t_e	0.0368	5
30 mm	0.8353	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.34	5
30 mm	79.11	5
BP	67.45	5
t_e	64.51	5
t_e (d, e)	64.34	5
$\Delta Hv/T_e$	19.25	5
d | 125 to	92.73	5
e | 265 °C	0.1076	5
d' | 25 to	91.85	5
e' | 125 °C	0.1007	5
d_c g/ml	0.291	5
v_c ml/g	3.43	5
t_c °C	452.	5
P_c mm	20107.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9499	5
t_e	0.9308	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	34.15	5
30	33.00	5
40	31.88	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.79\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

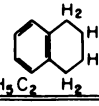
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	5-Ethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$	Molecular Weight 160.248

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	242.	2
100	166.	5
30	133.	5
10	107.	5
1	64.	5
Pressure		
mm 25°C	0.0637	5
t_e	1404.61	5
Density		
g/ml 20°C	0.973	2
d_4^t 25	0.969	2
30	0.965	4
a	0.989	4
b	-0.0380	4
Ref. Index		
n_D 20°C	1.540	2
25	1.538	2
30	1.535	4
"C"	0.7266	4
MR (Obs.)	51.7	2
MR (Calc.)	51.815	5
(nD-d/2)	1.054	2
Dielectric		
A | 135 to	7.05506	5
B | 320 °C	1815.8	5
C	193.	5
A* | 135 to	1.53964	5
B* | 280 °C	1712.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.40647	5
B' | 135 °C	2051.8	5
C'	214.	5
A'* 25 to	1.91149	5
B'* 135 °C	1949.2	5
Ac | 320 to	7.50497	5
Bc | t_c °C	2274.0	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_e °C	271.7	5

		Ref.
dt/dP		
°C/mm		
25°C	189.15	5
BP	0.0596	5
t_e	0.0368	5
30 mm	0.8449	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.58	5
30 mm	80.54	5
BP	68.48	5
t_e	65.43	5
t_e (d, e)	65.21	5
ΔHv/T_e	19.24	5
d | 135 to	95.14	5
e | 270 °C	0.1102	5
d' | 25 to	94.15	5
e' | 135 °C	0.1027	5
d_c g/ml	0.307	5
v_c ml/g	3.26	5
t_c °C	467.	5
P_c mm	21549.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9464	5
t_e	0.9265	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	39.54	5
γ 30	38.26	5
40	37.01	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L.1.%/wt. u.		
Dispersion	163.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

T_R = 0.80 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

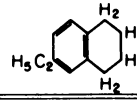
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 9

NAME	6-Ethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$
		Molecular Weight 160.248



		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | | to		
F.P. 100%			25°C	180.6	5	g | | °K		
B.P. °C			BP	0.0595	5	h		
760 mm	241.	2	t_e	0.0368	5	f' | | to		
100	165.	5	30 mm	0.8432	5	g' | | °K		
30	132.	5	ΔHm cal/g			h'		
10	106.	5	ΔHv cal/g			m | | to		
1	63.	5	25°C	91.34	5	n | | °K		
Pressure mm 25°C	0.0668	5	30 mm	80.37	5	o		
t_e	1402.3	5	BP	68.35	5	m' | | to		
Density g/ml 20°C	0.9568	2	t_e	65.32	5	n' | | °K		
d_4^t 25	0.9531	2	t_e (d, e)	65.1	5	o'		
d_4 30	0.9493	4	ΔHv/T_e	19.25	5	Surface tension dynes/cm. 20°C	36.98	5
a	0.9716	4	d | 130 to	94.86	5	σ 30	35.84	5
b	-0.0374	4	e | 270 °C	0.1100	5	40	34.74	5
Ref. Index			d' | 25 to	93.91	5	Parachor [P]		
n_D 20°C	1.5331	2	e' | 130 °C	0.1027	5	20°C		
25	1.5310	2	d_c g/ml	0.306	5	30		
30	1.5287	4	v_c ml/g	3.27	5	40		
"C"	0.7301	4	t_c °C	465.	5	Sugd.	412.7	5
MR (Obs.)	51.85	2	P_c mm	21418.	5	Exp. L.1.%/wt. u.		
MR (Calc.)	51.815	5	PV/RT			Dispersion	165.	2
(nD-d/2)	1.0547	2	25°C	1.0000	5	Flash Point °C		
Dielectric			30 mm	1.0000	5	Fire Point		
A | 130 to	7.05177	5	BP	0.9468	5	M. Spec.		
B | 320 °C	1810.2	5	t_e	0.9271	5	Ultra V.		
C	193.	5	t_c	0.244	5	X-Ray Dif.		
A* | 130 to	1.53647	5	ΔHc kcal/m			Infrared		
B* | 280 °C	1707.	5	ΔHf			Solubility in +		
K			ΔFf			Acetone		
c			Viscosity centistokes			Carbon tet.		
t_k | to			η °C			Benzene		
t_x | °C						Ether		
A' | 25 to	7.40297	5				n-Heptane		
B' | 130 °C	2045.5	5	B^v | to			Ethanol		
C'	213.	5	A^v | °C			Water		
A'* 25 to	1.90862	5	(B^v) | to			Water in		
B'* 130 °C	1943.	5	(A^v) | °C					
Ac | 320 to	7.50560	5	c_p liq. °K					
Bc | t_c °C	2270.	5	c_p vap. °K					
Cc	250.	5	c_v vap.					
Cryos. A° consts. B°								
t_e °C	270.58	5						

T_R = 0.80 T_c

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

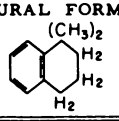
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1,1-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	221.	2
100	147.	5
30	115.	5
10	90.	5
1	48.	5
Pressure		
mm 25°C	0.1998	5
t_e	1365.05	5
Density		
g/ml 20°C	0.950	2
d_4^{25}	0.946	2
d_4^{30}	0.942	4
a	0.966	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5292	2
25	1.5271	2
30	1.5243	4
"C"	0.7300	4
MR (Obs.)	52.0	2
MR (Calc.)	51.815	5
(nD-d/2)	1.0545	2
Dielectric		
A | 115 to	6.99492	5
B | 315 °C	1719.7	5
C	197.	5
A* | 115 to	1.47633	5
B* | 260 °C	1613.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.34254	5
B' | 115 °C	1943.2	5
C'	217.	5
A'* 25 to	1.85606	5
B'* 115 °C	1841.3	5
Ac | 320 to	7.46083	5
Bc | t_c °C	2180.	5
Cc	255.	5
Cryos. A° consts. B°		
t_e °C	248.54	5

		Ref.
dt/dP		
°C/mm		
25°C	65.3072	5
BP	0.0581	5
t_e	0.0367	5
30 mm	0.8177	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.50	5
30 mm	76.05	5
BP	65.39	5
t_e	62.72	5
t_e (d, e)	62.63	5
ΔHv/T_e	19.27	5
d | 115 to	87.54	5
e | 250 °C	0.1002	5
d' | 25 to	86.86	5
e' | 115 °C	0.0943	5
d_c g/ml	0.297	5
v_c ml/g	3.37	5
t_c °C	435.	5
P_c mm	20018.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9577	5
t_e	0.9404	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		35.94	5
γ 30		34.74	5
40		33.57	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 11

NAME	1, cis-2-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene	* STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{16}$ Molecular Weight 160.248	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	235.	2
100	160.	5
30	126.	5
10	101.	5
1	58.	5
Pressure		
mm 25°C	0.0976	5
t_e	1403.8	5
Density		
g/ml 20°C	0.9470	2
d_4^t 25	0.9433	2
30	0.9396	4
a	0.9618	4
b	-0.0_374	4
Ref. Index		
n_D 20°C	1.5286	2
25	1.5265	2
30	1.5246	4
"C"	0.7318	4
MR (Obs.)	52.16	2
MR (Calc.)	51.815	5
(nD-d/2)	1.0551	2
Dielectric		
A | 125 to	7.00994	5
B | 290 °C	1771.4	5
C	194.	5
A* | 125 to	1.48194	5
B* | 275 °C	1663.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.35851	5
B' | 125 °C	2001.6	5
C'	214.	5
A'* 25 to	1.86733	5
B'* 125 °C	1899.6	5
Ac | 290 to	7.48207	5
Bc | t_c °C	2252.	5
Cc	255.	5
Cryos. A°		
consts. B°		
t_o °C	264.60	5

		Ref.
dt/dP		
°C/mm		
25°C	127.2	5
BP	0.0593	5
t_e	0.0373	5
30 mm	0.8377	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.45	5
30 mm	78.7	5
BP	67.55	5
t_e	64.65	5
t_e (d, e)	64.52	5
$\Delta Hv/T_e$	19.26	5
d | 125 to	91.62	5
e | 265 °C	0.1024	5
d' | 25 to	91.35	5
e' | 125 °C	0.1003	5
d_c g/ml	0.298	5
v_c ml/g	3.35	5
t_c °C	456.	5
P_c mm	20640.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9566	5
t_e	0.9382	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	35.48	5
30	34.39	5
40	33.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

* 1, trans-2-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene (same data)

No. 12

NAME	1, cis-3-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene	* STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	234.	2
100	159.	5
30	125.	5
10	100.	5
1	57.	5
Pressure mm 25°C	0.1058	5
t_e	1400.6	5
Density g/ml 20°C	0.940	2
d_4^{t} 25	0.936	2
30	0.932	4
a	0.956	4
b	-0.03 80	4
Ref. Index n_D 20°C	1.525	2
25	1.523	2
30	1.520	4
"C"	0.7325	4
MR (Obs.)	52.3	2
MR (Calc.)	51.815	5
(nD-d/2)	1.055	2
Dielectric		
A | 125 to	7.00994	5
B | 305 °C	1771.4	5
C	195.	5
A* | 125 to	1.48249	5
B* | 275 °C	1663.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.35851	5
B' | 125 °C	2001.6	5
C'	215.	5
A'* 25 to	1.86697	5
B'* 125 °C	1899.1	5
Ac | 305 to	7.48945	5
Bc | t_c °C	2252.5	5
Cc	255.	5
Cryos. A° consts. B°		
t_e °C	263.49	5

		Ref.
dt/dP °C/mm		
25°C	118.34	5
BP	0.0594	5
t_e	0.0368	5
30 mm	0.8377	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.11	5
30 mm	78.31	5
BP	67.26	5
t_e	64.38	5
t_e (d, e)	64.27	5
ΔHv/T_e	19.22	5
d | 125 to	91.01	5
e | 265 °C	0.1015	5
d' | 25 to	90.56	5
e' | 125 °C	0.0979	5
d_c g/ml	0.29	5
v_c ml/g	3.45	5
t_c °C	451.	5
P_c mm	19905.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9564	5
t_e	0.9380	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension dynes/cm.	20°C	34.45	5
γ	30	33.29	5
	40	32.16	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	412.7	5
Exp. L. l. %/wt. u. Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

* 1, trans-3-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene (same data)

TABLE VI. TETRAHYDRONAPHTHALENES

No. 13

NAME	1, cis-4-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene	* STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$	Molecular Weight 160.248

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	234.	2
100	159.	5
30	125.	5
10	100.	5
1	57.	5
Pressure		
mm 25°C	0.1058	5
t_e	1400.65	5
Density		
g/ml 20°C	0.940	2
d_4^t 25	0.936	2
30	0.932	4
a	0.956	4
b	-0.0_3380	4
Ref. Index		
n_D 20°C	1.525	2
25	1.523	2
30	1.520	4
"C"	0.7325	4
MR (Obs.)	52.3	2
MR (Calc.)	51.815	5
(nD-d/2)	1.055	2
Dielectric		
A | 125 to	7.00994	5
B | 305 °C	1771.4	5
C	195.	5
A* | 125 to	1.48249	5
B* | 275 °C	1663.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.35851	5
B' | 125 °C	2001.6	5
C'	215.	5
A'* 25 to	1.86697	5
B'* 125 °C	1899.1	5
Ac | 305 to	7.48945	5
Bc | t_c °C	2252.5	5
Cc	255.	5
Cryos. A*		
consts. B*		
t_e °C	263.49	5

		Ref.
dt/dP		
°C/mm		
25°C	118.34	5
BP	0.0594	5
t_e	0.0368	5
30 mm	0.8377	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.11	5
30 mm	78.31	5
BP	67.26	5
t_e	64.38	5
t_e (d, e)	64.27	5
$\Delta Hv/T_e$	19.22	5
d | 125 to	91.01	5
e | 265 °C	0.1015	5
d' | 25 to	90.56	5
e' | 125 °C	0.0979	5
d_c g/ml	0.29	5
v_c ml/g	3.45	5
t_c °C	451.	5
P_c mm	19905.2	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9564	5
t_e	0.9380	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	34.45	5
30	33.29	5
40	32.16	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L. l. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

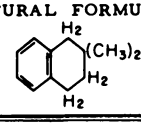
PURIFICATION: API

LITERATURE REFERENCES:

* 1, trans-4-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene (same data)

No. 14

NAME	2,2-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	230.	2
100	155.	5
30	122.	5
10	97.	5
1	55.	5
Pressure		
mm 25°C	0.1216	5
t_e	1362.4	5
Density		
g/ml 20°C	0.935	2
d_4^t 25	0.931	2
30	0.927	4
a	0.9510	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5200	2
25	1.5180	2
30	1.5160	4
"C"	0.7299	4
MR (Obs.)	52.1	2
MR (Calc.)	51.815	5
(nD-d/2)	1.0525	2
Dielectric		
A | 120 to	7.02175	5
B | 300 °C	1759.9	5
C	195.	5
A* | 120 to	1.52426	5
B* | 270 °C	1661.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.37106	5
B' | 120 °C	1988.6	5
C'	215.	5
A'* 25 to	1.88123	5
B'* 120 °C	1886.6	5
Ac | 300 to	7.47722	5
Bc | t_c °C	2206.	5
Cc	250.	5
Cryos. A* consts. B*		
t_e °C	257.72	5

		Ref.
dt/dP		
°C/mm		
25°C	103.43	5
BP	0.0586	5
t_e	0.0371	5
30 mm	0.8287	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.66	5
30 mm	78.06	5
BP	66.00	5
t_e	63.13	5
t_e (d,e)	62.89	5
$\Delta Hv/T_e$	19.05	5
d | 120 to	91.79	5
e | 260 °C	0.1121	5
d' | 25 to	90.13	5
e' | 120 °C	0.0986	5
d_c g/ml	0.288	5
v_c^c ml/g	3.47	5
t_c^c °C	443.	5
P_c mm	19678.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9419	5
t_e	0.9224	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		33.72	5
γ 30		32.58	5
40		31.47	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

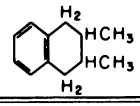
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 15

NAME	2,cis-3-Dimethyl-1,2,3,4-Tetrahydronaphthalene	* STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{16}$ Molecular Weight 160.248	

		Ref.			Ref.		Ref.
F.P. °C			dt/dP °C/mm			f | to	
F.P. 100%			25°C	113.09	5	g | °K	
B.P. °C			BP	0.0588	5	h	
760 mm	232.	2	t_e	0.0372	5		
100	157.	5	30 mm	0.8320	5	f' | to	
30	124.	5	ΔHm cal/g			g' | °K	
10	99.	5				h'	
1	56.	5	ΔHv cal/g			m | to	
Pressure			25°C	88.13	5	n | °K	
mm 25°C	0.11064	5	30 mm	78.39	5	o	
t_e	1365.3	5	BP	62.20	5		
Density			t_e	63.30	5	m' | to	
g/ml 20°C	0.940	2	t_e (d,e)	63.05	5	n' | °K	
d_4^t 25	0.936	2	ΔHv/T_e	19.03	5	o'	
30	0.932	4	d | 125 to	92.38	5	Surface tension	
a	0.9560	4	e | 260 °C	0.1128	5	dynes/cm. 20°C	34.45 5
b	-0.03 80	4	d' | 25 to	90.59	5	γ 30	33.29 5
Ref. Index			e' | 125 °C	0.0984	5	40	32.16 5
n_D 20°C	1.523	2	d_c g/ml	0.291	5	Parachor [P]	
25	1.521	2	v_c ml/g	3.44	5	20°C	
30	1.518	4	t_c °C	447.	5	30	
"C"	0.7299	4	P_c mm	19872.	5	40	
MR (Obs.)	52.1	2	PV/RT			Sugd.	412.7 5
MR (Calc.)	51.815	5	25°C	1.0000	5	Exp. L.1.%/wt.	
(nD-d/2)	1.053	2	30 mm	1.0000	5	u.	
Dielectric			BP	0.9404	5	Dispersion	
A | 125 to	7.02764	5	t_e	0.9205	5	Flash Point °C	
B | 300 °C	1770.7	5	t_c	0.244	5	Fire Point	
C	195.	5	ΔHc kcal/m			M. Spec.	
A* | 125 to	1.53111	5	ΔHf			Ultra V.	
B* | 270 °C	1672.6	5	ΔFf			X-Ray Dif.	
K			Viscosity centistokes			Infrared	
c			η °C			Solubility in +	
t_k | to						Acetone	
t_x | °C						Carbon tet.	
A' | 25 to	7.37732	5				Benzene	
B' | 125 °C	2000.8	5				Ether	
C'	215.	5	B^v | to			n-Heptane	
A'* 25 to	1.88684	5	A^v | °C			Ethanol	
B'* 125 °C	1898.6	5	(B^v) | to			Water	
Ac | 300 to	7.47040	5	(A^v) | °C			Water in	
Bc | t_c °C	2211.	5	c_p liq. °K				
Cc	250.	5	c_p vap. °K				
Cryos. A* consts. B*			c_v vap.				
t_e °C	259.91	5					

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

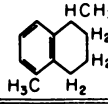
PURIFICATION: API

LITERATURE REFERENCES:

* 2,trans-3-Dimethyl-1,2,3,4-Tetrahydronaphthalene (same data)

No. 16

NAME	1,5-Dimethyl-1,2,3,4-Tetrahydronaphthalene	* STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	239.	2
100	164.	5
30	130.	5
10	104.	5
1	61.	5
Pressure mm 25°C	0.0767	5
t_e	1374.86	5
Density g/ml 20°C	0.941	2
d_4^t 25	0.937	2
30	0.933	4
a	0.957	4
b	-0.0380	4
Ref. Index n_D 20°C	1.526	2
25	1.524	2
30	1.521	4
"C"	0.7331	4
MR (Obs.)	52.3	2
MR (Calc.)	51.815	5
(nD-d/2)	1.053	2
Dielectric		
A | 130 to	7.0457	5
B | 310 °C	1803.4	5
C	194.	5
A* | 130 to	1.55344	5
B* | 280 °C	1707.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.39652	5
B' | 30 °C	2037.8	5
C'	214.	5
A'* 25 to	1.9023	5
B'* 130 °C	1934.9	5
Ac | 310 to	7.5032	5
Bc | t_c °C	2260.	5
Cc	250.	5
Cryos. A° consts. B°		
t_e °C	267.53	5

		Ref.
dt/dP °C/mm		
25°C	159.34	5
BP	0.0594	5
t_e	0.0373	5
30 mm	0.8419	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.28	5
30 mm	79.76	5
BP	67.00	5
t_e	63.97	5
t_e (d, e)	63.66	5
$\Delta Hv/T_e$	18.96	5
d | 130 to	94.94	5
e | 270 °C	0.1169	5
d' | 25 to	92.78	5
e' | 130 °C	0.1003	5
d_c g/ml	0.291	5
v_c ml/g	3.44	5
t_c °C	456.	5
P_c mm	20050.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9348	5
t_e	0.9139	5
t_c	0.243	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	34.59	5
γ 30	33.43	5
40	32.30	5
Parachor [P] 20°C		
30		
40		
Sugd.	412.7	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

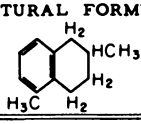
LITERATURE REFERENCES:

* 1,6-Dimethyl-1,2,3,4-Tetrahydronaphthalene (same data);
1,7-Dimethyl-1,2,3,4-Tetrahydronaphthalene (same data);
1,8-Dimethyl-1,2,3,4-Tetrahydronaphthalene (same data).

TABLE VI. TETRAHYDRONAPHTHALENES

No. 17

NAME	2,5-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$
		Molecular Weight 160.248



		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | to		
F.P. 100%			25°C	139.05	5	g | °K		
B.P. °C			BP	0.0591	5	h		
760 mm	236.	2	t_e	0.0371	5	f' | to		
100	161.	5	30 mm	0.8370	5	g' | °K		
30	127.	5	ΔHm cal/g			h'		
10	102.	5	ΔHv cal/g			m | to		
1	59.	5	25°C	89.56	5	n | °K		
Pressure mm 25°C	0.0885	5	30 mm	79.26	5	o		
t_e	1378.4	5	BP	67.00	5	m' | to		
Density			t_e	64.03	5	n' | °K		
g/ml 20°C	0.946	2	t_e (d, e)	63.78	5	o'		
d_4^t 25	0.942	2	ΔHv/T_e	19.08	5	Surface tension		
30	0.938	4	d | 125 to	93.66	5	dynes/cm. 20°C	35.33	5
a	0.962	4	e | 265 °C	0.113	5	30	34.15	5
b	-0.03380	4	d' | 25 to	92.08	5	40	33.00	5
Ref. Index			e' | 125 °C	0.1006	5	Parachor [P]		
n_D 20°C	1.526	2	d_c g/ml	0.293	5	20°C		
25	1.524	2	v_c ml/g	3.41	5	30		
30	1.522	4	t_c °C	454.	5	40		
"C"	0.7292	4	P_c mm	20330.	5	Sugd.	412.7	5
MR (Obs.)	52.0	2	PV/RT			Exp. L. l. %/wt.		
MR (Calc.)	51.815	5	25°C	1.0000	5	u.		
(nD-d/2)	1.053	2	30 mm	1.0000	5	Dispersion		
Dielectric			BP	0.9414	5	Flash Point °C		
A | 125 to	7.03639	5	t_e	0.9213	5	Fire Point		
B | 310 °C	1786.9	5	t_c	0.244	5	M. Spec.		
C	194.	5	ΔHc kcal/m			Ultra V.		
A* | 125 to	1.53495	5	ΔHf			X-Ray Dif.		
B* | 275 °C	1687.7	5	ΔFf			Infrared		
K			Viscosity centistokes			Solubility in +		
c			η °C			Acetone		
t_k | to						Carbon tet.		
t_x | °C						Benzene		
A' | 25 to	7.38662	5				Ether		
B' | 125 °C	2019.1	5	B^v | to			n-Heptane		
C'	214.	5	A^v | °C			Ethanol		
A'* 25 to	1.89434	5	(B^v) | to			Water		
B'* 125 °C	1916.8	5	(A^v) | °C			Water in		
Ac | 310 to	7.50565	5	c_p liq. °K					
Bc | t_c °C	2268.3	5	c_p vap. °K					
Cc	255.	5	c_v vap.					
Cryos. A° consts. B°								
t_e °C	264.53	5						

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

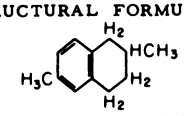
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	2, 6-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$	Molecular Weight 160.248

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	238.	2
100	162.	5
30	129.	5
10	103.	5
1	60.	5
Pressure		
mm 25°C	0.0804	5
t_e	1375.8	5
Density		
g/ml 20°C	0.941	2
d_4^t 25	0.937	2
30	0.933	4
a	0.763	4
b	-0.0_3380	4
Ref. Index		
n_D 20°C	1.526	2
25	1.524	2
30	1.521	4
"C"	0.7331	4
MR (Obs.)	52.4	2
MR (Calc.)	51.815	5
(nD-d/2)	1.056	2
Dielectric		
A | 130 to	7.04307	5
B | 310 °C	1798.1	5
C	194.	5
A* | 130 to	1.54794	5
B* | 275 °C	1701.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.39373	5
B' | 130 °C	2031.8	5
C'	214.	5
A'* 25 to	1.90013	5
B'* 130 °C	1929.1	5
Ac | 310 to	7.52365	5
Bc | t_c °C	2287.8	5
Cc	255.	5
Cryos. A° consts. B°		
t_e °C	266.52	5

		Ref.
dt/dP		
°C/mm		
25°C	152.40	5
BP	0.0593	5
t_e	0.0372	5
30 mm	0.8402	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.05	5
30 mm	79.60	5
BP	67.00	5
t_e	63.99	5
t_e (d, e)	63.70	5
ΔHv/T_e	19.01	5
d | 130 to	94.53	5
e | 265 °C	0.1157	5
d' | 25 to	92.56	5
e' | 130 °C	0.1004	4
d_c g/ml	0.290	5
v_c ml/g	3.45	5
t_c °C	455.	5
P_c mm	20064.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9369	5
t_e	0.9162	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		34.59	5
ɣ 30		33.43	5
40		32.30	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

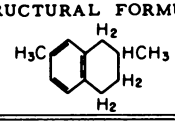
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	2,7-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	237.	2
100	162.	5
30	128.	5
10	103.	5
1	60.	5
Pressure		
mm 25°C	0.0843	5
t_e	1377.2	5
Density		
g/ml 20°C	0.941	2
d_4^t 25	0.937	2
30	0.933	4
a	0.957	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.526	2
25	1.524	2
30	1.522	4
"C"	0.7331	4
MR (Obs.)	52.4	2
MR (Calc.)	51.815	5
(nD-d/2)	1.056	2
Dielectric		
A | 130 to	7.03974	5
B | 310 °C	1792.5	5
C	194.	5
A* | 130 to	1.54142	5
B* | 275 °C	1694.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.3902	5
B' | 130 °C	2025.5	5
C'	214.	5
A'* 25 to	1.89724	5
B'* 130 °C	1923.	5
Ac | 310 to	7.51735	5
Bc | t_c °C	2279.3	5
Cc	255.	5
Cryos. A° consts. B°		
t_e °C	265.53	5

		Ref.
dt/dP		
°C/mm		
25°C	145.6	5
BP	0.0592	5
t_e	0.0372	5
30 mm	0.8386	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.81	5
30 mm	79.43	5
BP	67.00	5
t_e	64.01	5
t_e (d, e)	63.74	5
$\Delta Hv/T_e$	19.04	5
d | 130 to	94.09	5
e | 265 °C	0.1143	5
d' | 25 to	92.32	5
e' | 130 °C	0.1005	5
d_c g/ml	0.291	5
v_c ml/g	3.43	5
t_c °C	454.	5
P_c mm	20070.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9392	5
t_e	0.9188	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		34.31	5
30		33.43	5
40		33.3	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

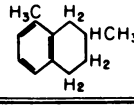
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	2,8-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$	Molecular Weight 160.248

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	236.	2
100	161.	5
30	127.	5
10	102.	5
1	59.	5
Pressure		
mm 25°C	0.0885	5
t_e	1378.5	5
Density		
g/ml 20°C	0.941	2
d_4^{25}	0.937	2
d_4^{30}	0.933	4
a	0.957	4
b	-0.03 80	4
Ref. Index		
n_D 20°C	1.526	2
25	1.524	2
30	1.521	4
"C"	0.7331	4
MR (Obs.)	52.4	2
MR (Calc.)	51.815	5
(nD-d/2)	1.056	2
Dielectric		
A | 125 to	7.03639	5
B | 310 °C	1786.9	5
C	194.	5
A* | 125 to	1.53489	5
B* | 275 °C	1687.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38662	5
B' | 125 °C	2019.1	5
C'	214.	5
A'* 25 to	1.89434	5
B'* 125 °C	1916.8	5
Ac | 310 to	7.51022	5
Bc | t_c °C	2270.9	5
Cc	255.	5
Cryos. A* consts. B*		
t_e °C	264.53	5

		Ref.
dt/dP °C/mm		
25°C	139.05	5
BP	0.0591	5
t_e	0.0371	5
30 mm	0.8370	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.57	5
30 mm	79.26	5
BP	67.00	5
t_e	64.03	5
t_e (d, e)	63.78	5
$\Delta Hv/T_e$	19.08	5
d | 125 to	93.66	5
e | 265 °C	0.1130	5
d' | 25 to	92.08	5
e' | 125 °C	0.1006	5
d_c g/ml	0.291	5
v_c ml/g	3.43	5
t_c °C	453.	5
P_c mm	20079.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9414	5
t_e	0.9214	5
t_c	0.244	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		34.59	5
γ 30		33.43	5
40		32.30	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

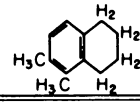
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 21

NAME	5,6-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	252.	2
100	175.	5
30	141.	5
10	115.	5
1	71.	5
Pressure		
mm 25°C	0.03616	5
t_e	1411.6	5
Density		
g/ml 20°C	0.975	2
d_4^t 25	0.971	2
30	0.967	4
a	0.991	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.552	2
25	1.550	2
30	1.547	4
"C"	0.7402	4
MR (Obs.)	52.5	2
MR (Calc.)	51.815	5
(nD-d/2)	1.064	2
Dielectric		
A | 140 to	7.08239	5
B | 330 °C	1861.3	5
C	191.	5
A* | 140 to	1.5799	5
B* | 290 °C	1763.3	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.4355	5
B' | 140 °C	2103.2	5
C'	211.9	5
A'* 25 to	1.9367	5
B'* 140 °C	2000.3	5
Ac | 330 to	7.54749	5
Bc | t_c °C	2341.8	5
Cc	250.	5
Cryos. A* consts. B*		
t_e °C	282.3	5

		Ref.
dt/dP		
°C/mm		
25°C	320.5	5
BP	0.0603	5
t_e	0.0370	5
30 mm	0.8576	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.14	5
30 mm	82.72	5
BP	69.50	5
t_e	66.24	5
t_e (d, e)	65.89	5
$\Delta Hv/T_e$	19.11	5
d | 140 to	99.52	5
e | 280 °C	0.1191	5
d' | 25 to	97.81	5
e' | 140 °C	0.1070	5
d_c g/ml	0.310	5
v_c ml/g	3.23	5
t_c °C	480.	5
P_c mm	21855.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9351	5
t_e	0.9133	5
t_c	0.240	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	39.87	5
σ 30	38.58	5
40	37.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

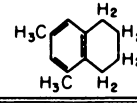
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 22

NAME	5, 7-Dimethyl-1, 2, 3, 4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F.P. °C	-6.	2
F.P. 100%		
B.P. °C		
760 mm	253.1	2
100	176.2	5
30	142.0	5
10	115.7	5
1	71.7	5
Pressure		
mm 25°C	0.0342	5
t_e	1414.0	5
Density		
g/ml 20°C	0.9583	2
d_4^{25}	0.9537	2
d_4^{30}	0.9491	4
a	0.9767	4
b	-0.0_3392	4
Ref. Index		
n_D 20°C	1.5405	2
25	1.5384	2
30	1.5350	4
"C"	0.7384	4
MR (Obs.)	52.51	2
MR (Calc.)	51.815	5
(nD-d/2)	1.0613	2
Dielectric		
A | 140 to	7.08594	5
B | 325 °C	1867.5	5
C	191.	5
A* | 140 to	1.5831	5
B* | 295 °C	1769.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4393	5
B' | 140 °C	2110.2	5
C'	212.0	5
A'* 25 to	1.9398	5
B'* 140 °C	2007.2	5
Ac | 325 to	7.55004	5
Bc | t_c °C	2347.9	5
Cc	250.	5
Cryos. A* consts. B*		
t_e °C	283.5	5

		Ref.
dt/dP		
°C/mm		
25°C	337.5	5
BP	0.0604	5
t_e	0.0370	5
30 mm	0.8594	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.41	5
30 mm	82.90	5
BP	69.25	5
t_e	66.33	5
t_e (d, e)	65.69	5
$\Delta Hv/T_e$	19.09	5
d | 140 to	100.35	5
e | 285 °C	0.1229	5
d' | 25 to	98.08	5
e' | 140 °C	0.1069	5
d_c g/ml	0.291	5
v_c ml/g	3.44	5
t_c °C	474.	5
P_c mm	20281.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9348	5
t_e	0.9129	5
t_c	0.240	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		37.21	5
30		35.80	5
40		34.43	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

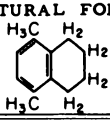
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VI. TETRAHYDRONAPHTHALENES

No. 23

NAME	5,8-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$ — Molecular Weight 160.248



		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	254.	2
100	177.	5
30	143.	5
10	117.	5
1	72.	5
Pressure		
mm 25°C	0.0327	5
t_e	1415.4	5
Density		
g/ml 20°C	0.967	2
d_4^t 25	0.963	2
30	0.959	4
a	0.983	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.547	2
25	1.545	2
30	1.542	4
"C"	0.73996	4
MR (Obs.)	52.5	2
MR (Calc.)	51.815	5
(nD-d/2)	1.063	2
Dielectric		
A | 145 to	7.08889	5
B | 330 °C	1872.6	5
C	191.	5
A* | 145 to	1.5863	5
B* | 295 °C	1774.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4424	5
B' | 145 °C	2116.0	5
C'	212.02	5
A'* 25 to	1.94237	5
B'* 145 °C	2012.8	5
Ac | 330 to	7.54042	5
Bc | t_c °C	2346.5	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_e °C	284.5	5

		Ref.
dt/dP		
°C/mm		
25°C	352.2	5
BP	0.0604	5
t_e	0.0371	5
30 mm	0.8608	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.63	5
30 mm	83.06	5
BP	69.75	5
t_e	66.45	5
t_e (d, e)	66.10	5
$\Delta Hv/T_e$	19.09	5
d | 145 to	100.1	5
e | 285 °C	0.1195	5
d' | 25 to	98.3	5
e' | 145 °C	0.1069	5
d_c g/ml	0.306	5
v_c ml/g	3.26	5
t_c °C	482.	5
P_c mm	21618.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9342	5
t_e	0.9122	5
t_c	0.240	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	38.58	5
30	37.32	5
40	36.09	5
Parachor [P]		
20°C		
30		
40		
Sugd.	412.7	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	6,7-Dimethyl-1,2,3,4-Tetrahydronaphthalene	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{16}$	Molecular Weight 160.248

		Ref.
F.P. °C	10.	2
F.P. 100%		
B.P. °C		
760 mm	252.	2
100	175.	5
30	141.	5
10	115.	5
1	71.	5
Pressure		
mm 25°C	0.0362	5
t_e	1416.9	5
Density		
g/ml 20°C	0.954	2
d_4^t 25	0.950	2
30	0.946	4
a	0.970	4
b	-0.0380	4
Ref. Index		
n_D 20°C	1.538	2
25	1.536	2
30	1.534	4
"C"	0.7384	4
MR (Obs.)	52.5	2
MR (Calc.)	51.815	5
(nD-d/2)	1.061	2
Dielectric		
A | 140 to	7.08239	5
B | 325 °C	1861.3	5
C	191.	5
A* | 140 to	1.57467	5
B* | 290 °C	1761.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.43552	5
B' | 140 °C	2103.2	5
C'	212.	5
A'* 25 to	1.93669	5
B'* 140 °C	2000.3	5
Ac | 325 to	7.54194	5
Bc | t_c °C	2338.4	5
Cc	250.	5
Cryos. A* consts. B*		
t_e °C	282.49	5

		Ref.
dt/dP		
°C/mm		
25°C	320.55	5
BP	0.0603	5
t_e	0.0369	5
30 mm	0.8576	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.14	5
30 mm	82.72	5
BP	69.70	5
t_e	66.44	5
t_e (d, e)	66.12	5
$\Delta Hv/T_e$	19.16	5
d | 140 to	99.27	5
e | 280 °C	0.1173	5
d' | 25 to	97.81	5
e' | 140 °C	0.1070	5
d_c g/ml	0.302	5
v_c ml/g	3.31	5
t_c °C	477.	5
P_c mm	21156.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9379	5
t_e	0.9165	5
t_c	0.240	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		36.54	5
γ 30		35.33	5
40		34.15	5
Parachor [P]			
20°C			
30			
40			
Sugd.		412.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

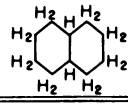
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 1

NAME	cis-Decahydronaphthalene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{10}H_{18}$ Molecular Weight 138.164	

		Ref.
F. P. °C	-43.01	2
F. P. 100%		
B. P. °C		
760 mm	195.65	2
100	124.6	5
30	93.26	5
10	69.4	5
1	29.5	5
Pressure		
mm 25°C	0.737	5
t_e	1287.0	5
Density		
g/ml 20°C	0.8965	2
d_4^t 25	0.8925	2
30	0.8885	4
a	0.9125	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4810	2
25	1.4788	2
30	1.4766	4
"C"	0.7077	4
MR (Obs.)	43.858	2
MR (Calc.)	43.98	5
(nD-d/2)	1.0328	2
Dielectric		
A 100 to	6.92860	5
B 235 °C	1609.6	5
C	202.	5
A* 100 to	1.37162	5
B* 230 °C	1509.6	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.2780	5
B' 100 °C	1823.	5
C'	221.	5
A'* 25 to	1.7383	5
B'* 100 °C	1722.	5
Ac 235 to	7.16561	5
Bc t_c °C	1921.	5
Cc	260.	5
Cryos. A* consts. B*		
t_e °C	219.47	5

		Ref.
dt/dP		
°C/mm		
25°C	19.56	5
BP	0.05613	5
t_e	0.03724	5
30 mm	0.7841	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.72	5
30 mm	82.06	5
BP	70.41	5
t_e	67.82	5
t_e (d, e)	67.70	5
$\Delta Hv/T_e$	19.02	5
d 100 to	92.67	5
e 220 °C	0.1138	5
d' 20 to	91.16	5
e' 100 °C	0.0976	5
d_c g/ml	0.240	5
v_c ml/g	4.16	5
t_c °C	404.	5
P_c mm	18730.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9548	5
t_e	0.9389	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		32.51	5
σ 30		31.36	5
40		30.25	5
Parachor [P]			
20°C			
30			
40			
Sugd.		368.0	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	trans-Decahydronaphthalene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{18}$	Molecular Weight 138.164

		Ref.
F.P. °C	-30.4	2
F.P. 100%		
B.P. °C		
760 mm	187.25	2
100	117.	5
30	86.	5
10	63.	5
1	24.	5
Pressure mm 25°C	1.0971	5
t_e	1263.2	5
Density g/ml 20°C	0.8699	2
d_4^t 25	0.8659	2
30	0.8619	4
a	0.8859	4
b	-0.0380	4
Ref. Index n_D 20°C	1.4695	2
25	1.4672	2
30	1.4650	4
"C"	0.7130	5
MR (Obs.)	44.30	2
MR (Calc.)	43.98	5
(nD-d/2)	1.0345	2
Dielectric		
A | 85 to	6.90464	5
B | 225 °C	1570.3	5
C	203.	5
A* | 85 to	1.35573	5
B* | 220 °C	1472.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.24657	5
B' | 85 °C	1774.4	5
C'	221.	5
A'* 25 to	1.71053	5
B'* 85 °C	1674.2	5
Ac | 225 to	7.31068	5
Bc | t_c °C	1937.4	5
Cc	250.	5
Cryos. A° consts. B°		
t_e °C	209.89	5

		Ref.
dt/dP °C/mm		
25°C	13.53	5
BP	0.0554	5
t_e	0.03732	5
30 mm	0.7717	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.19	5
30 mm	80.30	5
BP	68.80	5
t_e	66.33	5
t_e (d, e)	66.22	5
$\Delta Hv/T_e$	18.97	5
d | 85 to	90.14	5
e | 210 °C	0.1140	5
d' | 25 to	88.59	5
e' | 85 °C	0.9597	5
d_c g/ml	0.254	5
v_c ml/g	3.93	5
t_c °C	391.	5
P_c mm	19616.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9553	5
t_e	0.9398	5
t_c	0.257	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C	28.82	5
γ	30	27.77	5
	40	26.75	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	368.0	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

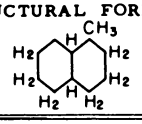
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VII. DECAHYDRONAPHTHALENES

No. 3

NAME	1-Methyl-(trans-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{20}$
		Molecular Weight 152.270



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	235.	2
100	160.	4
30	126.6	4
10	101.	5
1	58.	5
Pressure		
mm 25°C	0.0928	5
t_e	1384.2	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C	1.4720	2
25	1.4698	2
30	1.4676	4
"C"		
MR (Obs.)	48.598	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 127 to	7.03372	5
B | 300 °C	1781.6	5
C	194.	5
A* | 127 to	1.50246	5
B* | 275 °C	1679.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.38379	5
B' | 127 °C	2013.2	5
C'	214.	5
A'* 20 to	1.86994	5
B'* 127 °C	1911.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	263.7	5

		Ref.
dt/dP		
°C/mm		
25°C	133.00	5
BP	0.0590	5
t_e	0.0369	5
30 mm	0.8353	5
ΔHm cal/g		
ΔHv cal/g		
25°C	94.02	5
30 mm	83.25	5
BP	70.76	5
t_e	67.60	5
t_e (d, e)	67.86	5
$\Delta Hv/T_e$	19.17	5
d | 125 to	97.83	5
e | 265 °C	0.1152	5
d' | 25 to	96.67	5
e' | 125 °C	0.1060	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9461	5
t_e	0.9266	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
γ 30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	407.0	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	9-Methyl-(cis-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{20}$
		Molecular Weight 152.270

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	215.	2
100	142.	5
30	110.	5
10	85.	5
1	44.	5
Pressure		
mm 25°C	0.27159	5
t_e	1336.1	5
Density		
g/ml 20°C	0.8910	2
d_4^t 25	0.8870	2
30	0.8830	4
a	0.9070	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4804	2
25	1.4782	2
30	1.4755	4
"C"	0.7108	4
MR (Obs.)	49.43	4
MR (Calc.)	48.598	5
(nD-d/2)	1.0349	4
Dielectric		
A | 110 to	6.98032	5
B | 290 °C	1693.1	5
C	198.	5
A* | 110 to	1.45645	5
B* | 250 °C	1592.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.32702	5
B' | 110 °C	1913.2	5
C'	217.	5
A'* 25 to	1.82096	5
B'* 110 °C	1811.5	5
Ac | 290 to	7.45310	5
Bc | t_c °C	2148.5	5
Cc	255.	5
Cryos. A* consts. B*		
t_e °C	241.26	5

		Ref.
dt/dP		
°C/mm		
25°C	49.10	5
BP	0.0576	5
t_e	0.0370	5
30 mm	0.8093	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.02	5
30 mm	78.79	5
BP	67.25	5
t_e	64.52	5
t_e (d, e)	64.37	5
$\Delta Hv/T_e$	19.10	5
d | 110 to	90.80	5
e | 240 °C	0.1095	5
d' | 25 to	89.45	5
e' | 110 °C	0.0972	5
d_c g/ml	0.273	5
v_c ml/g	3.66	5
t_c °C	422.	5
P_c mm	19033.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9511	5
t_e	0.9335	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	32.17	5
γ 30	31.03	5
40	29.92	5
Parachor [P]		
20°C		
30		
40		
Sugd.	407.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

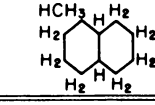
PURIFICATION: API

LITERATURE REFERENCES:

TABLE VII. DECAHYDRONAPHTHALENES

No. 5

NAME	9-Methyl-(trans-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{20}$
		Molecular Weight 152.270



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	205.	2
100	133.	5
30	101.	5
10	77.	5
1	36.	5
Pressure		
mm 25°C	0.4583	5
t_e	1312.7	5
Density		
g/ml 20°C	0.8620	2
d_4^t 25	0.8580	2
30	0.8540	4
a	0.8780	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4631	2
25	1.4619	2
30	1.4585	4
"C"	0.7102	4
MR (Obs.)	48.662	4
MR (Calc.)	48.598	5
(nD-d/2)	1.0321	4
Dielectric		
A 100 to	6.95093	5
B 270 °C	1648.4	5
C	200.	5
A* 100 to	1.43008	5
B* 240 °C	1547.4	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.29578	5
B' 100 °C	1862.6	5
C'	219.	5
A'* 25 to	1.79377	5
B'* 100 °C	1761.3	5
Ac 270 to	7.39336	5
Bc t_c °C	2053.4	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_a °C	230.08	5

		Ref.
dt/dP		
°C/mm		
25°C	30.28	5
BP	0.0569	5
t_e	0.0371	5
30 mm	0.7964	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.62	5
30 mm	76.54	5
BP	65.52	5
t_e	62.96	5
t_e (d, e)	62.86	5
$\Delta Hv/T_e$	19.05	5
d 100 to	87.27	5
e 230 °C	0.1061	5
d' 25 to	85.94	5
e' 100 °C	0.0929	5
d_c g/ml	0.256	5
v_c ml/g	3.90	5
t_c °C	403.	5
P_c mm	17732.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9542	5
t_e	0.9375	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	28.18	5
30	27.15	5
40	26.14	5
Parachor [P]		
20°C		
30		
40		
Sugd.	407.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

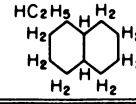
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	9-Ethyl-(cis-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{22}$ — Molecular Weight 166.296



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	233.	2
100	158.	5
30	125.	5
10	99.	5
1	57.	5
Pressure mm 25°C	0.10558	5
t_e	1387.4	5
Density g/ml 20°C	0.8860	2
d_4^t 25	0.8830	2
30	0.8800	4
a	0.8980	4
b	-0.0_360	4
Ref. Index n_D 20°C	1.480	2
25	1.478	2
30	1.476	4
"C"	0.7147	4
MR (Obs.)	53.319	4
MR (Calc.)	53.216	5
(nD-d/2)	1.037	4
Dielectric		
A | 125 to	7.03034	5
B | 300 °C	1776.0	5
C	195.	5
A* | 125 to	1.52976	5
B* | 270 °C	1671.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38019	5
B' | 125 °C	2006.8	5
C'	215.	5
A'* 25 to	1.90514	5
B'* 125 °C	1904.5	5
Ac | 300 to	7.49304	5
Bc | t_c °C	2227.8	5
Cc	250.	5
Cryos. A* consts. B*		
t_e °C	261.77	5

		Ref.
dt/dP °C/mm		
25°C	118.21	5
BP	0.0589	5
t_e	0.0368	5
30 mm	0.8337	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.14	5
30 mm	75.69	5
BP	64.64	5
t_e	61.85	5
t_e (d, e)	61.70	5
$\Delta Hv/T_e$	19.23	5
d | 125 to	88.43	5
e | 260 °C	0.1021	5
d' | 25 to	85.51	5
e' | 125 °C	0.0947	5
d_c g/ml	0.294	5
v_c ml/g	3.40	5
t_c °C	442.	5
P_c mm	18781.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9509	5
t_e	0.9321	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	31.88	5
γ 30	31.03	5
40	30.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	446.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VII. DECAHYDRONAPHTHALENES

No. 7

NAME	9-Ethyl-(trans-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{22}$
		Molecular Weight 166.296

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	225.	2
100	150.94	5
30	118.13	5
10	93.06	5
1	51.07	5
Pressure		
mm 25°C	0.15986	5
t_e	1375.1	5
Density		
g/ml 20°C	0.8610	2
d_4^{25}	0.8570	2
d_4^{30}	0.8530	4
a	0.8770	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.466	2
25	1.464	2
30	1.462	4
"C"	0.7150	4
MR (Obs.)	53.492	4
MR (Calc.)	53.216	5
(nD-d/2)	1.0355	4
Dielectric		
A | 120 to	7.00670	5
B | 280 °C	1737.0	5
C	196.	5
A* | 120 to	1.50252	5
B* | 265 °C	1630.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.35506	5
B' | 120 °C	1962.8	5
C'	215.8	5
A'* 25 to	1.88331	5
B'* 120 °C	1860.8	5
Ac | 280 to	7.50050	5
Bc | t_c °C	2216.5	5
Cc	255.	5
Cryos. A*		
consts. B*		
t_e °C	253.03	5

		Ref.
dt/dP		
°C/mm		
25°C	80.25	5
BP	0.0583	5
t_e	0.0367	5
30 mm	0.8224	5
ΔHm cal/g		
ΔHv cal/g		
25°C	82.83	5
30 mm	74.17	5
BP	63.65	5
t_e	60.96	5
t_e (d, e)	60.89	5
$\Delta Hv/T_e$	19.27	5
d | 120 to	85.80	5
e | 255 °C	0.0985	5
d' | 25 to	85.15	5
e' | 120 °C	0.0929	5
d_c g/ml	0.256	5
v_c ml/g	3.91	5
t_c °C	420.	5
P_c mm	16475.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9568	5
t_e	0.9392	5
t_c	0.248	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	28.43	5
30	27.39	5
40	26.38	5
Parachor [P]		
20°C		
30		
40		
Sugd.	446.0	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

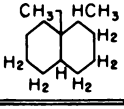
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1,10-Dimethyl-(cis-Decahydronaphthalene)	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{22}$	Molecular Weight 166.296

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	220.	2
100	146.42	5
30	113.86	5
10	88.99	5
1	47.36	5
Pressure		
mm 25°C	0.20927	5
t_e	1335.0	5
Density		
g/ml 20°C	0.8896	2
d_4^{25}	0.8856	2
d_4^{30}	0.8816	4
a	0.9056	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4812	2
25	1.4790	2
30	1.4768	4
"C"	0.7134	4
MR (Obs.)	53.217	4
MR (Calc.)	53.216	5
(nD-d/2)	1.0364	4
Dielectric		
A | 115 to	6.99208	5
B | 280 °C	1714.4	5
C	197.	5
A* | 115 to	1.5180	5
B* | 255 °C	1617.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.33952	5
B' | 115 °C	1937.2	5
C'	216.6	5
A'* 25 to	1.8697	5
B'* 115 °C	1835.5	5
Ac | 280 to	7.45224	5
Bc | t_c °C	2148.8	5
Cc	250.	5
Cryos. A° consts. B°		
t_e °C	246.4	5

		Ref.
dt/dP		
°C/mm		
25°C	62.52	5
BP	0.05796	4
t_e	0.0373	5
30 mm	0.8160	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.22	5
30 mm	73.13	5
BP	62.46	5
t_e	59.22	5
t_e (d, e)	58.33	5
ΔHv/T_e	18.95	5
d | 115 to	85.91	5
e | 245 °C	0.1122	5
d' | 25 to	83.49	5
e' | 115 °C	0.0909	5
d_c g/ml	0.260	5
v_c ml/g	3.84	5
t_c °C	416.	5
P_c mm	16821.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9525	5
t_e	0.9235	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	32.40	5
γ 30	31.25	5
40	30.13	5
Parachor [P]		
20°C		
30		
40		
Sugd.	446.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VII. DECAHYDRONAPHTHALENES

No. 9

NAME	1,10-Dimethyl-(trans-Decahydronaphthalene)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{22}$	Molecular Weight 166.296

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	213.	2
100	140.	5
30	108.	5
10	83.	5
1	45.	5
Pressure		
mm 25°C	0.310	5
t_e	1327.0	5
Density		
g/ml 20°C	0.8633	2
d_4^t 25	0.8593	2
30	0.8553	4
a	0.8799	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.4659	2
25	1.4637	2
30	1.4615	4
"C"	0.7131	4
MR (Obs.)	53.340	4
MR (Calc.)	53.216	5
(nD-d/2)	1.04343	4
Dielectric		
A 110 to	6.97377	5
B 310 °C	1686.3	5
C	199.	5
A* 110 to	1.5010	5
B* 250 °C	1590.	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.3100	5
B' 110 °C	1901.5	5
C'	218.	5
A'* 25 to	1.8219	5
B'* 110 °C	1793.	5
Ac 310 to	7.49780	5
Bc t_c °C	2187.1	5
Cc	260.	5
Cryos. A°		
consts. B°		
t_e °C	238.9	5

		Ref.
dt/dP		
°C/mm		
25°C	43.75	5
BP	0.0575	5
t_e	0.0372	5
30 mm	0.8080	5
ΔHm cal/g		
ΔHv cal/g		
25°C	78.35	5
30 mm	71.56	5
BP	61.14	5
t_e	58.48	5
t_e (d, e)	58.41	5
$\Delta Hv/T_e$	19.00	5
d 110 to	82.28	5
e 240 °C	0.9924	5
d' 25 to	80.91	5
e' 110 °C	0.0868	5
d_c g/ml	0.257	5
v_c ml/g	3.89	5
t_c °C	406.	5
P_c mm	16364.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9510	5
t_e	0.9314	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	28.74	5
30	27.69	5
40	26.66	5
Parachor [P]		
20°C		
30		
40		
Sugd.	446.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE VIII. AROMATIC PHENOLS

TABLE VIII. AROMATIC PHENOLS

No. 1

NAME	Phenol	STRUCTURAL FORMULA
Mole % Pur. 99.96	Ref. 1	Molecular Formula C_6H_6O — Molecular Weight 94.108

		Ref.
F. P. °C	40.90	1
F. P. 100%		
B. P. °C		
760 mm	181.75	1
100	120.7	1
30	92.78	4
10	70.86	5
1	33.6	5
Pressure		
mm 25°C	0.5305	5
t_e	1240.	5
Density		
g/ml 41 °C	1.05760	1
d_4^t 46	1.05331	1
51	1.0490	5
a	1.0929	5
b	$-0.0_3$86	5
Ref. Index		
n_D 41°C	1.54178	1
46	1.53937	1
51	1.53718	4
"C"	0.6706	4
MR (Obs.)	27.994	4
MR (Calc.)	27.832	5
(nD-d/2)	1.01298	4
Dielectric		
A | 93 to	7.57893	1
B | 240 °C	1817.0	1
C	205.	5
A* | 93 to	1.87043	5
B* | 220 °C	1720.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.86819	5
B' | 93 °C	2011.4	5
C'	222.	5
A'* 20 to	2.1593	5
B'* 93 °C	1909.4	5
Ac | 240 to	7.9398	5
Bc | t_c °C	2219.3	5
Cc	257.6	5
Cryos. A°		
consts. B°		
t_e °C	200.1	5

		Ref.
dt/dP		
°C/mm		
25°C	24.83	5
BP	0.04704	4
t_e	0.03163	5
30 mm	0.7065	4
ΔHm cal/g		
ΔHv cal/g		
25°C	142.55	5
30 mm	133.44	5
BP	116.40	5
t_e	113.06	5
t_e (d, e)	113.23	5
$\Delta Hv/T_e$	23.39	5
d | 93 to	147.70	5
e | 200 °C	0.1722	5
d' | 20 to	145.91	5
e' | 93 °C	0.1344	5
d_c g/ml	0.401	5
v_c ml/g	2.494	5
t_c °C	419.	3
P_c mm	45980.	3
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9416	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 60 °C	2.5199	1
80	1.5968	1
100	1.0835	1
120	0.8508	1
B^v | 50 to	1166.0	4
A^v | 90 °C	4.90200	4
(B^v) | 95 to	770.4	4
(A^v) | 130 °C	3.97052	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 50°C	37.66	1
γ 60	36.57	1
70	35.51	1
Parachor [P]		
50°C	222.0	4
60	222.2	4
70	222.4	5
0 = 15 Sugd.	222.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		1
Ultra V.		1
X-Ray Dif.		1
Infrared		1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane		
Ethanol	∞	
Water	8.20	1
Water in	37.14	1

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 ICT

No. 2

NAME	o-Cresol 2-Methylphenol	STRUCTURAL FORMULA 

Mole % Pur. 99.90	Ref. 1	Molecular Formula C_7H_8O	Molecular Weight 108.134

		Ref.
F.P. °C	30.94	1
F. P. 100%		
B. P. °C		
760 mm	190.95	1
100	126.54	1
30	97.4	4
10	74.9	5
1	36.8	5
Pressure mm 25°C	0.4254	5
t_e	1267.7	5
Density		
g/ml 41°C	1.02734	1
d_4^t 46	1.02298	1
51	1.01860	4
a	1.0630	4
b	-0.0387	4
Ref. Index		
n_D 41°C	1.53610	1
46	1.53362	1
51	1.53124	4
"C"		
MR (Obs.)	32.825	4
MR (Calc.)	32.450	5
(nD-d/2)	1.02243	4
Dielectric	11.5	3
A | 97 to	7.39476	4
B | 250 °C	1777.8	4
C	203.	4
A* | 97 to	1.7383	5
B* | 220 °C	1679.7	5
K		
c		
t_x | to		
t_x | °C		
A' | 10 to	7.7696	5
B' | 97 °C	1984.7	5
C'	220.	5
A'* 20 to	2.0803	5
B'* 97 °C	1883.3	5
Ac | 250 to	7.7327	5
Bc | t_c °C	2098.	5
Cc	242.3	5
Cryos. A° consts. B°		
t_e °C	211.24	5

		Ref.
dt/dP		
°C/mm		
25°C	31.190	5
BP	0.04986	1
t_e	0.03306	5
30 mm	0.7349	5
ΔHm cal/g	31.37	4
ΔHv cal/g		
25°C	124.41	5
30 mm	114.49	5
BP	99.12	5
t_e	96.23	5
t_e (d, e)	95.78	5
ΔHv/T_e	21.47	5
d | 97 to	130.50	5
e | 200 °C	0.1643	5
d' | 20 to	127.83	5
e' | 97 °C	0.1370	5
d_c g/ml	0.374	5
v_c ml/g	2.67	5
t_c °C	422.	3[3]
P_c mm	37544.	3[3]
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9519	5
t_e	0.9406	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	1.47	3[2]
120	0.784	3[2]
160	0.515	3[2]
B^v | 70 to	518.2	4
A^v | 170 °C	Σ.69811	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 41°C	40.64	5
γ 46	39.30	5
51	37.99	5
Parachor [P]		
20°C		
30		
40		
Sugd.	261.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C	81.	3'
Fire Point		
M Spec.		
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	285.	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane		
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 NBS Circ. 325; 3' Nat. Fire Prot. Assn. 325; 3[2] Ind. Eng. Chem. 36, 595 (1944) Pardee and Wenrich; 3[3] I.C.T.

No. 3

NAME	m-Cresol m-Methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_8O
		Molecular Weight 108.134

		Ref.
F.P. °C	11.5	3
F.P. 100%		
B.P. °C		
760 mm	202.2	3
100	138.0	3
30	108.7	4
10	86.0	5
1	47.2	5
Pressure mm 25°C	0.1930	5
t_e	1295.0	5
Density g/ml 80°C	0.986	3
d_4^t 120	0.954	3
160	0.921	3
a	1.050	5
b	-0.0380	5
Ref. Index n_D 20°C	1.5438	3
25		
30		
"C"	0.6926	4
MR (Obs.)	33.10≠	5
MR (Calc.)	32.450	5
(nD-d/2)	1.0249	5
Dielectric		
A | 110 to	7.53185	4
B | 240 °C	1875.3	4
C	201.	5
A* | 110 to	1.8537	5
B* | 230 °C	1771.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.9424	5
B' | 110 °C	2138.2	5
C'	220.	5
A'* 20 to	2.2824	5
B'* 110 °C	2033.4	5
Ac | 240 to	7.73634	5
Bc | t_c °C	2064.	5
Cc	223.3	5
Cryos. A°		
consts. B°		
t_e °C	223.32	5

		Ref.
dt/dP		
°C/mm		
25°C	64.196	5
BP	0.04954	5
t_e	0.03220	5
30 mm	0.7405	5
ΔHm cal/g		
ΔHv cal/g		
25°C	131.87	5
30 mm	120.66	5
BP	104.70	5
t_e	101.28	5
t_e (d, e)	101.08	5
$\Delta Hv/T_e$	23.04	5
d | 110 to	139.2	5
e | 230 °C	0.1707	5
d' | 25 to	135.22	5
e' | 110 °C	0.1339	5
d_c g/ml	0.357	5
v_c ml/g	2.80	5
t_c °C	426.	5
P_c mm	36000.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9374	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	1.76	3
120	0.890	3
160	0.570	3
B^v | 110 to	672.	4
A^v | 170 °C	2.2403	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	261.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane		
Ethanol	∞	
Water		
Water in		

≠ 80°C

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 4

NAME	p-Cresol p-Methylphenol	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 1	Molecular Formula C_7H_8O — Molecular Weight 108.134

		Ref.
F.P. °C	34.78	1
F.P. 100%		
B.P. °C		
760 mm	201.92	1
100	137.7	1
30	108.4	4
10	85.7	5
1	46.9	5
Pressure mm 25°C	0.1976	5
t_e	1297.	5
Density g/ml 41°C	1.01788	1
d_4^{46}	1.01401	1
d_4^{51}	1.01020	4
a	1.0496	5
b	-0.0_377	5
Ref. Index n_D 41°C	1.53115	1
46	1.57870	1
51	1.52625	4
"C"	0.6839	4
MR (Obs.)	32.875	4
MR (Calc.)	32.450	5
(nD-d/2)	1.02221	4
Dielectric	9.9 ≠	3
A | 97 to	7.52871	4
B | 250 °C	1872.4	4
C	201.	4
A* | 97 to	1.8648	5
B* | 220 °C	1773.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.9375	5
B' | 97 °C	2134.5	5
C'	222.	5
A'* 20 to	2.2788	5
B'* 97 °C	2030.	5
Ac | 250 to	7.8594	5
Bc | t_c °C	2241.2	5
Cc	250.	5
Cryos. A°		
consts. B°		
t_e °C	223.02	5

		Ref.
dt/dP °C/mm		
25°C	62.82	5
BP	0.04953	4
t_e	0.03215	5
30 mm	0.7401	4
ΔHm cal/g		
ΔHv cal/g		
25°C	131.68	5
30 mm	120.52	5
BP	104.85	5
t_e	101.38	5
t_e (d, e)	101.33	5
$\Delta Hv/T_e$	23.12	5
d | 108 to	138.68	5
e | 230 °C	0.1675	5
d' | 25 to	134.66	5
e' | 108 °C	0.1193	5
d_c g/ml	0.347	5
v_c ml/g	2.88	5
t_c °C	426.0	5
P_c mm	35000.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9519	5
t_e	0.9394	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension dynes/cm.	20°C	38.88	5
γ	30	37.72	5
	40	36.60	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	261.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			1
Ultra V.			
X-Ray Dif.			
Infrared			1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane			
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$ ≠ 58°C + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 NBS Circ. 514

TABLE VIII. AROMATIC PHENOLS

No. 5

NAME	2,3-Dimethylphenol 2,3-Xylenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$ — Molecular Weight 122.160

		Ref.
F. P. °C	75.	3
F. P. 100%		
B. P. °C		
760 mm	218.	3
100	150.	3
30	119.2	5
10	95.4	5
1	55.1	5
Pressure mm 25°C	0.1084	5
t_e	1333.5	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C	1.5420	3
25		
30		
"C"		
MR (Obs.)	37.068	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 119 to	7.38850	4
B | 255 °C	1875.2	4
C	198.	5
A* | 119 to	1.77518	5
B* | 250 °C	1776.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.72393	5
B' | 119 °C	2094.1	5
C'	216.	5
A'* 20 to	2.11725	5
B'* 119 °C	1991.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	241.83	5

		Ref.
dt/dP °C/mm		
25°C	111.15	5
BP	0.0527	5
t_e	0.0336	5
30 mm	0.7768	5
ΔHm cal/g		
ΔHv cal/g		
25°C	120.09	5
30 mm	107.49	5
BP	92.77	5
t_e	89.64	5
t_e (d, e)	89.22	5
$\Delta Hv/T_e$	21.26	5
d | 119 to	125.25	5
e | 230 °C	0.14898	5
d' | 25 to	123.43	5
e' | 119 °C	0.1337	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9473	5
t_e	0.9306	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.	300.7		5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 36, 596 (1944)

No. 6

NAME	2,4-Dimethylphenol 2,4-Xylenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$
		Molecular Weight 122.160

		Ref.
F.P. °C	27.	3
F.P. 100%		
B.P. °C		
760 mm	210.0	3
100	143.0	3
30	112.7	5
10	89.3	5
1	49.6	5
Pressure mm 25°C	0.1634	5
t_e	1311.	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	37.068	5
Dielectric		
A | 115 to	7.37688	4
B | 245 °C	1838.9	4
C	199.	5
A* | 115 to	1.77045	5
B* | 240 °C	1741.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.69866	5
B' | 115 °C	2045.0	5
C'	216.	5
A'* 25 to	2.09652	5
B'* 115 °C	1943.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	232.74	5

		Ref.
dt/dP °C/mm		
25°C	75.47	5
BP	0.0520	5
t_e	0.0336	5
30 mm	0.7648	5
ΔHm cal/g		
ΔHv cal/g		
25°C	117.27	5
30 mm	105.58	5
BP	91.09	5
t_e	87.49	5
t_e (d, e)	87.70	5
$\Delta Hv/T_e$	22.12	5
d | 115 to	122.35	5
e | 225 °C	0.1489	5
d' | 25 to	120.60	5
e' | 115 °C	0.1334	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9314	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	300.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

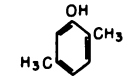
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 7

NAME	2,5-Dimethylphenol 2,5-Xylenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_8H_{10}O$ Molecular Weight 122.160	

		Ref.
F. P. °C	73.5	3
F. P. 100%		
B. P. °C		
760 mm	210.	3
100	143.	3
30	112.7	5
10	89.3	5
1	49.6	5
Pressure mm 25°C	0.16343	5
t_e	1292.90	5
Density g/ml 80°C	0.9650	3
d_4^t 120	0.9320	3
160	0.8990	3
a	1.0310	4
b	-0.03825	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	37.068	5
MR (Calc.) (nD-d/2)		
Dielectric		
A 115 to	7.37688	4
B 250 °C	1838.9	4
C	199.	5
A* 115 to	1.79110	5
B* 245 °C	1748.1	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.69866	5
B' 115 °C	2044.96	5
C'	216.	5
A'* 25 to	2.09652	5
B'* 115 °C	1943.8	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	232.13	5

		Ref.
dt/dP °C/mm		
25°C	75.47	5
BP	0.05198	5
t_e	0.03395	5
30 mm	0.7648	5
ΔHm cal/g		
ΔHv cal/g		
25°C	117.27	5
30 mm	105.58	5
BP	91.09	5
t_e	88.10	5
t_e (d, e)	87.80	5
$\Delta Hv/T_e$	21.30	5
d 115 to	122.35	5
e 235 °C	0.1489	5
d' 25 to	120.60	5
e' 115 °C	0.1334	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9368	5
t_e	0.9196	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	1.61	3
120	0.825	3
160	0.528	3
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C			
σ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		300.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

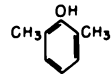
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 36, 596 (1944)

No. 8

NAME	2,6-Dimethylphenol 2,6-Xylenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$	Molecular Weight 122.160

		Ref.
F. P. °C	49.0	3
F. P. 100%		
B. P. °C 760 mm 100 30 10 1	 212. 145. 114.7 91.2 51.4	 3 3 5 5 5
Pressure mm 25°C t_e	 0.14316 1315.9	 5 5
Density g/ml 20°C d_4^t 25 30		
a b		
Ref. Index n_D 20°C 25 30		
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	37.068	5
Dielectric		
A | 115 to B | 250 °C C	7.40318 1858.7 199.	4 4 5
A* | 115 to B* | 245 °C K c t_k | to t_x | °C	1.7955 1761.1	5 5
A' | 25 to B' | 115 °C C'	7.74327 2078.2 217.	5 5 5
A'* 25 to B'* 115 °C	2.13909 1976.16	5 5
Ac | to Bc | t_c °C Cc		
Cryos. A* consts. B*		
t_e °C	234.88	5

		Ref.
dt/dP °C/mm 25°C BP t_e 30 mm	 85.49 0.0519 0.0334 0.7662	 5 5 5 5
ΔHm cal/g		
ΔHv cal/g 25°C 30 mm BP t_e t_e (d, e) ΔHv/T_e	 118.19 106.46 91.90 88.39 88.48 21.25	 5 5 5 5 5 5
d | 115 to e | 235 °C d' | 25 to e' | 115 °C	123.60 0.1495 121.46 0.1309	5 5 5 5
d_c g/ml v_c ml/g t_c °C P_c mm		
PV/RT 25°C 30 mm BP t_e t_c	1.0000 1.0000 0.9472 0.9309	5 5 5 5
ΔHc kcal/m ΔHf ΔFf		
Viscosity centistokes η °C		
B^v | to A^v | °C (B^v) | to (A^v) | °C		
c_p liq. °K c_p vap. °K c_v vap.		

		Ref.
f | to g | °K h		
f' | to g' | °K h'		
m | to n | °K o		
m' | to n' | °K o'		
Surface tension dynes/cm. 20°C γ 30 40		
Parachor [P] 20°C 30 40 Sugd.	 300.1	 5
Exp. L. 1.%/wt. u. Dispersion		
Flash Point °C Fire Point		
M Spec. Ultra V. X-Ray Dif. Infrared		
Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		

+ grams/100 grams solvent

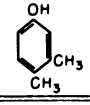
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 9

NAME	3,4-Dimethylphenol 3,4-Xylenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_8H_{10}O$ Molecular Weight 122.160	

		Ref.
F.P. °C	62.5	3
F.P. 100%		
B.P. °C		
760 mm	225.	3
100	160.0	3
30	130.1	5
10	106.8	5
1	67.0	5
Pressure		
mm 25°C	0.0387	5
t_e	1332.25	5
Density		
g/ml 80°C	0.9830	3
d^t_4 120	0.9520	3
160	0.9210	3
a	1.0450	4
b	-0.0_3775	4
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	37.068	5
(nD-d/2)		
Dielectric		
A 130 to	7.70494	4
B 265 °C	2030.9	4
C	196.	5
A* 130 to	2.10945	5
B* 260 °C	1939.0	5
K		
c		
t_k to		
t_x °C		
A' 25 to	8.04870	5
B' 130 °C	2261.3	5
C'	214.	5
A'* 25 to	2.43692	5
B'* 130 °C	2158.7	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	247.39	5

		Ref.
dt/dP		
°C/mm		
25°C	283.78	5
BP	0.0499	5
t_e	0.0316	5
30 mm	0.7580	5
ΔHm cal/g		
ΔHv cal/g		
25°C	131.86	5
30 mm	116.35	5
BP	100.90	5
t_e	97.67	5
t_e (d, e)	97.25	5
$\Delta Hv/T_e$	22.92	5
d 130 to	137.57	5
e 240 °C	0.1628	5
d' 25 to	135.54	5
e' 130 °C	0.1475	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9368	5
t_e	0.9198	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 80 °C	3.05	3
120	1.270	3
160	0.737	3
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 80°C	34.00	5
120	29.90	5
160	26.03	5
Parachor [P]		
20°C		
30		
40		
Sugd.	300.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

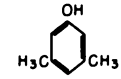
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 10

NAME	3,5-Dimethylphenol 3,5-Xylenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$	Molecular Weight 122.160

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	219.5	3
100	155.0	3
30	125.4	5
10	102.3	5
1	62.8	5
Pressure		
mm 25°C	0.0543	5
t_e	1320.2	5
Density		
g/ml 80°C	0.9680	3
d_4^{120}	0.9350	3
d_4^{160}	0.9020	3
a	1.0340	4
b	-0.0_3825	4
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	37.068	5
(nD-d/2)		
Dielectric		
A | 125 to	7.68771	4
B | 255 °C	2002.1	4
C	197.	5
A* | 125 to	2.09296	5
B* | 250 °C	1909.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.03449	5
B' | 125 °C	2231.9	5
C'	215.	5
A'* 25 to	2.42472	5
B'* 125 °C	2129.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	241.38	5

		Ref.
dt/dP		
°C/mm		
25°C	206.40	5
BP	0.0495	5
t_e	0.0316	5
30 mm	0.7514	5
ΔHm cal/g		
ΔHv cal/g		
25°C	129.06	5
30 mm	114.63	5
BP	99.45	5
t_e	96.32	5
t_e (d, e)	95.92	5
$\Delta Hv/T_e$	22.87	5
d | 125 to	134.85	5
e | 240 °C	0.1613	5
d' | 25 to	132.65	5
e' | 125 °C	0.1437	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9390	5
t_e	0.9222	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	2.50	3
120	1.075	3
160	0.635	3
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 80°C	31.98	5
γ 120	27.83	5
160	24.05	5
Parachor [P]		
20°C		
30		
40		
Sugd.	300.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 11

NAME	o-Ethylphenol 2-Ethylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$ — Molecular Weight 122.160

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	207.	3
100	138.5	3
30	107.7	5
10	84.1	5
1	44.2	5
Pressure mm 25°C	0.2525	5
t_e	1306.5	5
Density g/ml 20°C		
d_4^{t} 25 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	37.068	5
MR (Calc.) (nD-d/2)		
Dielectric		
A 105 to	7.23343	4
B 245 °C	1771.5	4
C	200.	5
A* 105 to	1.62547	5
B* 240 °C	1673.3	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.57011	5
B' 105 °C	1984.8	5
C'	218.	5
A'* 25 to	1.96893	5
B'* 105 °C	1883.0	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	230.3	5

		Ref.
dt/dP °C/mm		
25°C	51.1706	5
BP	0.05343	5
t_e	0.0347	5
30 mm	0.7740	5
ΔHm cal/g		
ΔHv cal/g		
25°C	111.95	5
30 mm	101.67	5
BP	87.65	5
t_e	84.31	5
t_e (d, e)	84.36	5
$\Delta Hv/T_e$	20.46	5
d 105 to	116.89	5
e 230 °C	0.1413	5
d' 25 to	115.06	5
e' 105 °C	0.1242	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9489	5
t_e	0.9327	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔEf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	300.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

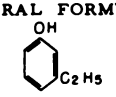
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 12

NAME	m-Ethylphenol 3-Ethylphenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$	Molecular Weight 122.160

		Ref.
F.P. °C	-4.0	3
F.P. 100%		
B.P. °C		
760 mm	214.	3
100	151.0	3
30	122.0	5
10	99.3	5
1	60.5	5
Pressure mm 25°C	0.0637	5
t_e	1317.9	5
Density g/ml 20°C		
d_4^{t} 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	37.068	5
Dielectric		
A | 120 to	7.74624	4
B | 250 °C	1999.7	4
C	197.	5
A* | 120 to	2.14114	5
B* | 245 °C	1903.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.11966	5
B' | 120 °C	2245.0	5
C'	216.	5
A'* 25 to	2.5110	5
B'* 120 °C	2142.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	235.24	5

		Ref.
dt/dP °C/mm		
25°C	176.35	5
BP	0.0483	5
t_e	0.0308	5
30 mm	0.7366	5
ΔHm cal/g		
ΔHv cal/g		
25°C	128.74	5
30 mm	114.96	5
BP	99.67	5
t_e	95.92	5
t_e (d, e)	96.14	5
$\Delta Hv/T_e$	23.04	5
d | 120 to	135.23	5
e | 235 °C	0.1662	5
d' | 25 to	132.30	5
e' | 120 °C	0.1421	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9470	5
t_e	0.9316	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	300.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 13

NAME	p-Ethylphenol 4-Ethylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}O$
		Molecular Weight 122.160

		Ref.
F. P. °C	47.0	3
F. P. 100%		
B. P. °C 760 mm	219.	3
100	153.0	3
30	122.9	5
10	99.5	5
1	59.7	5
Pressure mm 25°C	0.07253	5
t_e	1340.0	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25	1.5239	3
30		
"C"		
MR (Obs.)	37.068	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 125 to	7.55177	4
B | 255 °C	1943.1	4
C	197.	5
A* | 125 to	1.93471	5
B* | 250 °C	1843.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.89361	5
B' | 125 °C	2167.9	5
C'	215.	5
A'* 25 to	2.28558	5
B'* 125 °C	2065.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	242.15	5

		Ref.
dt/dP °C/mm		
25°C	159.09	5
BP	0.0509	5
t_e	0.0322	5
30 mm	0.7623	5
ΔHm cal/g		
ΔHv cal/g		
25°C	125.36	5
30 mm	111.59	5
BP	96.50	5
t_e	92.99	5
t_e (d, e)	92.86	5
$\Delta Hv/T_e$	22.04	5
d | 125 to	130.88	5
e | 245 °C	0.1570	5
d' | 25 to	128.89	5
e' | 125 °C	0.1407	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9505	5
t_e	0.9346	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	300.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 14

NAME	o-Propylphenol 2-Propylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}O$
		Molecular Weight 136.186

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	220.	3
100	158.	5
30	129.2	5
10	106.7	5
1	67.8	5
Pressure		
mm 25°C	0.03336	5
t_e	1338.8	5
Density		
g/ml 30°C	1.015	3
d_4^{25}		
d_4^{30}		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	41.686	5
(nD-d/2)		
Dielectric		
A | 130 to	7.92416	4
B | 255 °C	2103.	4
C	197.	5
A* | 130 to	2.35515	5
B* | 250 °C	2004.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.27990	5
B' | 130 °C	2341.6	5
C'	215.	5
A'* 25 to	2.71468	5
B'* 130 °C	2238.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	241.38	5

		Ref.
dt/dP		
°C/mm		
25°C	320.22	5
BP	0.04725	5
t_e	0.02964	5
30 mm	0.7325	5
ΔHm cal/g		
ΔHv cal/g		
25°C	121.46	5
30 mm	107.53	5
BP	93.55	5
t_e	90.41	5
t_e (d, e)	90.26	5
ΔHv/T_e	23.93	5
d | 130 to	127.42	5
e | 240 °C	0.15396	5
d' | 25 to	124.80	5
e' | 130 °C	0.1337	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9502	5
t_e	0.9352	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C		
30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	339.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 15

NAME	m-Propylphenol 3-Propylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_9H_{12}O$ Molecular Weight 136.186	

		Ref.
F.P. °C	26.0	3
F.P. 100%		
B.P. °C		
760 mm	228.	3
100	163.9	3
30	134.4	5
10	111.2	5
1	71.5	5
Pressure mm 25°C	0.02561	5
t_e	1362.42	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	41.686	5
Dielectric		
A | 135 to	7.83536	4
B | 265 °C	2100.7	4
C	196.	5
A* | 135 to	2.25857	5
B* | 260 °C	1999.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.18176	5
B' | 135 °C	2335.8	5
C'	214.	5
A'* 25 to	2.61424	5
B'* 135 °C	2232.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	250.86	5

		Ref.
dt/dP		
°C/mm		
25°C	414.70	5
BP	0.04890	5
t_e	0.30300	5
30 mm	0.7522	5
ΔHm cal/g		
ΔHv cal/g		
25°C	122.17	5
30 mm	107.42	5
BP	93.32	5
t_e	90.07	5
t_e (d, e)	89.88	5
$\Delta Hv/T_e$	23.41	5
d | 135 to	127.66	5
e | 250 °C	0.1506	5
d' | 25 to	125.55	5
e' | 135 °C	0.1349	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9344	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.	339.1		5
Exp. L.l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

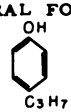
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 16

NAME	p-Propylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_9H_{12}O$ — Molecular Weight 136.186



		Ref.
F.P. °C	22.0	3
F.P. 100%		
B.P. °C		
760 mm	232.6	3
100	166.0	5
30	135.4	5
10	111.67	5
1	71.04	5
Pressure mm 25°C	0.02845	5
t_e	1377.07	5
Density g/ml 80°C	1.009	3
d_4^t 25 / 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	41.686	5
Dielectric		
A | 135 to	7.65517	5
B | 360 °C	2041.5	5
C	195.	5
A* | 135 to	2.0737	5
B* | 275 °C	1939.3	5
K		
c		
t_x | to		
t_x | °C		
A' | 20 to	7.9917	5
B' | 135 °C	2270.0	5
C'	213.	5
A'* 20 to	2.4247	5
B'* 135 °C	2167.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	257.04	5

		Ref.
dt/dP °C/mm		
25°C	380.97	5
BP	0.05118	5
t_e	0.03157	5
30 mm	0.7743	5
ΔHm cal/g		
ΔHv cal/g		
25°C	119.73	5
30 mm	104.90	5
BP	90.81	5
t_e	87.48	5
t_e (d, e)	87.27	5
$\Delta Hv/T_e$	22.47	5
d | 135 to	124.54	5
e | 260 °C	0.1450	5
d' | 20 to	123.09	5
e' | 135 °C	0.1343	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9335	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	339.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

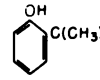
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 17

NAME	o-tert-Butylphenol 2-tert-Butylphenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}O$	Molecular Weight 150.212

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	221.	3
100	153.	3
30	122.2	5
10	98.3	5
1	57.9	5
Pressure		
mm 25°C	0.08663	5
t_e	1347.3	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	46.304	5
(nD-d/2)		
Dielectric		
A | 125 to	7.41439	4
B | 420 °C	1895.0	4
C	197.	5
A* | 125 to	1.88268	5
B* | 255 °C	1794.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.74923	5
B' | 125 °C	2114.8	5
C'	215.	5
A'* 25 to	2.23152	5
B'* 125 °C	2012.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	245.25	5

		Ref.
dt/dP		
°C/mm		
25°C	136.54	5
BP	0.05269	5
t_e	0.03327	5
30 mm	0.7782	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.45	5
30 mm	88.58	5
BP	76.35	5
t_e	73.53	5
t_e (d, e)	73 35	5
$\Delta Hv/T_e$	21.20	5
d | 125 to	103.69	5
e | 245 °C	0.1237	5
d' | 25 to	102.25	5
e' | 125 °C	0.1119	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9503	5
t_e	0.9340	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
γ 30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	378.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. By formula

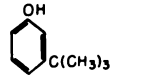
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 18

NAME	m-tert-Butylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}O$ — Molecular Weight 150.212



		Ref.
F.P. °C	41.	2
F.P. 100%		
B.P. °C 760 mm	240.	3
100	172.	3
30	140.9	5
10	116.7	5
1	75.4	5
Pressure mm 25°C	0.0201	5
t_e	1398.7	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	46.304	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 140 to	7.60868	4
B | 330 °C	2047.2	4
C	193.	5
A* | 140 to	2.06375	5
B* | 275 °C	1943.8	5
K		
c		
t_x | to		
t_x | °C		
A' | 20 to	7.93924	5
B' | 140 °C	2273.9	5
C'	211.	5
A'* 20 to	2.41358	5
B'* 140 °C	2171.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	265.71	5

		Ref.
dt/dP °C/mm		
25°C	528.09	5
BP	0.0523	5
t_e	0.0319	5
30 mm	0.7883	5
ΔHm cal/g		
ΔHv cal/g		
25°C	110.59	5
30 mm	95.92	5
BP	82.88	5
t_e	79.67	5
t_e (d, e)	79.50	5
$\Delta Hv/T_e$	22.21	5
d | 140 to	114.45	5
e | 270 °C	0.1315	5
d' | 20 to	113.75	5
e' | 140 °C	0.1266	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9501	5
t_e	0.9329	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	378.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 19

NAME	p-tert-Butylphenol 4-tert-Butylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{10}H_{14}O$ Molecular Weight 150.212	

		Ref.
F.P. °C	100.	3
F.P. 100%		
B.P. °C 760 mm	239.5	3
100	170.	3
30	138.4	5
10	113.9	5
1	72.2	5
Pressure mm 25°C	0.02766	5
t_e	1393.17	5
Density g/ml 80°C	0.908	3
d_4^{t} 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	46.304	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 140 to	7.49264	4
B | 370 °C	1999.8	4
C	194.	5
A* | 140 to	1.95278	5
B* | 275 °C	1897.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.81835	5
B' | 140 °C	2222.2	5
C'	212.	5
A'* 25 to	2.29311	5
B'* 140 °C	2119.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	265.87	5

		Ref.
dt/dP °C/mm		
25°C	396.83	5
BP	0.05373	5
t_e	0.03297	5
30 mm	0.8000	5
ΔHm cal/g		
ΔHv cal/g		
25°C	107.16	5
30 mm	93.40	5
BP	80.54	5
t_e	77.15	5
t_e (d, e)	77.18	5
$\Delta Hv/T_e$	21.50	5
d | 140 to	111.01	5
e | 265 °C	0.1272	5
d' | 25 to	110.20	5
e' | 140 °C	0.1213	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9497	5
t_e	0.9289	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	378.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 20

NAME	o-n-Butylphenol 2-n-Butylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}O$ — Molecular Weight 150.212

		Ref.
F.P. °C	-20.	3
F.P. 100%		
B.P. °C 760 mm	235.	3
100	163.5	3
30	131.3	5
10	106.5	5
1	64.6	5
Pressure mm 25°C	0.05344	5
t_e	1388.6	5
Density g/ml 80°C	0.975	3
d_4^t 25 / 30		
a		
b		
Ref. Index n_D 20°C	1.496	3
25		
30		
"C"		
MR (Obs.)	46.304	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 130 to	7.28486	4
B | 460 °C	1889.3	4
C	194.	5
A* | 130 to	1.74142	5
B* | 280 °C	1785.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.60622	5
B' | 130 °C	2104.2	5
C'	212.	5
A'* 25 to	2.08587	5
B'* 130 °C	2002.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	262.10	5

		Ref.
dt/dP °C/mm		
25°C	216.93	5
BP	0.05566	5
t_e	0.03444	5
30 mm	0.8109	5
ΔHm cal/g		
ΔHv cal/g		
25°C	101.47	5
30 mm	88.98	5
BP	76.41	5
t_e	73.34	5
t_e (d, e)	73.12	5
$\Delta Hv/T_e$	20.58	5
d | 130 to	104.91	5
e | 260 °C	0.1213	5
d' | 25 to	104.41	5
e' | 130 °C	0.1175	5
d_c g/ml		
v_c^c ml/g		
t_c^c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9324	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	378.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

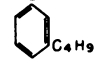
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 21

NAME	m-n-Butylphenol 3-n-Butylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{10}H_{14}O$ Molecular Weight 150.212	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	248.	3
100	179.	3
30	147.4	5
10	122.8	5
1	80.9	5
Pressure mm 25°C	0.0129	5
t_e	1418.2	5
Density g/ml 80°C	0.9740	3
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	46.304	5
(nD-d/2)		
Dielectric		
A | 145 to	7.61676	5
B | 290 °C	2083.8	5
C	192.	5
A* | 145 to	2.06862	5
B* | 285 °C	1979.9	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.94237	5
B' | 145 °C	2310.7	5
C'	210.	5
A'* 25 to	2.41353	5
B'* 145 °C	2208.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	274.69	5

		Ref.
dt/dP		
°C/mm		
25°C	806.34	5
BP	0.0531	5
t_e	0.0320	5
30 mm	0.8003	5
ΔHm cal/g		
ΔHv cal/g		
25°C	113.34	5
30 mm	97.48	5
BP	84.09	5
t_e	80.76	5
t_e (d, e)	80.54	5
$\Delta Hv/T_e$	22.14	5
d | 145 to	117.1	5
e | 275 °C	0.1331	5
d' | 25 to	116.57	5
e' | 145 °C	0.1295	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9303	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	378.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 22

NAME	p-n-Butylphenol 4-n-Butylphenol	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{14}O$ — Molecular Weight 150.212

		Ref.			Ref.			Ref.
F.P. °C	22.	3	dt/dP °C/mm			f | | to		
F.P. 100%			25°C	764.86	5	g | | °K		
B.P. °C			BP	0.05338	5	h |		
760 mm	248.0	3	t_e	0.03202	5	f' | | to		
100	179.0	3	30 mm	0.8026	5	g' | | °K		
30	147.0	5	ΔHm cal/g			h' |		
10	122.4	5	ΔHv cal/g			m | | to		
1	80.4	5	25°C	112.74	5	n | | °K		
Pressure mm 25°C	0.01364	5	30 mm	97.00	5	o |		
t_e	1428.1	5	BP	84.09	5	m' | | to		
Density g/ml 80°C	0.978	3	t_e	80.79	5	n' | | °K		
d_4^{t} 25 30			t_e (d, e)	80 62	5	o' |		
a			ΔHv/T_e	22.13	5	Surface tension dynes/cm. 20°C		
b			d | 145 to	115.79	5	γ 30		
Ref. Index n_D 20°C	1.5165	3	e | 275 °C	0.1278	5	40		
25			d' | 25 to	115.97	5	Parachor [P] 20°C		
30			e' | 145 °C	0.1290	5	30		
"C"			d_c g/ml			40		
MR (Obs.)	46.304	5	v_c ml/g			Sugd.	378.1	5
MR (Calc.)			t_c °C			Exp. L. l. %/wt. u.		
(nD-d/2)			P_c mm			Dispersion		
Dielectric			PV/RT 25°C	1.0000	5	Flash Point °C		
A | 145 to	7.5913	4	30 mm	1.0000	5	Fire Point		
B | 380 °C	2072.6	4	BP	0.9500	5	M Spec.		
C	192.	5	t_e	0.9360	5	Ultra V.		
A* | 145 to	2.03285	5	t_c			X-Ray Dif.		
B* | 285 °C	1965.2	5	ΔHc kcal/m			Infrared		
K			ΔHf			Solubility in +		
c			ΔFf			Acetone		
t_k | to			Viscosity centistokes			Carbon tet.		
t_x | °C			η °C			Benzene		
A' | 25 to	7.91596	5				Ether		
B' | 145 °C	2298.6	5	B^v | to			n-Heptane		
C'	210.	5	A^v | °C			Ethanol		
A'* 25 to	2.38740	5	(B^v) | to			Water		
B'* 145 °C	2196.1	5	(A^v) | °C			Water in		
Ac | to			c_p liq. °K					
Bc | t_c °C			c_p vap. °K					
Cc			c_v vap.					
Cryos. A° consts. B°								
t_e °C	275.16	5						

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 23

NAME	2-tert-Butyl-4-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{11}H_{16}O$	Molecular Weight 164.238

		Ref.
F. P. °C	51.7	3
F. P. 100%		
B. P. °C		
760 mm	237.	3
100	167.	3
30	135.3	5
10	110.7	5
1	69.1	5
Pressure		
mm 25°C	0.03628	5
t_e	1392.3	5
Density		
g/ml 80°C	0.922	3
d_4^t 120	0.892	3
160	0.862	3
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	50.922	5
(nD-d/2)		
Dielectric		
A | 135 to	7.42327	4
B | 370 °C	1957.8	4
C	194.	5
A* | 135 to	1.91788	5
B* | 275 °C	1854.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.74834	5
B' | 140 °C	2177.7	5
C'	212.	5
A'* 25 to	2.26405	5
B'* 140 °C	2075.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	263.48	5

		Ref.
dt/dP		
°C/mm		
25°C	308.75	5
BP	0.05422	5
t_e	0.03334	5
30 mm	0.8016	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.05	5
30 mm	83.94	5
BP	72.28	5
t_e	69.41	5
t_e (d, e)	69.25	5
$\Delta Hv/T_e$	21.24	5
d | 135 to	99.44	5
e | 265 °C	0.1146	5
d' | 25 to	98.80	5
e' | 140 °C	0.1098	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9325	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 80 °C	2.55	3
120	1.170	3
160	0.713	3
B^v | 110 to	831.0	4
A^v | 170 °C	3.9548	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	417.1	5
Exp. L.l.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

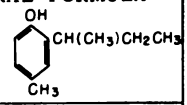
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 24

NAME	2-sec-Butyl-4-methylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}O$	Molecular Weight 164.238

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	237.0	3
100	169.0	5
30	137.9	5
10	113.8	5
1	72.6	5
Pressure mm 25°C	0.0257	5
t_e	1390.9	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	50.922	5
Dielectric		
A | 140 to	7.58277	4
B | 275 °C	2026.5	4
C	194.	5
A* | 140 to	2.07791	5
B* | 270 °C	1923.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.91389	5
B' | 140 °C	2252.3	5
C'	212.	5
A'* 25 to	2.42779	5
B'* 140 °C	2149.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	262.47	5

		Ref.
dt/dP		
°C/mm		
25°C	420.7	5
BP	0.0524	5
t_e	0.0321	5
30 mm	0.7869	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.34	5
30 mm	86.62	5
BP	74.82	5
t_e	71.95	5
t_e (d, e)	71.79	5
$\Delta Hv/T_e$	22.06	5
d | 140 to	103.03	5
e | 260 °C	0.1190	5
d' | 25 to	102.15	5
e' | 140 °C	0.1127	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9333	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	417.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in †		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

† grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 25

NAME	p-tert-Hydroxybenzene 4-tert-Amylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{11}H_{16}O$ Molecular Weight 164.238	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm 100 30 10 1	 262.5 192.5 160.3 135.3 92.5	 3 5 5 5 5
Pressure mm 25°C t_e	 0.00466 1456.7	 5 5
Density g/ml 80°C d_4^t 25 30	 0.962	 3
a b		
Ref. Index n_D 20°C 25 30		
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	 50.922	 5
Dielectric		
A | 160 to B | 305 °C C	 7.68125 2167.4 189.	 5 5 5
A* | 160 to B* | 300 °C K c t_k | to t_x | °C	 2.16322 2062.1	 5 5
A' | 25 to B' | 160 °C C'	 7.9982 2396.5 207.	 5 5 5
A'* 25 to B'* 160 °C	 2.50585 2294.2	 5 5
Ac | to Bc | t_c °C Cc		
Cryos. A* consts. B*		
t_e °C	290.74	5

		Ref.
dt/dP °C/mm 25°C BP t_e 30 mm	 2093.2 0.05374 0.0317 0.8155	 5 5 5 5
ΔHm cal/g		
ΔHv cal/g 25°C 30 mm BP t_e t_e (d, e) $\Delta Hv/T_e$	 110.30 92.93 80.15 76.81 76.60 22.37	 5 5 5 5 5 5
d | 160 to e | 290 °C d' | 25 to e' | 160 °C	 113.0 0.1251 113.50 0.1284	 5 5 5 5
d_c g/ml v_c ml/g t_c °C P_c mm		
PV/RT 25°C 30 mm BP t_e t_c	 1.0000 1.0000 0.9470 0.9284	 5 5 5 5
ΔHc kcal/m ΔHf ΔFf		
Viscosity centistokes η °C		
B^v | to A^v | °C (B^v) | to (A^v) | °C		
c_p liq. °K c_p vap. °K c_v vap.		

		Ref.
f | to g | °K h		
f' | to g' | °K h'		
m | to n | °K o		
m' | to n' | °K o'		
Surface tension dynes/cm. 20°C γ 30 40		
Parachor [P] 20°C 30 40 Sugd.	 417.5	 5
Exp. L.l.%/wt. u. Dispersion		
Flash Point °C Fire Point		
M. Spec. Ultra V. X-Ray Dif. Infrared		
Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		

grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

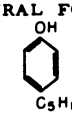
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 26

NAME	4-n-Amylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{16}O$
		Molecular Weight 164.238



		Ref.
F.P. °C	23.	3
F.P. 100%		
B.P. °C 760 mm	250.5	3
100	181.5	5
30	149.9	5
10	125.3	5
1	83.29	5
Pressure mm 25°C	0.0104	5
t_e	1434.9	5
Density g/ml 80°C	0.960	3
d_4^t 25 30		
a		
b		
Ref. Index n_D 20°C	1.5272	3
25		
30		
"C"		
MR (Obs.)	50.922	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 150 to	7.63596	4
B | 290 °C	2099.4	4
C	191.	5
A* | 150 to	2.11460	5
B* | 285 °C	1991.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.96118	5
B' | 150 °C	2327.0	5
C'	209.	5
A'* 25 to	2.47102	5
B'* 150 °C	2224.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	277.71	5

		Ref.
dt/dP °C/mm		
25°C	983.04	5
BP	0.0531	5
t_e	0.0317	5
30 mm	0.8012	5
ΔHm cal/g		
ΔHv cal/g		
25°C	105.28	5
30 mm	90.10	5
BP	78.11	5
t_e	75.01	5
t_e (d, e)	74.87	5
$\Delta Hv/T_e$	22.36	5
d | 150 to	107.96	5
e | 275 °C	0.1191	5
d' | 25 to	108.32	5
e' | 150 °C	0.1216	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9533	5
t_e	0.9362	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	417.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

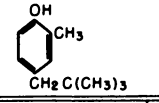
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 27

NAME	4-tert-Amyl-2-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{18}O$ Molecular Weight 178.264	

		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | | to		
F.P. 100%			25°C	4860.2	5	g | _ _ _ °K		
B.P. °C			BP	0.05356	5	h		
760 mm	273.	3	t_e	0.0309	5	f' | | to		
100	203.	5	30 mm	0.8205	5	g' | _ _ _ °K		
30	170.7	5	ΔHm cal/g			h'		
10	145.5	5	ΔHv cal/g			m | | to		
1	102.2	5	25°C	107.45	5	n | _ _ _ °K		
Pressure mm 25°C	0.0019	5	30 mm	89.23	5	o		
t_e	1492.4	5	BP	77.30	5	m' | | to		
Density g/ml 20°C			t_e	74.04	5	n' | _ _ _ °K		
d_4^t 25			t_e (d, e)	73.89	5	o'		
30			ΔHv/T_e	22.94	5	Surface tension dynes/cm. 20°C		
a			d | 170 to	109.15	5	γ 30		
b			e | 300 °C	0.1167	5	40		
Ref. Index n_D 20°C			d' | 25 to	110.57	5	Parachor [P] 20°C		
25			e' | 170 °C	0.1250	5	30		
30			d_c g/ml			40		
"C"			v_c ml/g			Sugd.	456.1	5
MR (Obs.)	55.540	5	t_c °C			Exp. L.l.%/wt. u.		
MR (Calc.) (nD-d/2)			P_c mm			Dispersion		
Dielectric			PV/RT 25°C	1.0000	5	Flash Point °C		
A | 170 to	7.78820	4	30 mm	1.0000	5	Fire Point		
B | 380 °C	2257.4	4	BP	0.9506	5	M. Spec.		
C	187.	5	t_e	0.9322	5	Ultra V.		
A* | 170 to	2.29102	5	t_c			X-Ray Dif.		
B* | 315 °C	2147.9	5	ΔHc kcal/m			Infrared		
K			ΔHf			Solubility in +		
c			ΔFf			Acetone		
t_k | _ _ to			Viscosity centistokes			Carbon tet.		
t_x | _ _ °C			η °C			Benzene		
A' | 25 to	8.10579	5				Ether		
B' | 170 °C	2490.3	5	B^v | to			n-Heptane		
C'	205.	5	A^v | °C			Ethanol		
A'* 25 to	2.64192	5	(B^v) | to			Water		
B'* 170 °C	2387.8	5	(A^v) | °C			Water in		
Ac | to			c_p liq. °K					
Bc | t_c °C			c_p vap. °K					
Cc			c_v vap.					
Cryos. A° consts. B°								
t_e °C	302.22	5						

+ grams/100 grams solvent

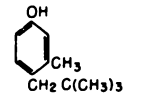
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 28

NAME	4-tert-Amyl-3-methylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$	Molecular Weight 178.264

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	273.	3
100	202.5	5
30	170.1	5
10	144.7	5
1	101.4	5
Pressure mm 25°C	0.00209	5
t_e	1487.8	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	55.540	5
Dielectric		
A | 170 to	7.75037	4
B | 410 °C	2240.0	4
C	187.	5
A* | 170 to	2.25809	5
B* | 310 °C	2132.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.06660	5
B' | 170 °C	2471.5	5
C'	205.	5
A'* 25 to	2.60314	5
B'* 170 °C	2369.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	302.32	5

		Ref.
dt/dP		
°C/mm		
25°C	4440.67	5
BP	0.05397	5
t_e	0.0312	5
30 mm	0.8240	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.64	5
30 mm	88.61	5
BP	76.50	5
t_e	73.23	5
t_e (d, e)	73.05	5
$\Delta Hv/T_e$	22.68	5
d | 170 to	108.6	5
e | 300 °C	0.1176	5
d' | 25 to	109.7	5
e' | 170 °C	0.1243	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9292	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	456.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

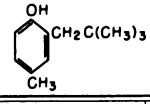
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 29

NAME	2-tert-Amyl-4-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{18}O$ Molecular Weight 178.264	

		Ref.
F. P. °C	27.	3
F. P. 100%		
B. P. °C 760 mm	252.	3
100	183.	5
30	151.3	5
10	126.7	5
1	84.8	5
Pressure mm 25°C	0.00880	5
t_e	1432.76	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	55.540	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 150 to	7.65505	4
B | 380 °C	2115.0	4
C	191.	5
A* | 150 to	2.17451	5
B* | 290 °C	2009.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.90769	5
B' | 150 °C	2291.5	5
C'	205.	5
A'* 25 to	2.45682	5
B'* 150 °C	2192.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	279.12	5

		Ref.
dt/dP °C/mm		
25°C	1139.07	5
BP	0.05302	5
t_e	0.03167	5
30 mm	0.8022	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.87	5
30 mm	83.49	5
BP	72.15	5
t_e	69.23	5
t_e (d, e)	69.10	5
$\Delta Hv/T_e$	22.34	5
d | 150 to	100.53	5
e | 280 °C	0.1126	5
d' | 25 to	101.92	5
e' | 150 °C	0.1218	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9324	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	456.1	5
Exp. L. l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

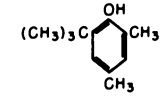
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 30

NAME	6-tert-Butyl-2, 4-dimethylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$	Molecular Weight 178.264

		Ref.
F. P. °C	22.3	3
F. P. 100%		
B. P. °C		
760 mm	249.	3
100	180.	5
30	148.4	5
10	123.8	5
1	81.8	5
Pressure		
mm 25°C	0.01192	5
t_e	1418.2	5
Density		
g/ml 80°C	0.917	3
d_4^{t} 120	0.888	3
160	0.859	3
a	0.9458	4
b	-0.0372	4
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 150 to	7.62910	4
B | 290 °C	2094.0	4
C	192.	5
A* | 150 to	2.15724	5
B* | 285 °C	1990.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.95443	5
B' | 150 °C	2321.3	5
C'	210.	5
A'* 25 to	2.49929	5
B'* 150 °C	2218.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	275.68	5

		Ref.
dt/dP		
°C/mm		
25°C	866.44	5
BP	0.0531	5
t_e	0.03199	5
30 mm	0.80096	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.94	5
30 mm	82.45	5
BP	72.11	5
t_e	69.70	5
t_e (d, e)	69.37	5
$\Delta Hv/T_e$	22.64	5
d | 150 to	97.70	5
e | 275 °C	0.1028	5
d' | 25 to	98.67	5
e' | 150 °C	0.1093	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9467	5
t_e	0.9286	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 80 °C	2.10	3
120	1.060	3
160	0.670	3
B^V | 120 to	848.5	4
A^V | 170 °C	3.8674	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h			
f' | | to			
g' | | °K			
h'			
m | | to			
n | | °K			
o			
m' | | to			
n' | | °K			
o'			
Surface tension			
dynes/cm. 20°C			
γ 30			
40			
Parachor [P]			
20°C			
30			
40			
Sugd.		456.1	5
Exp. L. 1. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

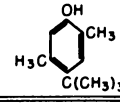
PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 31

NAME	4-tert-Butyl-2,5-dimethylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$ — Molecular Weight 178.264



		Ref.
F. P. °C	71.2	3
F. P. 100%		
B. P. °C 760 mm	264.	3
100	193.5	5
30	161.1	5
10	136.0	5
1	92.98	5
Pressure mm 25°C	0.00460	5
t_e	1461.3	5
Density g/ml 80°C	0.939	3
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C	1.5311	3
25		
30		
"C"		
MR (Obs.)	55.540	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 160 to	7.65967	5
B | 400 °C	2164.8	5
C	189.	5
A* | 160 to	2.17552	5
B* | 300 °C	2058.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.97750	5
B' | 160 °C	2393.1	5
C'	207.	5
A'* 25 to	2.51749	5
B'* 160 °C	2290.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	292.6	5

		Ref.
dt/dP °C/mm		
25°C	2123.	5
BP	0.05417	5
t_e	0.03184	5
30 mm	0.8199	5
ΔHm cal/g		
ΔHv cal/g		
25°C	101.45	5
30 mm	85.50	5
BP	73.65	5
t_e	70.54	5
t_e (d, e)	70.35	5
$\Delta Hv/T_e$	22.22	5
d | 160 to	104.1	5
e | 290 °C	0.1152	5
d' | 25 to	104.4	5
e' | 160 °C	0.1174	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9469	5
t_e	0.9283	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
σ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	456.1	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

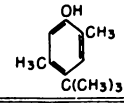
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 32

NAME	4-tert-Butyl-2, 6-dimethylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$	Molecular Weight 178.264

		Ref.
F.P. °C	82.4	3
F.P. 100%		
B.P. °C		
760 mm	248.	3
100	176.5	5
30	144.1	5
10	119.0	5
1	76.49	5
Pressure mm 25°C	0.02015	5
t_e	1422.1	5
Density g/ml 80°C	0.916	3
d_4^{t} 25 / 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	55.540	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 145 to	7.42037	5
B | 290 °C	1997.4	5
C	192.	5
A* | 145 to	1.94338	5
B* | 285 °C	1892.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.73868	5
B' | 145 °C	2217.1	5
C'	210.	5
A'* 25 to	2.2864	5
B'* 145 °C	2115.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	276.1	5

		Ref.
dt/dP °C/mm		
25°C	536.9	5
BP	0.05539	5
t_e	0.03350	5
30 mm	0.8186	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.63	5
30 mm	79.04	5
BP	67.94	5
t_e	65.10	5
t_e (d, e)	64.94	5
$\Delta Hv/T_e$	21.12	5
d | 145 to	94.42	5
e | 275 °C	0.1068	5
d' | 25 to	94.28	5
e' | 145 °C	0.1058	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9306	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	2.72	3
120	1.32	3
160	0.820	3
B^v | 100 to	926.	4
A^v | 170 °C	3.76552	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	456.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

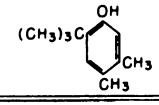
PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 33

NAME	6-tert-Butyl-3, 4-dimethylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$ — Molecular Weight 178.264



		Ref.
F. P. °C	46.0	3
F. P. 100%		
B. P. °C		
760 mm	258.5	3
100	187.0	3
30	154.4	5
10	129.1	5
1	86.1	5
Pressure		
mm 25°C	0.00898	5
t_e	1449.04	5
Density		
g/ml 80°C	0.920	3
d_4^t 120	0.892	3
160	0.863	3
a	0.976	4
b	-0.0_3370	4
Ref. Index		
n_D 20°C	1.5222	3
25		
30		
"C"	0.6852	4
MR (Obs.)	56.53	4
MR (Calc.)	55.540	5
(nD-d/2)	1.041	4
Dielectric		
A | 155 to	7.52518	4
B | 300 °C	2083.0	4
C	190.	5
A* | 155 to	2.04246	5
B* | 295 °C	1977.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.87640	5
B' | 155 °C	2331.9	5
C'	210.	5
A'* 25 to	2.41745	5
B'* 155 °C	2228.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	287.30	5

		Ref.
dt/dP		
°C/mm		
25°C	1145.47	5
BP	0.05518	5
t_e	0.03278	5
30 mm	0.8244	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.38	5
30 mm	82.42	5
BP	70.90	5
t_e	67.88	5
t_e (d, e)	67.71	5
$\Delta Hv/T_e$	21.59	5
d | 155 to	99.50	5
e | 285 °C	0.1107	5
d' | 25 to	99.08	5
e' | 155 °C	0.1079	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9292	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	3.50	3
120	1.37	3
160	0.782	3
B^v | 110 to	1037.	4
A^v | 170 °C	3.4994	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g |	°K		
h			
f'	to		
g' |	°K		
h'			
m	to		
n |	°K		
o			
m'	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C			
30			
40			
Parachor [P]			
20°C			
30			
40			
Sugd.		456.1	5
Exp. L. 1. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

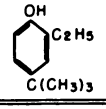
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 34

NAME	4-tert-Butyl-2-ethylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$	Molecular Weight 178.264

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	257.	3
100	187.	5
30	154.9	5
10	130.0	5
1	87.4	5
Pressure mm 25°C	0.0076	5
t_e	1443.5	5
Density g/ml 20°C		
d_4^t 25 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	55.540	5
Dielectric		
A | 155 to	7.62460	5
B | 350 °C	2120.5	5
C	190.	5
A* | 155 to	2.14398	5
B* | 295 °C	2015.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.98104	5
B' | 155 °C	2373.5	5
C'	210.	5
A'* 25 to	2.52158	5
B'* 155 °C	2269.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	284.90	5

		Ref.
dt/dP °C/mm		
25°C	1329.2	5
BP	0.0538	5
t_e	0.0320	5
30 mm	0.8123	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.10	5
30 mm	83.85	5
BP	72.26	5
t_e	69.24	5
t_e (d, e)	69.09	5
$\Delta Hv/T_e$	22.12	5
d | 155 to	101.45	5
e | 285 °C	0.1136	5
d' | 25 to	100.84	5
e' | 155 °C	0.1096	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9297	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C		
γ	30		
	40		
Parachor [P]	20°C		
	30		
	40		
	Sugd.	456.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

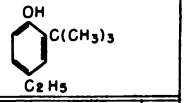
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 35

NAME	2-tert-Butyl-4-ethylphenol		STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{18}O$	Molecular Weight 178.264

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	250.	3
100	179.	5
30	147.7	5
10	122.9	5
1	80.6	5
Pressure		
mm 25°C	0.0136	5
t_e	1426.8	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)	55.540	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 150 to	7.52987	5
B | 295 °C	2050.2	5
C	191.	5
A* | 150 to	2.05210	5
B* | 290 °C	1945.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.85152	5
B' | 150 °C	2273.9	5
C'	209.	5
A'* 25 to	2.39804	5
B'* 150 °C	2172.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	277.56	5

		Ref.
dt/dP		
°C/mm		
25°C	768.07	5
BP	0.0542	5
t_e	0.0326	5
30 mm	0.8101	5
ΔHm cal/g		
ΔHv cal/g		
25°C	94.79	5
30 mm	81.26	5
BP	69.96	5
t_e	67.08	5
t_e (d, e)	66.91	5
$\Delta Hv/T_e$	21.71	5
d | 150 to	97.59	5
e | 280 °C	0.1105	5
d' | 25 to	97.54	5
e' | 150 °C	0.1102	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9490	5
t_e	0.9311	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	456.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

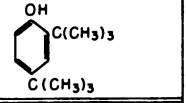
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 36

NAME	2,4-di-tert-Butylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{22}O$ — Molecular Weight 206.316



		Ref.
F.P. °C	56.5	3
F.P. 100%		
B.P. °C 760 mm	263.5	3
100	191.	5
30	158.0	5
10	132.4	5
1	89.0	5
Pressure mm 25°C	0.00722	5
t_e	1463.8	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	60.158	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 160 to	7.49747	5
B | 400 °C	2089.0	5
C	189.	5
A* | 160 to	2.07361	5
B* | 320 °C	1981.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.8450	5
B' | 60 °C	2337.	5
C'	209.	5
A'* 25 to	2.44774	5
B'* 160 °C	2233.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	293.23	5

		Ref.
dt/dP °C/mm		
25°C	1410.12	5
BP	0.0560	5
t_e	0.03303	5
30 mm	0.8344	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.16	5
30 mm	71.54	5
BP	61.46	5
t_e	58.74	5
t_e (d, e)	58.62	5
ΔHv/T_e	21.40	5
d | 160 to	86.64	5
e | 300 °C	0.09556	5
d' | 25 to	86.53	5
e' | 160 °C	0.09489	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9480	5
t_e	0.9288	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		534.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

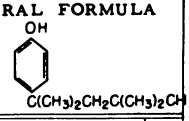
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 37

NAME	4-Diisobutylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{22}O$ — Molecular Weight 206.316



		Ref.
F. P. °C	84.	3
F. P. 100%		
B. P. °C 760 mm	279.	3
100	207.	5
30	173.9	5
10	148.2	5
1	104.1	5
Pressure mm 25°C	0.0017	5
t_e	1501.02	5
Density g/ml 20°C		
d_4^t 25 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	60.158	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 175 to	7.68856	5
B | 325 °C	2235.6	5
C	186.	5
A* | 175 to	2.25887	5
B* | 325 °C	2128.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.99920	5
B' | 175 °C	2464.8	5
C'	204.	5
A'* 25 to	2.59789	5
B'* 175 °C	2362.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	309.46	5

		Ref.
dt/dP °C/mm		
25°C	5367.9	5
BP	0.0553	5
t_e	0.0318	5
30 mm	0.8388	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.69	5
30 mm	76.52	5
BP	65.79	5
t_e	62.82	5
t_e (d, e)	62.68	5
ΔHv/T_e	22.24	5
d | 175 to	94.27	5
e | 310 °C	0.1021	5
d' | 25 to	95.41	5
e' | 175 °C	0.1086	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9460	5
t_e	0.9259	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
δ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	534.1	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

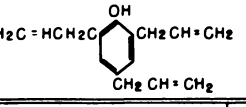
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 38

NAME	2,4,6-Triallylphenol		STRUCTURAL FORMULA
			

Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{18}O$	Molecular Weight 214.294

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	294.	3
100	221.	5
30	187.4	5
10	161.1	5
1	116.2	5
Pressure mm 25°C	0.0_356	5
t_e	1540.5	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	64.776	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 185 to	7.75543	5
B | 400 °C	2352.0	5
C	183.	5
A* | 185 to	2.33371	5
B* | 335 °C	2216.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.06057	5
B' | 185 °C	2556.7	5
C'	201.	5
A'* 25 to	2.67062	5
B'* 185 °C	2454.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	326.05	5

		Ref.
dt/dP		
°C/mm		
25°C	15510.91	5
BP	0.0559	5
t_e	0.0314	5
30 mm	0.8540	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.04	5
30 mm	76.78	5
BP	65.98	5
t_e	62.87	5
t_e (d, e)	62.74	5
ΔHv/T_e	22.48	5
d | 185 to	95.74	5
e | 325 °C	0.1012	5
d' | 25 to	97.86	5
e' | 185 °C	0.1125	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9240	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	534.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

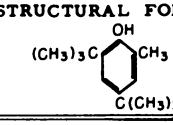
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 39

NAME	4,6-di-tert-Butyl-2-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{15}H_{24}O$ Molecular Weight 220.342	

		Ref.
F.P. °C	51.	3
F.P. 100%		
B.P. °C		
760 mm	269.	3
100	197.	5
30	164.1	5
10	138.5	5
1	94.9	5
Pressure		
mm 25°C	0.0041	5
t_e	1473.4	5
Density		
g/ml 80°C	0.891	3
d_4^t 120	0.862	3
160	0.833	3
a	0.939	4
b	-0.0_360	4
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)	64.776	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 165 to	7.59070	5
B | 350 °C	2152.4	5
C	188.	5
A* | 165 to	2.19636	5
B* | 310 °C	2046.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.90327	5
B' | 165 °C	2378.1	5
C'	206.	5
A'* 25 to	2.53457	5
B'* 165 °C	2275.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	298.71	5

		Ref.
dt/dP		
°C/mm		
25°C	2400.9	5
BP	0.0555	5
t_e	0.0324	5
30 mm	0.8337	5
ΔHm cal/g		
ΔHv cal/g		
25°C	82.30	5
30 mm	68.95	5
BP	59.17	5
t_e	56.50	5
t_e (d, e)	56.40	5
$\Delta Hv/T_e$	21.77	5
d | 165 to	84.24	5
e | 300 °C	0.0932	5
d' | 25 to	84.70	5
e' | 165 °C	0.0960	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9460	5
t_e	0.9260	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		534.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

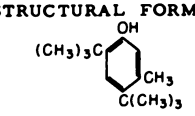
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 40

NAME	4,6-di-tert-Butyl-3-methylphenol		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{24}O$	Molecular Weight 220.342



		Ref.
F.P. °C	62.1	3
F.P. 100%		
B.P. °C		
760 mm	282.	3
100	211.	5
30	178.2	5
10	152.6	5
1	108.8	5
Pressure mm 25°C	0.0011	5
t_e	1506.2	5
Density g/ml 80°C	0.912	3
d_4^t 120	0.882	3
160	0.853	3
a	0.972	4
b	-0.0_375	4
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	64.776	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 180 to	7.79349	5
B | 325 °C	2294.2	5
C	185.	5
A* | 180 to	2.39293	5
B* | 320 °C	2187.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.10651	5
B' | 180 °C	2527.2	5
C'	203.	5
A'* 25 to	2.73216	5
B'* 180 °C	2425.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	312.05	5

		Ref.
dt/dP °C/mm		
25°C	8488.1	5
BP	0.0543	5
t_e	0.0311	5
30 mm	0.8325	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.77	5
30 mm	73.59	5
BP	63.28	5
t_e	60.40	5
t_e (d, e)	60.30	5
$\Delta Hv/T_e$	22.74	5
d | 180 to	91.29	5
e | 315 °C	0.0993	5
d' | 25 to	92.41	5
e' | 180 °C	0.1056	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9451	5
t_e	0.9250	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	534.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

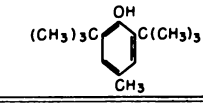
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 41

NAME	2,6-di-tert-Butyl-4-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{15}H_{24}O$ Molecular Weight 220.342	

		Ref.
F.P. °C	70.	3
F.P. 100%		
B.P. °C		
760 mm	265.	3
100	194.	5
30	161.5	5
10	136.2	5
1	92.98	5
Pressure		
mm 25°C	0.0047	5
t_e	1462.0	5
Density		
g/ml 80°C	0.899	3
d_4^{120}	0.870	3
d_4^{160}	0.841	3
a	0.959	4
b	-0.0_375	4
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	64.776	5
(nD-d/2)		
Dielectric		
A | 160 to	7.63222	5
B | 350 °C	2157.1	5
C	189.	5
A* | 160 to	2.24064	5
B* | 305 °C	2051.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.94836	5
B' | 160 °C	2384.4	5
C'	207.	5
A'* 25 to	2.58018	5
B'* 160 °C	2281.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	293.87	5

		Ref.
dt/dP		
°C/mm		
25°C	2091.7	5
BP	0.0546	5
t_e	0.0321	5
30 mm	0.8243	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.80	5
30 mm	68.90	5
BP	59.21	5
t_e	56.60	5
t_e (d, e)	56.51	5
$\Delta Hv/T_e$	21.99	5
d | 160 to	84.02	5
e | 295 °C	0.0936	5
d' | 25 to	84.17	5
e' | 160 °C	0.0945	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9460	5
t_e	0.9266	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 80 °C	3.47	3
120	1.540	3
160	0.920	3
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	534.1	5
Exp. L.l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+]		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

[+] grams/100 grams solvent

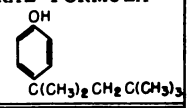
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 42

NAME	4-Diisobutyl-2-methylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{24}O$	Molecular Weight 220.342

		Ref.
F.P. °C	49.5	3
F.P. 100%		
B.P. °C		
760 mm	275.	5
100	206.	5
30	174.0	5
10	148.9	5
1	105.9	5
Pressure		
mm 25°C	0.00129	5
t_e	1465.4	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 174 to	7.89769	5
B | 410 °C	2317.8	5
C	187.	5
A* | 174 to	2.52399	5
B* | 315 °C	2219.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	8.21783	5
B' | 174 °C	2554.7	5
C'	205.	5
A'* 20 to	2.84385	5
B'* 174 °C	2451.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	302.84	5

		Ref.
dt/dP		
°C/mm		
25°C	6973.82	5
BP	0.05262	5
t_e	0.03068	5
30 mm	0.8139	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.18	5
30 mm	73.86	5
BP	63.01	5
t_e	60.17	5
t_e (d, e)	60.02	5
ΔHv/T_e	23.02	5
d | 174 to	92.56	5
e | 305 °C	0.1074	5
d' | 20 to	91.75	5
e' | 174 °C	0.1028	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9350	5
t_e	0.9144	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C			
γ 30			
40			
Parachor [P]			
20°C			
30			
40			
Sugd.		578.1	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

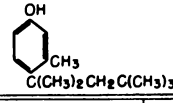
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. and Eng. Chem. 36, no. 7, 596-597 (1944)

No. 43

NAME	4-Diisobutyl-3-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{24}O$ — Molecular Weight 220.342



		Ref.
F. P. °C	49.8	3
F. P. 100%		
B. P. °C 760 mm	275.	3
100	206.	5
30	174.0	5
10	148.9	5
1	105.9	5
Pressure mm 25°C	0.00129	5
t_e	1484.7	5
Density g/ml 80°C	0.904	3
d_4^t 120	0.876	3
160	0.847	3
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	64.776	5
Dielectric		
A | 175 to	7.89759	5
B | 315 °C	2317.8	5
C	187.	5
A* | 175 to	2.50338	5
B* | 310 °C	2212.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.21772	5
B' | 175 °C	2554.7	5
C'	205.	5
A'* 25 to	2.84374	5
B'* 175 °C	2451.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	303.44	5

		Ref.
dt/dP °C/mm		
25°C	6975.3	5
BP	0.05263	5
t_e	0.03036	5
30 mm	0.8140	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.18	5
30 mm	73.86	5
BP	63.68	5
t_e	60.88	5
t_e (d, e)	60.81	5
ΔHv/T_e	23.26	5
d | 175 to	91.40	5
e | 300 °C	0.1008	5
d' | 25 to	91.75	5
e' | 175 °C	0.1028	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9254	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	5.00	3
120	1.970	3
160	1.125	3
B^v | 110 to	1036.	4
A^v | 170 °C	3.6597	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	534.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

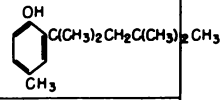
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 44

NAME	2-Diisobutyl-4-methylphenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{24}O$	Molecular Weight 220.342

		Ref.
F.P. °C	46.2	3
F.P. 100%		
B.P. °C		
760 mm	269.	3
100	198.0	5
30	165.4	5
10	140.0	5
1	96.70	5
Pressure mm 25°C	0.00332	5
t_e	1470.8	5
Density		
g/ml 80°C	0.904	3
d_4^{120}	0.876	3
d_4^{160}	0.847	3
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)	64.776	5
Dielectric		
A | 165 to	7.66944	5
B | 400 °C	2188.4	5
C	188.	5
A* | 165 to	2.2774	5
B* | 310 °C	2083.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9848	5
B' | 165 °C	2417.0	5
C'	206.	5
A'* 25 to	2.6153	5
B'* 165 °C	2314.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	298.11	5

		Ref.
dt/dP		
°C/mm		
25°C	2884.7	5
BP	0.05453	5
t_e	0.03188	5
30 mm	0.8262	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.64	5
30 mm	70.00	5
BP	60.11	5
t_e	57.43	5
t_e (d, e)	57.33	5
$\Delta Hv/T_e$	22.14	5
d | 165 to	85.78	5
e | 300 °C	0.0954	5
d' | 25 to	86.07	5
e' | 165 °C	0.0972	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9451	5
t_e	0.9253	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 80 °C	5.70	3
120	2.130	3
160	1.158	3
B^v | 110 to	1127.	4
A^v | 170 °C	3.4622	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.	534.1		5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

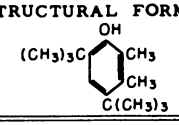
PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 45

NAME	4,6-di-tert-Butyl-2,3-dimethylphenol		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{26}O$	Molecular Weight 234.368



		Ref.
F.P. °C	85.5	3
F.P. 100%		
B.P. °C		
760 mm	284.	3
100	213.	5
30	180.2	5
10	154.5	5
1	110.6	5
Pressure mm 25°C	$0.0_3 89$	5
t_e	1510.3	5
Density g/ml 20°C		
d_4^{t} 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)		
Dielectric		
A | 180 to	7.81831	5
B | 330 °C	2315.7	5
C	185.	5
A* | 180 to	2.44548	5
B* | 325 °C	2209.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.13087	5
B' | 180 °C	2549.6	5
C'	203.	5
A'* 25 to	2.78205	5
B'* 180 °C	2447.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	314.15	5

		Ref.
dt/dP °C/mm		
25°C	9972.56	5
BP	0.05428	5
t_e	0.0309	5
30 mm	0.8337	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.15	5
30 mm	69.69	5
BP	59.88	5
t_e	57.16	5
t_e (d,e)	57.03	5
$\Delta Hv/T_e$	22.81	5
d | 180 to	86.71	5
e | 315 °C	0.0945	5
d' | 25 to	87.64	5
e' | 180 °C	0.0996	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9440	5
t_e	0.9242	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
σ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	612.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 46

NAME	4,6-di-tert-Butyl-2-ethylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{26}O$ — Molecular Weight 234.368

		Ref.
F.P. °C	30.	3
F.P. 100%		
B.P. °C 760 mm	275.	3
100	203.0	5
30	170.0	5
10	144.3	5
1	100.4	5
Pressure mm 25°C	0.00245	5
t_e	1489.4	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)		
Dielectric		
A | 170 to	7.65186	4
B | 420 °C	2204.2	4
C	187.	5
A* | 170 to	2.28152	5
B* | 320 °C	2097.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.96322	5
B' | 170 °C	2432.1	5
C'	205.	5
A'* 25 to	2.61865	5
B'* 170 °C	2329.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	305.14	5

		Ref.
dt/dP °C/mm		
25°C	3858.05	5
BP	0.05533	5
t_e	0.03204	5
30 mm	0.8369	5
ΔHm cal/g		
ΔHv cal/g		
25°C	79.82	5
30 mm	66.33	5
BP	56.92	5
t_e	54.35	5
t_e (d,e)	54.22	5
$\Delta Hv/T_e$	22.02	5
d | 170 to	81.55	5
e | 310 °C	0.0895	5
d' | 20 to	82.14	5
e' | 170 °C	0.0931	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9451	5
t_e	0.9256	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	612.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

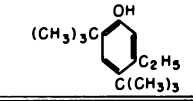
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 47

NAME	4,6-di-tert-Butyl-3-ethylphenol		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{26}O$	Molecular Weight 234.368



		Ref.
F.P. °C	80.5	3
F.P. 100%		
B.P. °C		
760 mm	289.	3
100	218.	3
30	185.1	5
10	159.4	5
1	115.2	5
Pressure mm 25°C	0.0356	5
t_e	1524.	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	65.304	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 185 to	7.86793	4
B | 450 °C	2358.9	4
C	184.	5
A* | 185 to	2.49180	5
B* | 330 °C	2251.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	8.17959	5
B' | 185 °C	2594.6	5
C'	202.	5
A'* 20 to	2.82882	5
B'* 185 °C	2492.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	319.50	5

		Ref.
dt/dP °C/mm		
25°C	15347.82	5
BP	0.05420	5
t_e	0.03063	5
30 mm	0.8361	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.41	5
30 mm	71.00	5
BP	61.05	5
t_e	58.26	5
t_e (d, e)	58.13	5
$\Delta Hv/T_e$	23.04	5
d | 185 to	88.73	5
e | 325 °C	0.09579	5
d' | 20 to	89.98	5
e' | 185 °C	0.1025	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9440	5
t_e	0.9241	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	612.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in [+]		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

[+] grams/100 grams solvent

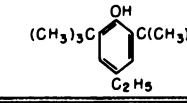
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 48

NAME	2, 6-di-tert-Butyl-4-ethylphenol		STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{26}O$	Molecular Weight 234.368

		Ref.
F.P. °C	44.0	3
F.P. 100%		
B.P. °C		
760 mm	272.	3
100	199.0	5
30	165.7	5
10	139.9	5
1	95.9	5
Pressure		
mm 25°C	0.00391	5
t_e	1481.2	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 165 to	7.53824	5
B | 400 °C	2137.8	5
C	187.	5
A* | 165 to	2.17079	5
B* | 320 °C	2032.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.88193	5
B' | 165 °C	2387.1	5
C'	207.	5
A'* 25 to	2.53776	5
B'* 165 °C	2284.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	302.46	5

		Ref.
dt/dP		
°C/mm		
25°C	2501.8	5
BP	0.05632	5
t_e	0.03286	5
30 mm	0.8424	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.00	5
30 mm	64.63	5
BP	55.30	5
t_e	52.75	5
t_e (d, e)	52.63	5
$\Delta Hv/T_e$	21.48	5
d | 165 to	79.18	5
e | 300 °C	0.0878	5
d' | 25 to	79.19	5
e' | 165 °C	0.0879	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9248	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C			
γ 30			
40			
Parachor [P]			
20°C			
30			
40			
Sugd.		612.1	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

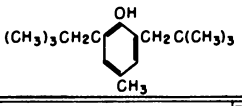
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 49

NAME	2,6-di-tert-Amyl-4-methylphenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{17}H_{28}O$ Molecular Weight 248.394	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	283.	3
100	210.	3
30	176.5	5
10	150.5	5
1	106.0	5
Pressure		
mm 25°C	0.00149	5
t_e	1509.4	5
Density		
g/ml 80°C	0.931	3
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C	1.4950	3
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)	68.872	5
(nD-d/2)		
Dielectric		
A | 175 to	7.64684	4
B | 420 °C	2230.5	4
C	185.	5
A* | 175 to	2.29872	5
B* | 325 °C	2123.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.95403	5
B' | 175 °C	2458.1	5
C'	203.	5
A'* 25 to	2.63281	5
B'* 175 °C	2356.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	314.21	5

		Ref.
dt/dP		
°C/mm		
25°C	6170.7	5
BP	0.05611	5
t_e	0.03215	5
30 mm	0.8483	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.46	5
30 mm	63.58	5
BP	54.43	5
t_e	51.87	5
t_e (d,e)	51.75	5
$\Delta Hv/T_e$	21.93	5
d | 175 to	78.75	5
e | 315 °C	0.08595	5
d' | 25 to	79.75	5
e' | 175 °C	0.09157	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9440	5
t_e	0.9236	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C		
30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	651.1	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

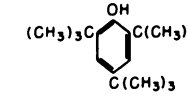
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

No. 50

NAME	2,4,6-tri-tert-Butylphenol	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula $C_{18}H_{30}O$	Molecular Weight 262.420

		Ref.
F.P. °C	131.	3
F.P. 100%		
B.P. °C		
760 mm	278.	3
100	206.	5
30	172.9	5
10	147.2	5
1	103.2	5
Pressure		
mm 25°C	0.00187	5
t_e	1474.96	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 170 to	7.67633	4
B | 420 °C	2225.1	4
C	186.	5
A* | 170 to	2.37639	5
B* | 320 °C	2126.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.98721	5
B' | 170 °C	2453.9	5
C'	204.	5
A'* 25 to	2.6910	5
B'* 170 °C	2351.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	307.64	5

		Ref.
dt/dP		
°C/mm		
25°C	4965.56	5
BP	0.05529	5
t_e	0.03225	5
30 mm	0.8382	5
ΔHm cal/g		
ΔHv cal/g		
25°C	72.55	5
30 mm	59.94	5
BP	50.78	5
t_e	48.37	5
t_e (d, e)	48.20	5
$\Delta Hv/T_e$	21.85	5
d | 170 to	75.01	5
e | 310 °C	0.0872	5
d' | 25 to	74.68	5
e' | 170 °C	0.0853	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9127	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C		
γ 30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	690.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

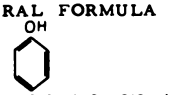
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem., 36, 596 (1944)

TABLE VIII. AROMATIC PHENOLS

No. 51

NAME	p-tert-Octylphenol p-(1, 1, 3, 3-Tetramethylbutyl) phenol	STRUCTURAL FORMULA 
Mole % Pur. 99.76	Ref. 1	Molecular Formula $C_{14}H_{22}O$ — Molecular Weight 206.316

		Ref.
F. P. °C	85.02	1
F. P. 100%		
B. P. °C 760 mm	290.45	1
100	212.20	1
30	176.87	4
10	149.62	4
1	103.55	4
Pressure mm 25°C	0.00228	5
t_e	1532.4	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)		
MR (Calc.) (nD-d/2)		
Dielectric		
A | 175 to	7.34058	1
B | 440 °C	2115.9	1
C	184.	1
A* | 175 to	1.90520	5
B* | 335 °C	2007.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.63305	5
B' | 175 °C	2332.3	5
C'	202.	5
A'* 25 to	2.23218	5
B'* 175 °C	2231.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	325.23	5

		Ref.
dt/dP °C/mm		
25°C	4201.5	5
BP	0.6079	5
t_e	0.0347	5
30 mm	0.8910	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.26	5
30 mm	72.99	5
BP	62.13	5
t_e	59.02	5
t_e (d, e)	58.80	5
ΔHv/T_e	20.35	5
d | 175 to	89.91	5
e | 325 °C	0.9564	5
d' | 25 to	91.94	5
e' | 175 °C	0.1071	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9430	5
t_e	0.9204	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	458.4	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 52

NAME	o-Chlorophenol	STRUCTURAL FORMULA
Mole % Pur. 99.82	Ref. 1	Molecular Formula C_6H_5ClO
	Molecular Weight 128.557	

		Ref.
F.P. °C	9.00	1
F.P. 100%		
B.P. °C		
760 mm	174.90	1
100	108.50	4
30	79.0	4
10	56.4	5
1	18.5	5
Pressure mm 25°C	1.5573	5
t_e	1225.5	5
Density g/ml 20°C	1.2634	1
d_4^t 25	1.2577	1
30	1.2518	4
a		
b		
Ref. Index n_D 20°C	1.55939	1
25	1.55676	1
30	1.54437	1
"C"	0.5783	4
MR (Obs.)	32.87	4
MR (Calc.)	32.699	5
(nD-d/2)	0.92766	5
Dielectric	5.997	1
A | 80 to	7.05272	5
B | 300 °C	1589.1	5
C	206.	5
A* | 80 to	1.48398	5
B* | 205 °C	1493.3	5
K		
c		
t_x | to		
| °C		
A' | 20 to	7.42442	5
B' | 80 °C	1808.0	5
C'	225.	5
A'* 20 to	1.85717	5
B'* 80 °C	1706.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*	0.0206	1
consts. B*		
t_e °C	194.84	5

		Ref.
dt/dP °C/mm		
25°C	9.6406	5
BP	0.0522	5
t_e	0.03583	5
30 mm	0.7400	5
ΔHm cal/g	25.102	4
ΔHv cal/g		
25°C	91.56	5
30 mm	86.37	5
BP	74.46	5
t_e	72.09	5
t_e (d, e)	71.98	5
$\Delta Hv/T_e$	19.80	5
d | 80 to	96.19	5
e | 195 °C	0.1243	5
d' | 25 to	93.96	5
e' | 80 °C	0.0960	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9551	5
t_e	0.9411	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.0696	1
40	1.7818	1
60	1.1882	1
80	0.8709	1
B^V | 30 to	860.15	4
A^V | 90 °C	3.50455	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	41.22	1
γ 30	39.89	1
40	38.58	1
Parachor [P] 20°C	257.8	4
30	258.1	4
40	258.3	4
Sugd.	259.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	2.25	1
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 1

NAME	Benzenethiol Thiophenol	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula C_6H_6S	Molecular Weight 110.174

		Ref.
F. P. °C	-14.8	2
F. P. 100%		
B. P. °C		
760 mm	168.7	2
100	99.5	5
30	69.33	5
10	46.4	5
1	8.4	5
Pressure		
mm 25°C	2.9814	5
t_e	1209.93	5
Density		
g/ml 20°C	1.0766	2
d_4^t 25	1.0724	2
30	1.0682	4
a	1.0934	4
b	-0.0384	4
Ref. Index		
n_D 20°C	1.5893	2
25	1.5864	2
30	1.5844	4
"C"	0.7125	4
MR (Obs.)	34.50	2
MR (Calc.)	34.807≠	5
(nD-d/2)	1.0510	2
Dielectric		
A | 70 to	6.78419	5
B | 205 °C	1466.5	5
C	207.	5
A* | 70 to	1.15400	5
B* | 200 °C	1371.81	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.11854	5
B' | 70 °C	1657.1	5
C'	224.	5
A'* 25 to	1.49236	5
B'* 70 °C	1557.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	189.20	5

		Ref.
dt/dP		
°C/mm		
25°C	5.4681	5
BP	0.0550	5
t_e	0.0384	5
30 mm	0.7538	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.38	5
30 mm	93.58	5
BP	80.20	5
t_e	77.61	5
t_e (d, e)	77.44	5
$\Delta Hv/T_e$	18.49	5
d | 70 to	102.92	5
e | 190 °C	0.1347	5
d' | 25 to	101.08	5
e' | 70 °C	0.1082	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9405	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	40.46	5
σ 30	39.21	5
40	37.99	5
Parachor [P]		
20°C		
30		
40		
Sugd.	258.1	5
Exp. L. 1. %/wt. u.		
Dispersion	216.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	2-Methylbenzenethiol o-Methylthiophenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula C_7H_8S	Molecular Weight 124.200

		Ref.
F. P. °C	15.	2
F. P. 100%		
B. P. °C		
760 mm	194.2	2
100	122.5	5
30	91.02	5
10	67.1	5
1	27.2	5
Pressure		
mm 25°C	0.8634	5
t_e	1278.6	5
Density		
g/ml 20°C	1.041	2
d_4^t 25	1.037	2
30	1.033	4
a	1.0570	4
b	-0.0_3380	4
Ref. Index		
n_D 20°C	1.570	2
25	1.568	2
30	1.565	4
"C"	0.7143	4
MR (Obs.)	39.1	2
MR (Calc.)	39.425≠	5
(nD-d/2)	1.050	2
Dielectric		
A | 90 to	6.86693	5
B | 235 °C	1579.3	5
C	202.	5
A* | 90 to	1.27077	5
B* | 230 °C	1481.43	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.20649	5
B' | 90 °C	1784.6	5
C'	220.	5
A'* 25 to	1.62142	5
B'* 90 °C	1684.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	218.01	5

		Ref.
dt/dP		
°C/mm		
25°C	16.98	5
BP	0.0568	5
t_e	0.0379	5
30 mm	0.7870	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.03	5
30 mm	89.89	5
BP	76.80	5
t_e	73.98	5
t_e (d, e)	73.78	5
$\Delta Hv/T_e$	18.71	5
d | 90 to	100.14	5
e | 220 °C	0.1269	5
d' | 25 to	99.73	5
e' | 90 °C	0.1081	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9356	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	38.45	5
γ 30	37.28	5
40	36.14	5
Parachor [P]		
20°C		
30		
40		
Sugd.	297.1	5
Exp. L. 1. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 3

NAME	3-Methylbenzenethiol m-Methylthiophenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_7H_8S	Molecular Weight 124.200

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	195.1	2
100	123.3	5
30	91.75	5
10	67.8	5
1	27.8	5
Pressure mm 25°C	0.8290	5
t_e	1277.38	5
Density g/ml 20°C	1.044	2
d_4^t 25	1.040	2
30	1.036	4
a	1.060	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.572	2
25	1.569	2
30	1.567	4
"C"	0.7146	4
MR (Obs.)	39.2	2
MR (Calc.)	39.425≠	5
(nD-d/2)	1.050	2
Dielectric		
A | 90 to	6.87023	5
B | 235 °C	1584.2	5
C	202.	5
A* | 90 to	1.27717	5
B* | 230 °C	1487.25	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.21000	5
B' | 90 °C	1790.10	5
C'	221.	5
A'* 25 to	1.62433	5
B'* 90 °C	1689.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	218.89	5

		Ref.
dt/dP °C/mm		
25°C	17.64	5
BP	0.05688	5
t_e	0.03802	5
30 mm	0.7885	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.30	5
30 mm	90.09	5
BP	76.80	5
t_e	73.97	5
t_e (d, e)	73.74	5
ΔHv/T_e	18.67	5
d | 90 to	101.88	5
e | 220 °C	0.1285	5
d' | 25 to	99.997	5
e' | 90 °C	0.1080	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9498	5
t_e	0.9330	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	38.90	5
30	37.72	5
40	36.57	5
Parachor [P] 20°C		
30		
40		
Sugd.	297.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	4-Methylbenzenethiol p-Methylthiophenol	STRUCTURAL FORMULA 

Mole % Pur.	Ref.	Molecular Formula C_7H_8S	Molecular Weight 124.200

		Ref.
F.P. °C	44.	2
F.P. 100%		
B.P. °C		
760 mm	194.9	2
100	123.1	5
30	91.59	5
10	67.6	5
1	27.6	5
Pressure mm 25°C	0.836	5
t_e	1271.5	5
Density g/ml 20°C		
d_4^{t} 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	39.425≠	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 90 to	6.86972	5
B | 235 °C	1583.2	5
C	202.	5
A* | 90 to	1.28237	5
B* | 230 °C	1487.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.20945	5
B' | 90 °C	1789.0	5
C'	221.	5
A'* 25 to	1.62391	5
B'* 90 °C	1688.2	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	218.46	5

		Ref.
dt/dP °C/mm		
25°C	17.50	5
BP	0.05686	5
t_e	0.03814	5
30 mm	0.7881	5
ΔHm cal/g		
ΔHv cal/g		
25°C	97.24	5
30 mm	90.05	5
BP	76.50	5
t_e	73.65	5
t_e (d, e)	73.78	5
$\Delta Hv/T_e$	18.60	5
d | 90 to	101.79	5
e | 220 °C	0.1282	5
d' | 25 to	99.94	5
e' | 90 °C	0.1081	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9466	5
t_e	0.9296	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	297.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	2-Ethylbenzenethiol o-Ethylthiophenol	STRUCTURAL FORMULA 
Mole % Pur.	Ref. Molecular Formula $C_8H_{10}S$	Molecular Weight 138.226

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	210.	2
100	137.	5
30	104.28	5
10	80.	5
1	39.	5
Pressure		
mm 25°C	0.3963	5
t_e	1287.78	5
Density		
g/ml 20°C	1.0349	2
d_4^t 25	1.0309	2
30	1.0269	4
a	1.0509	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.5700	2
25	1.5680	2
30	1.5653	4
"C"	0.7185	4
MR (Obs.)	43.82	2
MR (Calc.)	44.043≠	5
(nD-d/2)	1.0525	2
Dielectric		
A | 105 to	6.92105	5
B | 250 °C	1656.5	5
C	200.	5
A* | 105 to	1.39456	5
B* | 245 °C	1566.6	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.26402	5
B' | 105 °C	1871.79	5
C'	219.	5
A'* 25 to	1.71747	5
B'* 105 °C	1769.80	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	234.64	5

		Ref.
dt/dP		
°C/mm		
25°C	34.90	5
BP	0.05799	5
t_e	0.0385	5
30 mm	0.8092	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.42	5
30 mm	84.39	5
BP	70.6	5
t_e	67.74	5
t_e (d, e)	67.39	5
$\Delta Hv/T_e$	18.44	5
d | 105 to	97.99	5
e | 235 °C	0.1304	5
d' | 25 to	94.95	5
e' | 105 °C	0.1012	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9309	5
t_e	0.9114	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	40.10	5
30	38.87	5
40	37.67	5
Parachor [P]		
20°C		
30		
40		
Sugd.	336.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	3-Ethylbenzenethiol m-Ethylthiophenol	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}S$
		Molecular Weight 138.226

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	211.	2
100	138.	5
30	105.33	5
10	81.	5
1	40.	5
Pressure		
mm 25°C	0.3668	5
t_e	1283.01	5
Density		
g/ml 20°C	1.038	2
d_4^{25}	1.034	2
30	1.030	4
a	1.0540	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.572	2
25	1.569	2
30	1.567	4
"C"	0.7187	4
MR (Obs.)	43.8	2
MR (Calc.)	44.085≠	5
(nD-d/2)	1.053	2
Dielectric		
A 105 to	6.92379	5
B 250 °C	1657.6	5
C	199.	5
A* 105 to	1.40506	5
B* 245 °C	1570.5	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.26693	5
B' 105 °C	1873.04	5
C'	218.	5
A'* 25 to	1.72091	5
B'* 105 °C	1771.6	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	235.43	5

		Ref.
dt/dP		
°C/mm		
25°C	37.38	5
BP	0.05795	5
t_e	0.03854	5
30 mm	0.8089	5
ΔHm cal/g		
ΔHv cal/g		
25°C	93.24	5
30 mm	84.89	5
BP	70.6	5
t_e	67.70	5
t_e (d, e)	67.30	5
$\Delta Hv/T_e$	18.40	5
d 105 to	99.13	5
e 235 °C	0.1352	5
d' 25 to	95.84	5
e' 105 °C	0.1039	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9264	5
t_e	0.9066	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		40.58	5
γ 30		39.34	5
40		38.13	5
Parachor [P]			
20°C			
30			
40			
Sugd.		336.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	4-Ethylbenzenethiol p-Ethylthiophenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}S$ — Molecular Weight 138.226

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	211.	2
100	138.	5
30	105.33	5
10	81.	5
1	40.	5
Pressure mm 25°C	0.3668	5
t_e	1283.01	5
Density g/ml 20°C	1.038	2
d_4^t 25	1.034	2
30	1.030	4
a	1.0540	4
b	-0.03 80	4
Ref. Index n_D 20°C	1.572	2
25	1.569	2
30	1.567	4
"C"	0.7187	4
MR (Obs.)	43.8	2
MR (Calc.)	44.085≠	5
(nD-d/2)	1.053	2
Dielectric		
A | 105 to	6.92379	5
B | 250 °C	1657.6	5
C	199.	5
A* | 105 to	1.40506	5
B* | 245 °C	1570.47	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.26693	5
B' | 105 °C	1873.04	5
C'	218.	5
A'* 25 to	1.72091	5
B'* 105 °C	1771.59	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	235.43	5

		Ref.
dt/dP °C/mm		
25°C	37.38	5
BP	0.05795	5
t_e	0.03854	5
30 mm	0.8089	5
ΔHm cal/g		
ΔHv cal/g		
25°C	93.24	5
30 mm	84.89	5
BP	70.6	5
t_e	67.70	5
t_e (d, e)	67.39	5
$\Delta Hv/T_e$	18.40	5
d | 105 to	99.13	5
e | 235 °C	0.1352	5
d' | 25 to	95.84	5
e' | 105 °C	0.1039	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9264	5
t_e	0.9066	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	40.58	5
30	39.34	5
40	38.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	336.1	5
Exp. L.l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	2,4-Dimethylbenzenethiol 2,4-Dimethylthiophenol	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{10}S$ — Molecular Weight 138.226

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	208.	2
100	135.	5
30	102.27	5
10	78.	5
1	37.	5
Pressure mm 25°C	0.4347	5
t_e	1288.13	5
Density g/ml 20°C		
d_4^t 25 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	44.085≠	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 100 to	6.91390	5
B | 250 °C	1645.5	5
C	200.	5
A* | 100 to	1.38306	5
B* | 245 °C	1554.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25642	5
B' | 100 °C	1859.4	5
C'	219.	5
A'* 25 to	1.71116	5
B'* 100 °C	1757.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	232.58	5

		Ref.
dt/dP °C/mm		
25°C	32.01	5
BP	0.05781	5
t_e	0.03834	5
30 mm	0.8059	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.88	5
30 mm	84.00	5
BP	70.8	5
t_e	67.68	5
t_e (d,e)	67.72	5
$\Delta Hv/T_e$	18.50	5
d | 100 to	96.87	5
e | 235 °C	0.1254	5
d' | 25 to	94.42	5
e' | 100 °C	0.1014	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9344	5
t_e	0.9154	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C		
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	336.1	5
Exp. L.T.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	2,5-Dimethylbenzenethiol 2,5-Dimethylthiophenol	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_8H_{10}S$ Molecular Weight 138.226	

		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | to		
F.P. 100%			25°C	28.14	5	g | °K		
B.P. °C			BP	0.05753	5	h		
760 mm	205.	2	t_e	0.03803	5	f' | to		
100	132.	5	30 mm	0.8010	5	g' | °K		
30	100.24	5	ΔHm cal/g			h'		
10	76.	5	ΔHv cal/g			m | to		
1	35.	5	25°C	91.08	5	n | °K		
Pressure mm 25°C	0.4988	5	30 mm	83.43	5	o		
t_e	1294.15	5	BP	70.9	5	m' | to		
Density g/ml 20°C			t_e	67.84	5	n' | °K		
d_4^t 25			t_e (d, e)	67.95	5	o'		
30			ΔHv/T_e	18.65	5	Surface tension dynes/cm. 20°C		
a			d | 100 to	95.43	5	γ 30		
b			e | 230 °C	0.1196	5	40		
Ref. Index n_D 20°C			d' | 25 to	93.63	5	Parachor [P] 20°C		
25			e' | 100 °C	0.1017	5	30		
30			d_c g/ml			40		
"C"			v_c ml/g			Sugd.	336.1	5
MR (Obs.)			t_c °C			Exp. L. l. %/wt. u.		
MR (Calc.) (nD-d/2)	44.085≠	5	P_c mm			Dispersion		
Dielectric			PV/RT 25°C	1.0000	5	Flash Point °C		
A | 100 to	6.90353	5	30 mm	1.0000	5	Fire Point		
B | 245 °C	1629.2	5	BP	0.9430	5	M. Spec.		
C	.200.	5	t_e	0.9249	5	Ultra V.		
A* | 100 to	1.36040	5	t_c			X-Ray Dif.		
B* | 240 °C	1534.2	5	ΔHc kcal/m			Infrared		
K			ΔHf			Solubility in +		
c			ΔFf			Acetone		
t_k | to			Viscosity centistokes			Carbon tet.		
t_x | °C			η °C			Benzene		
A' | 25 to	7.24539	5				Ether		
B' | 100 °C	1840.9	5				n-Heptane		
C'	219.	5	B^v | to			Ethanol		
A'* 25 to	1.70209	5	A^v | °C			Water		
B'* 100 °C	1739.8	5	(B^v) | to			Water in		
Ac | to			(A^v) | °C					
Bc | t_c °C			c_p liq. °K					
Cc			c_p vap. °K					
Cryos. A* consts. B*			c_v vap.					
t_e °C	229.69	5						

≠ S = 8.5

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE X. AROMATIC AMINES

TABLE X. AROMATIC AMINES

No. 1

NAME	Aniline	STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 1	Molecular Formula C_6H_7N — Molecular Weight 93.116

		Ref.
F.P. °C	-6.30	1
F.P. 100%	99.86	1
B.P. °C		
760 mm	184.13	4
100	119.60	4
30	90.62	5
10	68.29	5
1	30.55	5
Pressure		
mm 25°C	0.67142	5
t_e	1244.8	5
Density		
g/ml 20°C	1.02173	1
d_4^t 25	1.01750	1
30	1.01327	4
a	1.03865	4
b	-0.03846	4
Ref. Index		
n_D 20°C	1.58628	1
25	1.58364	1
50	1.57068	5
"C"	0.7634	4
MR (Obs.)	30.562	4
MR (Calc.)	30.617	5
(nD-d/2)	1.07459	4
Dielectric		
A | 90 to	7.24179	4
B | 250 °C	1675.3	4
C	200.	4
A* | 90 to	1.53517	5
B* | 230 °C	1582.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.63851	5
B' | 90 °C	1913.8	5
C'	220.	5
A'* 20 to	1.92924	5
B'* 90 °C	1813.6	5
Ac | 250 to	7.75568	4
Bc | t_c °C	2140.4	4
Cc	258.8	4
Cryos. A°		
consts. B°		
t_e °C	204.00	5

		Ref.
dt/dP		
°C/mm		
25°C	20.29	5
BP	0.05022	4
t_e	0.0340	5
30 mm	0.7298	5
ΔHm cal/g		
ΔHv cal/g		
25°C	139.32	5
30 mm	129.02	5
BP	110.80	5
t_e	107.16	5
t_e (d, e)	106.93	5
$\Delta Hv/T_e$	20.91	5
d | 90 to	146.67	5
e | 205 °C	0.1948	5
d' | 20 to	143.24	5
e' | 90 °C	0.1570	5
d_c g/ml	0.314	5
v_c ml/g	3.187	5
t_c °C	426.	3
P_c mm	39820.	3
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9524	5
t_e	0.9374	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	45.50	5
30	44.02	5
40	42.56	5
Parachor [P]		
20°C		
30		
40		
Sugd.	236.70	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.	Yes	1
X-Ray Dif.		
Infrared	Yes	1
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	3.65	1
Water in	5.28	1

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 ICT

No. 2

NAME	o-Toluidine	STRUCTURAL FORMULA
Mole % Pur. 99.8	Ref. 1	Molecular Formula C_7H_9N — Molecular Weight 107.150

		Ref.
F.P. °C	-23.68	1
F.P. 100%	-14.73	1
B.P. °C		
760 mm	200.23	4
100	133.41	4
30	103.33	4
10	80.14	5
1	40.95	5
Pressure mm 25°C	0.31703	5
t_e	1287.0	5
Density g/ml 20°C	0.99843	1
d_4^t 25	0.99430	1
30	0.99017	4
a	1.01495	4
b	-0.0383	4
Ref. Index n_D 20°C	1.57246	1
25	1.56987	1
30	1.56731	4
"C"	0.7477	4
MR (Obs.)	35.279	4
MR (Calc.)	35.235	5
(nD-d/2)	1.07325	4
Dielectric		
A | 103 to	7.28896	4
B | 320 °C	1768.7	4
C	201.	5
A* | 103 to	1.63008	5
B* | 235 °C	1671.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.63271	5
B' | 103 °C	1984.1	5
C'	219.	5
A'* 20 to	1.97647	5
B'* 103 °C	1882.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01492	1
consts. B°		
t_e °C	222.2	5

		Ref.
dt/dP °C/mm		
25°C	41.11	5
BP	0.05201	5
t_e	0.03417	5
30 mm	0.7580	5
ΔHm cal/g	16.81	4
ΔHv cal/g		
25°C	126.55	5
30 mm	115.62	5
BP	99.47	5
t_e	96.08	5
t_e (d, e)	95.82	5
$\Delta Hv/T_e$	21.74	5
d | 100 to	132.86	5
e | 225 °C	0.1667	5
d' | 25 to	130.04	5
e' | 100 °C	0.1395	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9337	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	4.4335	1
40	2.5028	1
60	1.6420	1
80	1.1751	1
B^v | 40 to	908.	4
A^v | 90 °C	Σ.50092	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		43.55	5
γ 30		42.13	5
40		40.71	5
Parachor [P] 20°C			
30			
40			
Sugd.		275.7	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			1
Solubility in +			
Acetone			
Carbon tet.		∞	
Benzene			
Ether		∞	
n-Heptane			
Ethanol		∞	
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow SSR 135 - 415

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE X. AROMATIC AMINES

No. 3

NAME	m-Toluidine m-Amino methylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.78	Ref. 1	Molecular Formula C_7H_9N — Molecular Weight 107.150

		Ref.
F. P. °C	-30.40	1
F. P. 100%		
B. P. °C		
760 mm	203.35	4
100	135.98	5
30	105.67	5
10	82.33	5
1	42.89	5
Pressure mm 25°C	0.2749	5
t_e	1297.72	5
Density g/ml 20°C	0.98890	1
d_4^t 25	0.98485	1
30	0.98080	4
a	1.00510	4
b	-0.0_3810	4
Ref. Index n_D 20°C	1.56811	1
25	1.56570	1
50	1.55361	1
"C"	0.7497	4
MR (Obs.)	35.453	4
MR (Calc.)	35.235	5
(nD-d/2)	1.06866	4
Dielectric	7.888	1
A | 105 to	7.27435	4
B | 320 °C	1772.06	4
C	200.	4
A* | 105 to	1.61099	5
B* | 240 °C	1674.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.61573	5
B' | 105 °C	1986.9	5
C'	218.	5
A'* 20 to	1.95909	5
B'* 105 °C	1885.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*	0.01456	1
consts. B*		
t_e °C	225.86	5

		Ref.
dt/dP °C/mm		
25°C	46.95	5
BP	0.05246	5
t_e	0.03425	5
30 mm	0.7633	5
ΔHm cal/g	15.79	4
ΔHv cal/g		
25°C	127.77	5
30 mm	116.25	5
BP	100.03	5
t_e	96.59	5
t_e (d, e)	96.29	5
$\Delta Hv/T_e$	20.74	5
d | 100 to	133.80	5
e | 215 °C	0.1661	5
d' | 25 to	131.34	5
e' | 100 °C	0.1428	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9346	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.9060	1
40	2.2142	1
60	1.4838	1
80	1.0798	1
B^v | 40 to	862.5	4
A^v | 90 °C	3.5914	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		37.90	1
σ 30		37.04	1
40		36.09	1
Parachor [P] 20°C		268.8	4
30		269.5	4
40		270.0	4
Sugd.		275.7	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 4

NAME	p-Toluidine p-Amino methylbenzene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula C_7H_9N — Molecular Weight 107.150

		Ref.
F.P. °C	43.7	3²
F.P. 100%		
B.P. °C		
760 mm	200.55	3'
100	133.2	4
30	102.9	5
10	79.63	5
1	40.27	5
Pressure mm 25°C	0.3353	5
t_e	1283.7	5
Density g/ml 50°C	0.9619	3
d_4^t t 70	0.9444	3
90	0.9276	3
a	1.0156	4
b	-0.03875	4
Ref. Index n_D 25°C	1.56357	4
45	1.55397	3
50	1.55348	4
"C"	0.7423	4
MR (Obs.)	35.20≠	4
MR (Calc.)	35.235	5
(nD-d/2)	1.06587	4
Dielectric		
A | 103 to	7.25137	5
B | 330 °C	1755.0	5
C	201.	5
A* | 103 to	1.5971	5
B* | 240 °C	1659.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.61234	5
B' | 103 °C	1981.3	5
C'	220.	5
A'* 20 to	1.9551	5
B'* 103 °C	1878.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	222.6	5

		Ref.
dt/dP		
°C/mm		
25°C	39.24	5
BP	0.05250	4
t_e	0.03459	5
30 mm	0.7620	5
ΔHm cal/g		
ΔHv cal/g		
25°C	125.34	5
30 mm	114.78	5
BP	98.74	5
t_e	95.01	5
t_e (d, e)	95.11	5
ΔHv/T_e	20.53	5
d | 103 to	131.69	5
e | 230 °C	0.1643	5
d' | 20 to	128.73	5
e' | 103 °C	0.1355	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9465	5
t_e	0.9305	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 50°C	34.88	3
γ 70	32.80	3
90	30.89	3
Parachor [P]		
50°C	270.8	4
70	271.3	4
90	272.4	4
Sugd.	275.7	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ 45°C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 54, 2398 (1932) Buehler et al; 3' J. Chim. Phys. 34, 707 (1937) Timmerman and Hermaut-Roland; 3² J. Chem. Soc. (London) 107, 276 (1915) Cauwood and Turner

TABLE X. AROMATIC AMINES

No. 5

NAME	p-Ethyl aniline p-Amino ethylbenzene	STRUCTURAL FORMULA
Mole % Pur. 99.63	Ref. 1	Molecular Formula $C_8H_{11}N$
Molecular Weight 121.176		

		Ref.
F.P. °C	-5.08	1
F.P. 100%	-4.87	4
B.P. °C		
760 mm	217.82	1
100	147.78	5
30	116.44	5
10	92.31	5
1	51.61	5
Pressure mm 25°C	0.1457	5
t_e	1340.3	5
Density g/ml 20°C	0.96787	1
d_4^t 25	0.96388	1
30	0.95987	4
a	0.98383	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.55535	1
25	1.55291	1
35	1.54825	1
"C"	0.7498	4
MR (Obs.)	40.197	4
MR (Calc.)	39.853	5
(nD-d/2)	1.07142	4
Dielectric	4.840	1
A | 148 to	7.24490	4
B | 340 °C	1813.6	4
C	198.	5
A* | 148 to	1.6206	5
B* | 255 °C	1712.3	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.57508	5
B' | 148 °C	2027.2	5
C'	216.	5
A'* 20 to	1.96742	5
B'* 148 °C	1925.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01783	1
consts. B°		
t_e °C	242.4	5

		Ref.
dt/dP °C/mm		
25°C	85.39	5
BP	0.05442	5
t_e	0.03466	5
30 mm	0.7892	5
ΔHm cal/g	21.0	4
ΔHv cal/g		
25°C	117.19	5
30 mm	105.16	5
BP	90.01	5
t_e	87.09	5
t_e (d, e)	86.33	5
$\Delta Hv/T_e$	20.47	5
d | 148 to	122.5	5
e | 230 °C	0.1494	5
d' | 20 to	120.5	5
e' | 148 °C	0.1317	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9452	5
t_e	0.9343	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.849	1
40	2.3149	1
60	1.5733	1
B^v | 35 to	875.3	4
A^v | 70 °C	3.56984	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		35.10	1
σ 30		34.14	1
40			
Parachor [P] 20°C		304.7	4
30		305.1	4
40			
Sugd.		314.7	5
Exp. L. l. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 6

NAME	n-Butylaniline n-Butyl aminobenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.82	Ref. 1	Molecular Formula $C_{10}H_{15}N$	Molecular Weight 149.138

		Ref.
F.P. °C	-14.40	1
F.P. 100%		
B.P. °C		
760 mm	241.59	1
100	169.26	5
30	136.69	5
10	111.65	5
1	69.59	5
Pressure mm 25°C	0.03415	5
t_e	1407.01	5
Density g/ml 20°C	0.93226	1
d_4^t 25	0.92835	1
30	0.92444	4
a	0.94790	4
b	-0.03378	4
Ref. Index n_D 20°C	1.53412	1
25	1.53167	1
30	1.52935	4
"C"	0.7507	4
MR (Obs.)	49.736	4
MR (Calc.)	49.089	5
(nD-d/2)	1.0780	4
Dielectric		
A | 140 to	7.29253	4
B | 370 °C	1917.28	4
C	193.	4
A* | 140 to	1.74100	5
B* | 280 °C	1812.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.43364	5
B' | 140 °C	2011.5	5
C'	201.	5
A'* 25 to	1.92009	5
B'* 140 °C	1917.1	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.03234	1
consts. B°		
t_e °C	269.64	5

		Ref.
dt/dP °C/mm		
25°C	322.92	5
BP	0.0563	5
t_e	0.03446	5
30 mm	0.8207	5
ΔHm cal/g		
ΔHv cal/g		
25°C	107.44	5
30 mm	90.92	5
BP	78.08	5
t_e	74.87	5
t_e (d, e)	74.65	5
$\Delta Hv/T_e$	20.57	5
d | 140 to	107.66	5
e | 270 °C	0.1224	5
d' | 25 to	111.14	5
e' | 140 °C	0.1479	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9316	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.4579	1
40	2.1212	1
60	1.4674	1
80	1.1127	1
B^v | 30 to	774.92	4
A^v | 90 °C	3.85239	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	33.85	1
30	32.88	1
40	31.98	1
Parachor [P] 20°C	385.9	4
30	386.3	4
40	386.9	4
Sugd.	385.6	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 7

NAME	4-Amino-1,3-dimethylbenzene 4-Amino-m-xylene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_8H_{11}N$ — Molecular Weight 121.176

		Ref.
F.P. °C	16.	3
F.P. 100%		
B.P. °C		
760 mm	214.0	3'
100	145.5	5
30	114.6	5
10	90.9	5
1	50.7	5
Pressure mm 25°C	0.1539	5
t_e	1324.7	5
Density g/ml 25°C	0.9723	3
d_4^t 50	0.9520	3
70	0.9355	3
a	0.9918	4
b	-0.0_378	4
Ref. Index n_D 25°C	1.55689	4
45	1.54729	3
50	1.54489	4
"C"	0.7483	4
MR (Obs.)	40.185≠	4
MR (Calc.)	39.853	5
(nD-d/2)	1.06899	4
Dielectric		
A | 115 to	7.2977	5
B | 340 °C	1819.8	5
C	198.	5
A* | 115 to	1.68241	5
B* | 250 °C	1721.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.63281	5
B' | 115 °C	2035.4	5
C'	216.	5
A'* 20 to	2.02577	5
B'* 115 °C	1933.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	237.82	5

		Ref.
dt/dP °C/mm		
25°C	80.52	5
BP	0.05330	5
t_e	0.03422	5
30 mm	0.07776	5
ΔHm cal/g		
ΔHv cal/g		
25°C	117.67	5
30 mm	105.75	5
BP	90.82	5
t_e	87.48	5
t_e (d, e)	87.24	5
$\Delta Hv/T_e$	20.74	5
d | 115 to	122.97	5
e | 240 °C	0.1503	5
d' | 20 to	120.99	5
e' | 115 °C	0.1330	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9485	5
t_e	0.9317	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 25°C		36.75	3
δ 50		34.46	3
70		32.38	3
Parachor [P] 25°C		307.2	4
50		308.2	4
70		308.8	4
Sugd.		314.7	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ 45°C

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 54, 2398 (1932); 3' Ber. 35, 3749, Junghahn

No. 8

NAME	o-Chloroaniline o-Amino chlorobenzene	STRUCTURAL FORMULA 

Mole % Pur. 99.86	Ref. 1	Molecular Formula C_6H_6ClN	Molecular Weight 127.570

		Ref.
F.P. °C	-1.94	1
F.P. 100%		
B.P. °C		
760 mm	208.84	1
100	139.48	4
30	108.43	4
10	84.55	4
1	44.3	5
Pressure mm 25°C	0.2533	5
t_e	1311.	5
Density g/ml 20°C	1.21266	1
d_4^t 25	1.20787	1
30	1.20308	4
a	1.23182	4
b	-0.0396	4
Ref. Index n_D 20°C	1.58894	1
25	1.58644	1
30	1.57441	1
"C"	0.6322	4
MR (Obs.)	35.45	4
MR (Calc.)	35.484	5
(nD-d/2)	0.98261	4
Dielectric		
A | 110 to	7.19240	4
B | 330 °C	1762.74	4
C	200.0	5
A* | 110 to	1.60261	5
B* | 240 °C	1664.35	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.55246	5
B' | 110 °C	1991.84	5
C'	219.4	5
A'* 25 to	1.96779	5
B'* 110 °C	1888.93	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01785	1
consts. B°		
t_e °C	232.59	5

		Ref.
dt/dP		
°C/mm		
25°C	51.44	5
BP	0.0542	5
t_e	0.0352	5
30 mm	0.7812	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.33	5
30 mm	96.80	5
BP	83.06	5
t_e	80.06	5
t_e (d,e)	79.81	5
$\Delta Hv/T_e$	20.19	5
d | 110 to	111.63	5
e | 230 °C	0.1368	5
d' | 25 to	109.19	5
e' | 110 °C	0.1143	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9482	5
t_e	0.9316	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.9157	1
40	1.8458	1
60	1.3057	1
80	1.0250	1
B^v | 40 to	706.49	4
A^v | 90 °C	2.01047	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension dynes/cm.	20°C	43.66	1
γ	30	42.54	1
	40	41.35	1
Parachor [P]	20°C	270.5	4
	30	270.8	4
	40	271.1	4
	Sugd.	273.9	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.		∞	
Benzene		∞	
Ether			
n-Heptane			
Ethanol			
Water		0.876	1
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation, absorption

LITERATURE REFERENCES:

No. 9

NAME	m-Chloroaniline m-Amino chlorobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.79	Ref. 1	Molecular Formula C_6H_6ClN — Molecular Weight 127.573

		Ref.
F. P. °C	-10.29	1
F. P. 100%		
B. P. °C 760 mm	229.92	1
100	158.16	1
30	125.95	4
10	101.15	4
1	59.3	5
Pressure mm 25°C	0.0838	5
t_e	1344.	5
Density g/ml 20°C	1.21606	1
d_4^t 25	1.21147	1
30	1.20688	4
a	1.23442	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.59414	1
25	1.59190	1
30	1.58028	1
"C"	0.6355	4
MR (Obs.)	35.50	4
MR (Calc.)	35.484	5
(nD-d/2)	0.98611	4
Dielectric		
A | 125 to	7.23603	4
B | 350 °C	1857.75	4
C	196.64	4
A* | 125 to	1.65667	5
B* | 265 °C	1764.50	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.59884	5
B' | 125 °C	2099.20	5
C'	216.96	5
A'* 25 to	2.0050	5
B'* 125 °C	1995.12	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01769	1
consts. B°		
t_e °C	255.63	5

		Ref.
dt/dP °C/mm		
25°C	144.58	5
BP	0.0560	5
t_e	0.0356	5
30 mm	0.8109	5
ΔHm cal/g	19.02	4
ΔHv cal/g		
25°C	114.36	5
30 mm	102.01	5
BP	86.21	5
t_e	82.74	5
t_e (d, e)	82.30	5
ΔHv/T_e	19.96	5
d | 125 to	121.15	5
e | 250 °C	0.1520	5
d' | 20 to	117.41	5
e' | 125 °C	0.1223	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9330	5
t_e	0.9135	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.3538	1
40	2.0285	1
60	1.3939	1
80	1.0387	1
B^v | 40 to	803.91	4
A^v | 90 °C	3.74043	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		45.68	1
ϑ 30		44.52	1
40		43.42	1
Parachor [P] 20°C		272.7	4
30		273.0	4
40		273.4	4
Sugd.		273.9	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.		∞	
Benzene		∞	
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation, chromotographed

LITERATURE REFERENCES:

No. 10

NAME	m-Aminobenzotrifluoride	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_6F_3N$ — Molecular Weight 161.118

		Ref.
F. P. °C	5.65	3
F. P. 100%		
B. P. °C		
760 mm	191.13	3
100	125.59	4
30	96.28	4
10	73.76	4
1	35.8	5
Pressure mm 25°C	0.4527	5
t_e	1247.	5
Density g/ml 20°C		
d_4^{t} 25		
30		
a		
b		
Ref. Index n_D 20°C	1.4788	3
25	1.4769	3
30	1.4750	3
"C"		
MR (Obs.)	34.785	5
MR (Calc.)		
(nD-d/2)		
Dielectric		
A | 95 to	7.17030	3
B | 370 °C	1650.21	3
C	193.58	3
A* | 95 to	1.71965	5
B* | 230 °C	1564.62	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.52897	5
B' | 95 °C	1864.69	5
C'	211.84	5
A'* 25 to	2.06433	5
B'* 95 °C	1769.39	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	211.44	5

		Ref.
dt/dP °C/mm		
25°C	28.86	5
BP	0.0513	5
t_e	0.0346	5
30 mm	0.7370	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.95	5
30 mm	76.15	5
BP	64.24	5
t_e	61.97	5
t_e (d, e)	61.69	5
$\Delta Hv/T_e$	20.60	5
d | 95 to	88.23	5
e | 210 °C	0.1255	5
d' | 25 to	86.69	5
e' | 95 °C	0.1095	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9410	5
t_e	0.9230	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C		
γ	30		
	40		
Parachor [P]	20°C		
	30		
	40		
	Sugd.	301.5	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1997 (1953) Kardon and Saylor

No. 1

NAME	Nitrobenzene		STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_6H_5No_2$	Molecular Weight 123.108

		Ref.
F.P. °C	5.7	3[7]
F.P. 100%		
B.P. °C		
760 mm	210.85	3[8]
100	139.83	5
30	108.2	5
10	83.9	5
1	43.1	5
Pressure mm 25°C	0.284	5
t_e	1317.0	5
Density g/ml 20°C	1.2032	3
d_4^t 25	1.1982	5
30	1.1936	3[2]
a	1.2232	4
b	-0.00100	4
Ref. Index n_D 20°C	1.55230	3[3]
25	1.55006	3[4]
30	1.54782	4
"C"	0.6001	4
MR (Obs.)	32.708	4
MR (Calc.)	32.507	5
(nD-d/2)	0.95070	4
Dielectric	34.89	3[5]
A | 108 to	7.08283	5
B | 300 °C	1722.2	5
C	199.	5
A* | 108 to	1.47568	5
B* | 250 °C	1623.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.55755	5
B' | 108 °C	2026.	5
C'	225.	5
A'* 20 to	1.95137	5
B'* 108 °C	1919.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	235.54	5

		Ref.
dt/dP		
°C/mm		
25°C	47.17	5
BP	0.05573	5
t_e	0.03615	5
30 mm	0.7934	5
ΔHm cal/g	22.50	3[6]
ΔHv cal/g		
25°C	107.14	5
30 mm	98.65	5
BP	84.30	5
t_e	80.85	5
t_e (d, e)	80.64	5
$\Delta Hv/T_e$	19.75	5
d | 108 to	113.78	5
e | 235 °C	0.1398	5
d' | 20 to	109.69	5
e' | 108 °C	0.1019	5
d_c g/ml		
v_c ml/g		
t_c °C	482.8	3[9]
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9305	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		43.33	5
σ 30		41.96	5
40		40.52	5
Parachor [P] 20°C			
30			
40			
Sugd.		262.5	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in [+]			
Acetone			
Carbon tet.			
Benzene		∞	
Ether		∞	
n-Heptane			
Ethanol			
Water			
Water in			

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE:

PURIFICATION:

LITERATURE REFERENCES: 3 Z. Anorg. Chem. 199, 91 (1931); 3[1] J. Chem. Soc. (London) 768 (1933) Sugden; 3[2] J. Chem. Soc. (London) 65, 1025 (1896) R. Perkins; 3[3] Thesis Freiburg (1919) E. Dummer; 3[4] J. Chem. Soc. (London) 127, 1049 (1925); 3[5] J. Chem. Soc. 570 (1930); 3[6] Z. Physik Chem. 72, 225 (1910); 3[7] J. Gen. Chem. (U.S.S.R.) 17, 665 (1947); Udovenko and Ayrapetova; 3[8] C. Zentral II 442 (1910) Z. El. Ch. 34, 112 Stachorski; 3[9] ICT.

No. 2

NAME	o-Ethylnitrobenzene	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 1	Molecular Formula $C_8H_9NO_2$
	Molecular Weight 151.160	

		Ref.
F. P. °C	-12.26	1
F. P. 100%		
B. P. °C 760 mm	232.52	4
100	159.4	4
30	126.73	4
10	101.6	5
1	59.4	5
Pressure mm 25°C	0.084	5
t_e	1373.	5
Density g/ml 20°C	1.12066	1
d_4^t 25	1.11602	1
30	1.11138	1
a	1.13922	4
b	-0.03928	4
Ref. Index n_D 20°C	1.53557	1
25	1.53332	1
30	1.52179	1
"C"	0.6260	4
MR (Obs.)	42.030	4
MR (Calc.)	41.743	5
(nD-d/2)	0.97524	4
Dielectric	21.9≠	1
A | 125 to	7.14960	4
B | 290 °C	1825.0	4
C	195.	5
A* | 130 to	1.61974	5
B* | 270 °C	1724.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.50205	5
B' | 125 °C	2058.9	5
C'	215.0	5
A'* 20 to	2.17972	5
B'* 125 °C	1955.4	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.02581	1
consts. B°		
t_e °C	259.91	5

		Ref.
dt/dP °C/mm		
25°C	144.64	5
BP	0.05723	5
t_e	0.03587	5
30 mm	0.8211	5
ΔHm cal/g	23.23	1
ΔHv cal/g		
25°C	96.22	5
30 mm	85.36	5
BP	72.73	5
t_e	69.74	5
t_e (d, e)	69.46	5
$\Delta Hv/T_e$	19.77	5
d | 125 to	100.49	5
e | 260 °C	0.1194	5
d' | 25 to	98.89	5
e' | 125 °C	0.1067	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9450	5
t_e	0.9257	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.2063	1
40	1.5363	1
60	1.1638	1
80	0.9173	1
B^V | 30 to	619.91	4
A^V | 90 °C	Σ.20719	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm.	20°C	38.93	1
ɣ	30	37.80	1
	40	36.76	1
Parachor [P]	20°C	336.9	4
	30	336.5	4
	40	338.1	4
	Sugd.	340.5#	5
Exp. L. l. %/wt. u. Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in + Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in		0.159	1

$T_R = 0.75\,T_c$ ≠ 0.2°C ≠ using O_2 as 60 + grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XII. AROMATIC ALCOHOLS (PHENYL ETHYL ALCOHOLS)

No. 1

NAME	Benzyl alcohol	STRUCTURAL FORMULA 
Mole % Pur. 99.93	Ref. 1	Molecular Formula C_7H_8O — Molecular Weight 108.134

		Ref.
F. P. °C	-15.19	1
F. P. 100%		
B. P. °C		
760 mm	205.1	1
100	141.15	4
30	111.9	4
10	89.23	5
1	50.51	5
Pressure mm 25°C	0.1469	5
t_e	1300.7	5
Density g/ml 20°C	1.04535	1
d_4^t 25	1.04156	1
30	1.03777	4
a	1.06051	4
b	-0.03758	4
Ref. Index n_D 20°C	1.54035	1
25	1.53837	1
30	1.53639	4
"C"	0.67673	4
MR (Obs.)	32.474	4
MR (Calc.)	32.450	5
(nD-d/2)	1.01768	4
Dielectric		
A | 112 to	7.58200	1
B | 330 °C	1904.3	1
C	200.	1
A* | 112 to	1.92156	5
B* | 240 °C	1806.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.93428	5
B' | 112 °C	2130.42	5
C'	218.	5
A'* 20 to	2.27748	5
B'* 112 °C	2028.06	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	226.22	5

		Ref.
dt/dP °C/mm		
25°C	81.9213	5
BP	0.04924	4
t_e	0.03185	5
30 mm	0.7397	5
ΔHm cal/g		
ΔHv cal/g		
25°C	135.75	5
30 mm	122.84	5
BP	106.39	5
t_e	102.99	5
t_e (d, e)	102.66	5
ΔHv/T_e	22.30	5
d | 112 to	142.59	5
e | 225 °C	0.1765	5
d' | 20 to	139.47	5
e' | 112 °C	0.1486	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9361	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		42.76	4
σ 30		41.27	4
40		40.07	4
Parachor [P] 20°C			
30			
40			
0 = 18 Sugd.		264.1	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 2

NAME	α-Phenyl ethyl alcohol α-Methylbenzyl alcohol	STRUCTURAL FORMULA 

Mole % Pur. ?	Ref. 1	Molecular Formula $C_8H_{10}O$	Molecular Weight 122.160

		Ref.
F. P. °C	Glassy	1
F. P. 100%		
B. P. °C		
760 mm	203.4	1
100	139.26	4
30	109.98	4
10	87.25	5
1	48.52	5
Pressure mm 25°C	0.1730	5
t_e	1295.6	5
Density g/ml 20°C	1.01353	1
d_4^t 25	1.00949	1
30	1.00545	4
a	1.02969	4
b	-0.0_3808	4
Ref. Index n_D 20°C	1.52752	1
25	1.52527	1
30	1.52302	4
"C"	0.68244	4
MR (Obs.)	37.085	4
MR (Calc.)	37.068	5
(nD-d/2)	1.02076	4
Dielectric		
A | 110 to	7.55432	1
B | 330 °C	1889.9	1
C	201.	1
A* | 110 to	1.94823	5
B* | 245 °C	1792.03	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.90607	5
B' | 110 °C	2115.01	5
C'	219.	5
A'* 20 to	2.30202	5
B'* 110 °C	2012.15	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	224.48	5

		Ref.
dt/dP °C/mm		
25°C	70.673	5
BP	0.04944	4
t_e	0.03211	5
30 mm	0.7408	5
ΔHm cal/g		
ΔHv cal/g		
25°C	118.32	5
30 mm	107.47	5
BP	93.07	5
t_e	90.04	5
t_e (d, e)	89.82	5
$\Delta Hv/T_e$	22.10	5
d | 110 to	124.43	5
e | 220 °C	0.1542	5
d' | 20 to	121.51	5
e' | 110 °C	0.1277	5
d_c g/ml		
v_c^c ml/g		
t_c^c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9357	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	10.9568	1
40	4.7356	1
60	2.5905	1
80	1.6233	1
B^v | 30 to	1286.0	4
A^v | 90 °C	4.56939	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		39.99	4
γ 30		38.73	4
40		37.50	4
Parachor [P]			
20°C			
30			
40			
0 = 15	Sugd.	303.1	5
Exp. L.			
%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XII. AROMATIC ALCOHOLS (PHENYL ETHYL ALCOHOLS)

No. 3

NAME	β-Phenyl ethyl alcohol Phenethyl alcohol	STRUCTURAL FORMULA 
Mole % Pur. ?	Ref. 1	Molecular Formula $C_8H_{10}O$ — Molecular Weight 122.160

		Ref.
F. P. °C	Glassy	1
F. P. 100%		
B. P. °C		
760 mm	218.2	1
100	151.33	4
30	120.93	4
10	97.39	5
1	57.38	5
Pressure mm 25°C	0.08837	5
t_e	1311.5	5
Density g/ml 20°C	1.02023	1
d_4^t 25	1.01642	1
30	1.01261	4
a	1.03547	4
b	-0.03762	4
Ref. Index n_D 20°C	1.53252	1
25	1.53052	1
30	1.52852	4
"C"	0.68402	4
MR (Obs.)	37.133	4
MR (Calc.)	37.068	5
(nD-d/2)	1.02241	4
Dielectric		
A | 121 to	7.46926	1
B | 340 °C	1905.1	1
C	197.	1
A* | 121 to	1.88168	5
B* | 260 °C	1814.82	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.80851	5
B' | 121 °C	2126.92	5
C'	215.	5
A'* 20 to	2.20184	5
B'* 121 °C	2025.12	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	240.81	5

		Ref.
dt/dP °C/mm		
25°C	133.0844	5
BP	0.05171	4
t_e	0.03332	5
30 mm	0.7681	5
ΔHm cal/g		
ΔHv cal/g		
25°C	122.99	5
30 mm	109.66	5
BP	93.08	5
t_e	89.62	5
t_e (d, e)	89.23	5
$\Delta Hv/T_e$	21.30	5
d | 121 to	130.28	5
e | 230 °C	0.1705	5
d' | 20 to	126.46	5
e' | 121 °C	0.1389	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9347	5
t_e	0.9171	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		41.06	4
γ 30		39.95	4
40		38.67	4
Parachor [P] 20°C			
30			
40			
Sugd.		303.1	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

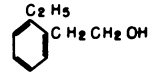
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 4

NAME	o-Ethyl-β-phenyl ethyl alcohol o-Ethylphenethyl alcohol	STRUCTURAL FORMULA 
Mole % Pur. ?	Ref. 1	Molecular Formula $C_{10}H_{14}O$ — Molecular Weight 150.212

		Ref.
F.P. °C	Glassy	1
F.P. 100%		
B.P. °C		
760 mm	249.7	1
100	179.38	4
30	147.32	4
10	122.45	5
1	80.13	5
Pressure		
mm 25°C	0.01436	5
t_e	1410.6	5
Density		
g/ml 20°C	0.99720	1
d_4^t 25	0.99365	1
30	0.99010	4
a	1.0114	4
b	-0.0_3710	4
Ref. Index		
n_D 20°C	1.53045	1
25	1.52859	1
30	1.52673	4
"C"	0.6973	4
MR (Obs.)	46.547	4
MR (Calc.)	46.304	5
(nD-d/2)	1.03185	4
Dielectric		
A | 147 to	7.53399	1
B | 380 °C	2055.2	1
C	192.	1
A* | 147 to	1.99777	5
B* | 290 °C	1955.36	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.85529	5
B' | 147 °C	2279.03	5
C'	210.	5
A'* 20 to	2.32651	5
B'* 147 °C	2176.55	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	276.73	5

		Ref.
dt/dP		
°C/mm		
25°C	732.622	5
BP	0.05424	4
t_e	0.03291	5
30 mm	0.8110	5
ΔHm cal/g		
ΔHv cal/g		
25°C	111.78	5
30 mm	96.15	5
BP	82.15	5
t_e	78.79	5
t_e (d, e)	78.45	5
$\Delta Hv/T_e$	21.52	5
d | 147 to	116.30	5
e | 270 °C	0.1368	5
d' | 20 to	114.98	5
e' | 147 °C	0.1278	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9404	5
t_e	0.9219	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	40.97	4
γ 30	39.82	4
40	38.68	4
Parachor [P]		
20°C		
30		
40		
Sugd.	381.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XII. AROMATIC ALCOHOLS (PHENYL ETHYL ALCOHOLS)

No. 5

NAME	p-Ethyl-β-phenyl ethyl alcohol p-Ethylphenethyl alcohol	STRUCTURAL FORMULA 
Mole % Pur. 99.17	Ref. 1	Molecular Formula $C_{10}H_{14}O$ — Molecular Weight 150.212

		Ref.
F.P. °C	7.87	1
F.P. 100%		
B.P. °C		
760 mm	250.0	1
100	179.14	4
30	146.91	4
10	121.95	5
1	79.53	5
Pressure mm 25°C	0.01519	5
t_e	1411.5	5
Density g/ml 20°C	0.98066	1
d_4^t 25	0.97708	1
30	0.97350	4
a	0.99498	4
b	-0.0_3716	4
Ref. Index n_D 20°C	1.52293	1
25	1.52107	1
30	1.51921	4
"C"	0.69959	4
MR (Obs.)	46.786	4
MR (Calc.)	46.304	5
(nD-d/2)	1.03260	4
Dielectric		
A | 147 to	7.48252	1
B | 380 °C	2029.3	1
C	191.	1
A* | 147 to	1.94673	5
B* | 290 °C	1929.88	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.80242	5
B' | 147 °C	2251.25	5
C'	209.	5
A'* 20 to	2.27512	5
B'* 147 °C	2149.56	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	277.35	5

		Ref.
dt/dP °C/mm		
25°C	695.204	5
BP	0.05476	4
t_e	0.03326	5
30 mm	0.8146	5
ΔHm cal/g		
ΔHv cal/g		
25°C	111.37	5
30 mm	95.55	5
BP	81.46	5
t_e	78.04	5
t_e (d, e)	77.72	5
$\Delta Hv/T_e$	21.29	5
d | 147 to	115.62	5
e | 275 °C	0.1366	5
d' | 20 to	114.61	5
e' | 147 °C	0.1298	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	5
t_e	0.9215	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension dynes/cm. 20°C		38.32	4
γ 30		37.56	4
40		36.06	4
Parachor [P] 20°C			
30			
40			
Sugd.		381.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 6

NAME	p-Chloro-β-phenyl ethyl alcohol p-Chlorophenethyl alcohol	STRUCTURAL FORMULA
Mole % Pur. ?	Ref. 1	Molecular Formula C_8H_9ClO — Molecular Weight 156.609

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	259.16	1
100	186.17	4
30	153.07	4
10	127.49	5
1	84.10	5
Pressure		
mm 25°C	0.01093	5
t_e	1436.96	5
Density		
g/ml 20°C	1.18036	1
d_4^t 25	1.17630	1
d_4^{30}	1.17224	4
a	1.19660	4
b	-0.03812	4
Ref. Index		
n_D 20°C	1.54865	1
25	1.54670	1
30	1.54475	4
"C"	0.59411	4
MR (Obs.)	42.181	4
MR (Calc.)	41.935	5
(nD-d/2)	0.95847	4
Dielectric		
A | 153 to	7.42043	1
B | 400 °C	2039.0	1
C	190.	1
A* | 153 to	1.89572	5
B* | 300 °C	1937.82	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.73226	5
B' | 153 °C	2258.57	5
C'	208.	1
A'* 20 to	2.22051	5
B'* 153 °C	2156.76	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	288.30	5

		Ref.
dt/dP		
°C/mm		
25°C	954.659	5
BP	0.05654	4
t_e	0.03391	5
30 mm	0.8356	5
ΔHm cal/g		
ΔHv cal/g		
25°C	108.09	5
30 mm	91.97	5
BP	78.36	5
t_e	74.97	5
t_e (d, e)	74.62	5
$\Delta Hv/T_e$	20.91	5
d | 153 to	111.61	5
e | 285 °C	0.1283	5
d' | 20 to	111.23	5
e' | 153 °C	0.1258	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1 0000	5
BP	0.9400	5
t_e	0.9198	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	43.28	4
γ 30	42.08	4
40	40.94	4
Parachor [P]		
20°C		
30		
40		
Sugd.	340.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XIII. AROMATIC KETONES

No. 1

NAME	Acetophenone Methyl phenyl ketone	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_8O	Molecular Weight 124.176

		Ref.
F.P. °C	19.655	3
F.P. 100%		
B.P. °C		
760 mm	202.0	3
100	133.2	3
30	102.4	5
10	78.8	5
1	39.0	5
Pressure mm 25°C	0.3715	5
t_e	1294.2	5
Density g/ml 20°C	1.02810	3
d_4^t 25	1.02382	3
30	1.01947	3
a	1.04522	5
b	-0.03856	5
Ref. Index n_D 15°C	1.53075	3
25	1.53423	3
30	1.53380	4
"C"	0.6837	4
MR (Obs.)	37.715	4
MR (Calc.)	37.554	5
(nD-d/2)	1.02232	4
Dielectric		
A | 102 to	7.15738	4
B | 330 °C	1723.46	4
C	201.	4
A* | 102 to	1.55909	5
B* | 245 °C	1625.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.51308	4
B' | 102 °C	1946.1	4
C'	220.	5
A'* 20 to	1.92025	5
B'* 102 °C	1843.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	225.03	5

		Ref.
dt/dP °C/mm		
25°C	36.06	5
BP	0.05385	4
t_e	0.03534	5
30 mm	0.7733	5
ΔHm cal/g		
ΔHv cal/g		
25°C	106.23	5
30 mm	97.33	5
BP	83.54	5
t_e	80.56	5
t_e (d, e)	80.35	5
$\Delta Hv/T_e$	20.08	5
d | 102 to	111.5	5
e | 225 °C	0.1384	5
d' | 20 to	109.11	5
e' | 102 °C	0.1150	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9498	5
t_e	0.9336	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 15°C		40.09	3
δ 30		39.15	3
40		38.21	3
Parachor [P] 20°C			
30			
40			
0 = 18 Sugd.		268.9	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Timmermans

No. 2

NAME	Benzophenone Diphenylketone	STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 1	Molecular Formula $C_{13}H_{10}O$ — Molecular Weight 182.210

		Ref.
F.P. °C	47.93	1
F.P. 100%		
B.P. °C		
760 mm	305.47	1
100	224.45	4
30	187.98	5
10	159.92	5
1	112.73	5
Pressure mm 50°C	0.00932	5
t_e	1525.4	5
Density g/ml 50°C	1.0846	3
d_4^t 55	1.0805	3
60	1.0765	3
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	55.043	5
Dielectric	55°10.98	1
A | 190 to	7.28937	1
B | 600 °C	2144.6	1
C	181.	1
A* | 190 to	1.83504	5
B* | 355 °C	2050.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.57278	5
B' | 190 °C	2358.9	5
C'	199.	5
A'* 25 to	2.26811	5
B'* 190 °C	2317.7	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°	0.01983	1
t_e °C	341.31	5

		Ref.
dt/dP °C/mm		
50°C	11785.2	5
BP	0.06306	5
t_e	0.03622	5
30 mm	0.9190	5
ΔHm cal/g	22.2875	4
ΔHv cal/g		
25°C	107.43	5
30 mm	84.13	5
BP	70.02	5
t_e	65.91	5
t_e (d,e)	65.72	5
$\Delta Hv/T_e$	19.54	5
d | 190 to	106.71	5
e | 345 °C	0.1201	5
d' | 25 to	111.00	5
e' | 190 °C	0.1430	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9188	5
t_e	0.8922	5
t_c		
ΔHc kcal/m	1556.	3
ΔHf		
ΔFf		
Viscosity centistokes		
η 60 °C	3.7982	1
80	2.4187	1
100	1.7016	1
120	1.2899	1
B^V | 70 to	947.93	4
A^V | 130 °C	3.69974	4
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h			
f' |	to		
g' |	°K		
h'			
m |	to		
n |	°K		
o			
m' |	to		
n' |	°K		
o'			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.		415.8	5
Exp. L. l. %/wt. u, Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in + Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water 60°C		0.0076	1
Water in 60°C		0.793	1

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES: 3 J. Chem. Soc. 69, 1025 (1896) H. Perkin

TABLE XIII. AROMATIC KETONES

No. 3

NAME	p-Chloroacetophenone	STRUCTURAL FORMULA
Mole % Pur. 98.45	Ref. 1	Molecular Formula C_8H_7ClO	Molecular Weight 154.593

		Ref.
F.P. °C	18.40	1
F.P. 100%		
B.P. °C 760 mm	237.2	1
100	163.88	4
30	131.05	4
10	105.84	5
1	63.42	5
Pressure mm 25°C	0.06097	5
t_e	1384.6	5
Density g/ml 20°C	1.19224	1
d_4^t 25	1.18752	1
30	1.18280	4
a	1.21072	1
b	-0.0_3924	1
Ref. Index n_D 20°C	1.55498	1
25	1.55283	1
30	1.55022	4
"C"	0.60835	1
MR (Obs.)	41.617	4
MR (Calc.)	40.421	5
(nD-d/2)	0.95886	4
Dielectric		
A | 131 to	7.17747	1
B | 350 °C	1852.9	1
C	194.	1
A* | 131 to	1.65578	5
B* | 275 °C	1752.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.49315	5
B' | 131 °C	2063.8	5
C'	212.	5
A'* 25 to	1.98545	5
B'* 131 °C	1962.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	265.08	5

		Ref.
dt/dP °C/mm		
25°C	193.85	5
BP	0.05735	5
t_e	0.03568	5
30 mm	0.8255	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.70	5
30 mm	84.82	5
BP	72.29	5
t_e	69.20	5
t_e (d, e)	69.00	5
$\Delta Hv/T_e$	19.88	5
d | 131 to	100.30	5
e | 265 °C	0.1181	5
d' | 25 to	99.51	5
e' | 131 °C	0.1120	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9447	5
t_e	0.9246	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.43	5
30	28.50	5
40	27.64	5
Parachor [P] 20°C		
30		
40		
Sugd.	302.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 4

NAME	Propiophenone Ethyl phenyl ketone	STRUCTURAL FORMULA
Mole % Pur. 99.57	Ref. 1	Molecular Formula $C_9H_{10}O$
		Molecular Weight 134.170

		Ref.
F.P. °C	18.61	1
F.P. 100%		
B.P. °C		
760 mm	217.48	1
100	147.30	5
30	115.83	5
10	91.63	5
1	50.85	5
Pressure mm 25°C	0.15519	5
t_e	1338.4	5
Density g/ml 20°C	1.00962	1
d_4^t 25	1.00531	1
30	1.0001	4
a	1.02686	1
b	-0.03862	1
Ref. Index n_D 20°C	1.52684	1
25	1.52450	1
30	1.52197	4
"C"	0.6842	1
MR (Obs.)	40.845	4
MR (Calc.)	40.172	5
(nD-d/2)	1.02203	4
Dielectric		
A | 115 to	7.21435	4
B | 350 °C	1800.5	4
C	198.	5
A* | 115 to	1.63632	5
B* | 252 °C	1699.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.54342	5
B' | 115 °C	2012.9	5
C'	216.	5
A'* 25 to	1.97979	5
B'* 115 °C	1911.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	242.5	5

		Ref.
dt/dP °C/mm		
25°C	80.74	5
BP	0.05479	4
t_e	0.03496	5
30 mm	0.79187	5
ΔHm cal/g		
ΔHv cal/g		
25°C	105.1	5
30 mm	94.36	5
BP	81.01	5
t_e	77.93	5
t_e (d, e)	77.73	5
$\Delta Hv/T_e$	20.28	5
d | 115 to	109.56	5
e | 242 °C	0.1313	5
d' | 25 to	108.06	5
e' | 115 °C	0.1183	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9329	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 30°C		36.42	1
γ 40		35.21	1
50		34.16	1
Parachor [P]			
30°C		330.9	4
40		329.3	4
50		329.8	4
Sugd.		331.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water		0.0075	1
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow, Lit.

PURIFICATION: Distillation, Lit.

LITERATURE REFERENCES: 3 Jr. Chem. Soc. (London) 1948, p. 607, A. I. Vogel

TABLE XIV. AROMATIC ESTERS

No. 1

NAME	Methyl benzoate	STRUCTURAL FORMULA
Mole % Pur. 99.80	Ref. 1	Molecular Formula $C_8H_8O_2$	Molecular Weight 136.144	

		Ref.
F.P. °C	-12.38	1
F.P. 100%		
B.P. °C		
760 mm	199.35	1
100	130.9	4
30	100.46	4
10	77.1	4
1	38.0	5
Pressure		
mm 25°C	0.3944	5
t_e	1295.	5
Density		
g/ml 20°C	1.08854	1
d_4^t 25	1.08377	1
30	1.07900	4
a	1.10762	4
b	-0.0_3954	4
Ref. Index		
n_D 20°C	1.51679	1
25	1.51457	1
50	1.50298	1
"C"		
MR (Obs.)	37.825	4
MR (Calc.)	31.424	5
(nD-d/2)	0.97252	5
Dielectric		
A | 100 to	7.07832	1
B | 260°C	1656.25	1
C	195.23	1
A* | 100 to	1.51406	5
B* | 230°C	1557.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.4312	5
B' | 100°C	1871.5	5
C'	213.9	5
A'* 25 to	1.8877	5
B'* 100°C	1774.0	5
Ac | 260 to	7.3186	5
Bc | t_c °C	1866.	5
Cc	218.7	5
Cryos. A°	-0.01722	1
consts. B°		
t_e °C	222.37	5

		Ref.
dt/dP		
°C/mm		
25°C	33.56	5
BP	0.05371	4
t_e	0.0353	5
30 mm	0.7642	4
ΔHm cal/g	17.09	4
ΔHv cal/g		
25°C	98.03	5
30 mm	88.89	5
BP	75.81	5
t_e	73.15	5
t_e (d, e)	72.77	5
ΔHv/T_e	20.10	5
d | 100 to	102.17	5
e | 210 °C	0.1322	5
d' | 25 to	101.06	5
e' | 100 °C	0.1211	5
d_c g/ml	0.37	5
v_c ml/g	2.71	5
t_c °C	438.	5
P_c mm	30000.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9392	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	1.8904	1
40	1.3172	1
60	0.9891	1
80	0.7838	1
B^v | 30 to	623.2	4
A^v | 90 °C	2.12977	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		37.90	1
γ 30		36.64	1
40		35.48	1
Parachor [P]			
20°C		310.3	4
30		310.4	4
40		310.7	4
Sugd.		310.9	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$^TR = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XV. CYCLOPENTANES

No. 1

NAME	Cyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.98	Ref. 2	Molecular Formula C_5H_{10} — Molecular Weight 70.130

		Ref.
F. P. °C	-93.879	2
F. P. 100%		
B. P. °C 760 mm	49.262	2
100	-1.3	2
30	-23.55	4
10	-40.4	4
1	-68.	5
Pressure mm 25°C	317.5	4
t_e	873.3	5
Density g/ml 20°C	0.74538	2
d_4^t 25	0.74045	2
30	0.73549	4
a	0.76527	4
b	-0.0_3944	4
Ref. Index n_D 20°C	1.40645	2
25	1.40363	2
30	1.40074	4
"C"	0.7264	4
MR (Obs.)	23.133	2
MR (Calc.)	23.090	5
(nD-d/2)	1.03376	2
Dielectric	20° 1.965	3
A | -25 to	6.88676	2
B | 110 °C	1124.162	2
C	231.361	2
A* | -25 to	1.17294	4
B* | 70 °C	1047.8	4
K	20.	5
c	-0.09169	4
t_k to	92.	4
t_x °C	290.	5
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac | 110 to	7.41293	4
Bc | t_c °C	1512.9	4
Cc	286.1	4
Cryos. A*	0.00228	2
consts. B*		
t_e °C	53.56	5

		Ref.
dt/dP °C/mm		
25°C	0.07998	4
BP	0.04003	2
t_e	0.0359	5
30 mm	0.5561	4
ΔHm cal/g	2.075	2
ΔHv cal/g 25°C	97.22	2
30 mm	105.85	5
BP	93.03	2
t_e	92.26	5
t_e (d, e)	92.27	5
$\Delta Hv/T_e$	19.80	5
d | -25 to	101.71	5
e | 55 °C	0.1761	5
d' | to		
e' | °C		
d_c g/ml	0.270	2
v_c ml/g	3.70	2
t_c °C	238.60	2
P_c mm	33858.	2
PV/RT 25°C	0.9813	4
30 mm	1.0000	5
BP	0.9643	4
t_e	0.9606	5
t_c	0.276	2
ΔHc kcal/m	740.79	2
ΔHf	-25.30	2
ΔFf	8.70	2
Viscosity centistokes η -10 °C	0.815	2
0	0.726	2
20	0.589	2
40	0.490	2
B^v | -10 to	365.24	4
A^v | 50 °C	2.52405	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300 °K	0.28490	2
400	0.40268	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.1231	4
n	600 °K	0.0015	4
o		-0.0_646	4
m'	700 to	-0.0598	4
n'	1000 °K	0.0014	4
o'		-0.0_650	4
Surface tension dynes/cm. 20°C		21.77	5
30		20.58	5
40		19.42	5
Parachor [P] 20°C			
30			
40			
Sugd.		203.5	5
Exp. L. 1. %/wt. u.			
Dispersion		94.2	2
Flash Point °C		-42.0	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		1161.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

No. 2

NAME	Methylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{12}	Molecular Weight 84.156

		Ref.
F.P. °C	-142.455	2
F.P. 100%		
B.P. °C		
760 mm	71.812	2
100	17.86	2
30	-5.82	4
10	-23.7	4
1	-53.2	5
Pressure mm 25°C	137.5	4
t_e	927.6	5
Density g/ml 20°C	0.74864	2
d_4^t 25	0.74394	2
30	0.73922	4
a	0.76748	4
b	-0.0_392	4
Ref. Index n_D 20°C	1.40970	2
25	1.40700	2
30	1.40425	4
"C"	0.7287	4
MR (Obs.)	27.833	2
MR (Calc.)	27.708	5
(nD-d/2)	1.03538	2
Dielectric	20° 1.985	3
A | -5 to	6.86283	2
B | 125 °C	1186.059	2
C	226.042	2
A* | -5 to	1.21951	4
B* | 90 °C	1109.8	4
K	20.	5
c	-0.08702	4
t_k | to	97.	4
t_x | °C	312.8	5
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 125 to	7.34080	4
Bc | t_c °C	1546.9	4
Cc	276.1	4
Cryos. A*	0.04878	2
consts. B*	0.0046	2
t_e °C	78.43	5

		Ref.
dt/dP °C/mm		
25°C	0.1678	4
BP	0.04274	2
t_e	0.0366	5
30 mm	0.59195	4
ΔHm cal/g	19.678	2
ΔHv cal/g		
25°C	89.83	2
30 mm	95.06	5
BP	82.18	2
t_e	81.11	5
t_e (d, e)	81.08	5
$\Delta Hv/T_e$	19.41	5
d | -5 to	94.10	5
e | 75 °C	0.1659	5
d' | to		
e' | °C		
d_c g/ml	0.264	2
v_c ml/g	3.79	2
t_c °C	259.61	2
P_c mm	28394.	2
PV/RT		
25°C	0.9881	4
30 mm	1.0000	5
BP	0.9540	4
t_e	0.9482	5
t_c	0.273	2
ΔHc kcal/m	885.60	2
ΔHf	-33.07	2
ΔFf	7.53	2
Viscosity centistokes		
η 20 °C	0.677	2
40	0.555	2
60	0.464	2
70	0.428	2
B^v | -20 to	390.17	4
A^v | 30 °C	Σ.49985	4
(B^v) | 30 to	404.34	4
(A^v) | 80 °C	Σ.45329	4
c_p liq. °K		
c_p vap. 300 °K	0.31442	2
400	0.42908	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to	-0.0879		4
n | 600 °K	0.0015		4
o |	-0.0_649		4
m' | 700 to	-0.0078		4
n' | 1000 °K	0.0013		4
o' |	-0.0_647		4
Surface tension dynes/cm. 20°C	21.60		5
γ 30	20.50		5
40	19.43		5
Parachor [P] 20°C			
30			
40			
Sugd.	242.5		5
Exp. L.1.%/wt. u.			
Dispersion	96.1		2
Flash Point °C	-25.0		5
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared	1162.		1
Solubility in +			
Acetone	∞		
Carbon tet.	∞		
Benzene	∞		
Ether	∞		
n-Heptane	∞		
Ethanol	∞		
Water			
Water in			
Viscosity centistokes			
-10°C	0.960		2
0	0.847		2

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

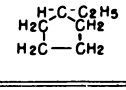
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS Circ. 514

TABLE XV. CYCLOPENTANES

No. 3

NAME	Ethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 2	Molecular Formula C_7H_{14}	Molecular Weight 98.182	

		Ref.
F.P. °C	-138.446	2
F.P. 100%		
B.P. °C 760 mm	103.466	2
100	45.045	2
30	19.36	4
10	-0.09	4
1	-32.	5
Pressure mm 25°C	39.93	4
t_e	1034.	5
Density g/ml 20°C	0.76647	2
d_4^t 25	0.76217	2
30	0.75786	4
a	0.78366	4
b	-0.0_3385	4
Ref. Index n_D 20°C	1.41981	2
25	1.41730	2
30	1.41483	4
"C"	0.7283	4
MR (Obs.)	32.403	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03657	2
Dielectric	2.016	5
A | 20 to	6.88709	2
B | 155 °C	1298.599	2
C	220.675	2
A* | 20 to	1.25274	4
B* | 125 °C	1210.926	4
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 155 to	7.33306	4
Bc | t_c °C	1654.1	4
Cc	268.9	4
Cryos. A°	0.04553	2
consts. B°		
t_e °C	114.65	5

		Ref.
dt/dP °C/mm 25°C	0.5056	4
BP	0.04623	2
t_e	0.0364	5
30 mm	0.6423	4
ΔHm cal/g		
ΔHv cal/g 25°C	88.81	2
30 mm	89.90	5
BP	78.58	2
t_e	77.06	5
t_e (d, e)	77.07	5
$\Delta Hv/T_e$	19.51	5
d | 20 to	92.51	5
e | 115 °C	0.1346	5
d' | to		
e' | °C		
d_c g/ml	0.262	2
v_c ml/g	3.817	2
t_c °C	296.30	2
P_c mm	25483.	2
PV/RT 25°C	0.9963	4
30 mm	1.0000	5
BP	0.9661	4
t_e	0.9580	5
t_c	0.269	2
ΔHc kcal/m	1032.57	2
ΔHf	-39.10	2
ΔFf	8.91	2
Viscosity centistokes η 20 °C	0.740	2
40	0.608	2
60	0.513	2
70	0.474	2
B^v | -20 to	387.70	4
A^v | 30 °C	$\bar{Z}$.54691	4
(B^v) | 30 to	387.39	4
(A^v) | 80 °C	$\bar{Z}$.54701	4
c_p liq. °K		
c_p vap. 300°K	0.32338	2
400	0.44703	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.2309	4
n | 600 °K		0.0023	4
o		-0.0_515	4
m' | 700 to		0.0098	4
n' | 1000 °K		0.0013	4
o'		-0.0_645	4
Surface tension dynes/cm. 20°C		23.30	5
γ 30		22.26	5
40		21.25	5
Parachor [P] 20°C			
30			
40			
Sugd.		281.5	5
Exp. L.1.%/wt. u. Dispersion		95.4	2
Flash Point °C		-1.0	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes -10°C		1.047	2
0		0.924	2

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	1,1-Dimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.97	Ref. 2	Molecular Formula C_7H_{14}
	Molecular Weight 98.182	

		Ref.
F.P. °C	-69.795	2
F.P. 100%		
B.P. °C		
760 mm	87.846	2
100	31.202	2
30	6.4148	4
10	-12.31	4
1	-43.1	5
Pressure mm 25°C	75.69	4
t_e	981.	5
Density g/ml 20°C	0.75448	2
d_4^t 25	0.74991	2
30	0.74533	4
a	0.77276	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.41356	2
25	1.41091	2
30	1.40823	4
"C"	0.7295	4
MR (Obs.)	32.489	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03632	2
Dielectric	1.998	5
A 0 to	6.81724	2
B 140 °C	1219.474	2
C	221.946	2
A* 0 to	1.21309	4
B* 110 °C	1138.47	4
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 140 to	7.61456	4
Bc t_c °C	1863.9	4
Cc	307.3	4
Cryos. A°	0.00314	2
consts. B°		
t_e °C	96.81	5

		Ref.
dt/dP °C/mm		
25°C	0.2869	4
BP	0.04497	2
t_e	0.0369	5
30 mm	0.6191	4
ΔHm cal/g		
ΔHv cal/g		
25°C	82.29	2
30 mm	85.21	5
BP	73.73	2
t_e	72.48	5
t_e (d,e)	72.47	5
$\Delta Hv/T_e$	19.23	5
d 0 to	86.11	5
e 100 °C	0.1409	5
d' to		
e' °C		
d_c g/ml	0.28	2
v_c ml/g	3.57	2
t_c °C	277.	2
P_c mm	26600.	2
PV/RT		
25°C	0.9935	4
30 mm	1.0000	5
BP	0.9599	4
t_e	0.9527	5
t_c	0.27	2
ΔHc kcal/m	1029.89	2
ΔHf	-41.14	2
ΔFf	7.96	2
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.32755	2
400	0.44356	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0773	4
n	600 °K	0.0015	4
o		-0.0_647	4
m'	700 to	0.0221	4
n'	1000 °K	0.0013	4
o'		-0.0_646	4
Surface tension dynes/cm. 20°C		21.86	5
γ 30		20.80	5
40		19.76	5
Parachor [P] 20°C			
30			
40			
Sugd.		281.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.2	2
Flash Point °C		-12.	5
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XV. CYCLOPENTANES

No. 5

NAME	cis-1,2-Dimethylcyclopentane		STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 2	Molecular Formula C_7H_{14}	Molecular Weight 98.182

		Ref.
F.P. °C	-53.896	2
F.P. 100%		
B.P. °C		
760 mm	99.532	2
100	41.465	2
30	16.00	4
10	-3.26	4
1	-34.9	5
Pressure mm 25°C	47.242	4
t_e	1020.	5
Density g/ml 20°C	0.77262	2
d_4^t 25	0.76807	2
30	0.76351	4
a	0.79080	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.42217	2
25	1.41963	2
30	1.41691	4
"C"	0.7264	4
MR (Obs.)	32.304	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03586	2
Dielectric	2.023	5
A | 10 to	6.85008	2
B | 150 °C	1269.140	2
C	220.209	2
A* | 10 to	1.22418	4
B* | 120 °C	1183.67	4
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 150 to	7.44124	4
Bc | t_c °C	1745.6	4
Cc	284.3	4
Cryos. A*	0.00415	2
consts. B*		
t_e °C	110.18	5

		Ref.
dt/dP °C/mm		
25°C	0.4355	4
BP	0.04603	2
t_e	0.0366	5
30 mm	0.6364	4
ΔHm cal/g		
ΔHv cal/g		
25°C	87.07	2
30 mm	88.66	5
BP	77.16	2
t_e	75.70	5
t_e (d, e)	75.69	5
$\Delta Hv/T_e$	19.39	5
d | 10 to	90.86	5
e | 10 °C	0.1377	5
d' | to		
e' | °C		
d_c g/ml	0.27	2
v_c ml/g	3.70	2
t_c °C	292.	2
P_c mm	25840.	2
PV/RT		
25°C	0.9957	4
30 mm	1.0000	5
BP	0.9646	4
t_e	0.9566	5
t_c	0.27	2
ΔHc kcal/m	1031.98	2
ΔHf	-39.52	2
ΔFf	9.29	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.32939	2
400	0.44479	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0762	4
n | 600 °K		0.0015	4
o		-0.0_649	4
m' | 700 to		0.0234	4
n' | 1000 °K		0.0013	4
o'		-0.0_646	4
Surface tension			
dynes/cm. 20°C		24.05	5
σ 30		22.93	5
40		21.83	5
Parachor [P]			
20°C			
30			
40			
Sugd.		281.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.3	2
Flash Point °C		-4.0	5
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	trans-1,2-Dimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.97	Ref. 2	Molecular Formula C_7H_{14}	Molecular Weight 98.182

		Ref.
F.P. °C	-117.58	2
F.P. 100%		
B.P. °C		
760 mm	91.869	2
100	34.856	2
30	9.86	4
10	-9.0	2
1	-40.1	4
Pressure mm 25°C	64.039	4
t_e	994.	5
Density g/ml 20°C	0.75144	2
d_4^t 25	0.74686	2
30	0.74227	4
a	0.76975	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.41200	2
25	1.40941	2
30	1.40667	4
"C"	0.7298	4
MR (Obs.)	32.511	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03628	2
Dielectric	1.994	5
A | 0 to	6.84422	2
B | 145 °C	1242.748	2
C	221.686	2
A* | 0 to	1.23203	4
B* | 110 °C	1159.99	4
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 145 to	7.36128	4
Bc | t_c °C	1648.7	4
Cc	277.1	4
Cryos. A*	0.03202	2
consts. B*	0.003	2
t_e °C	101.38	5

		Ref.
dt/dP °C/mm		
25°C	0.3321	4
BP	0.04521	2
t_e	0.0367	5
30 mm	0.6245	4
ΔHm cal/g		
ΔHv cal/g		
25°C	84.12	2
30 mm	86.55	5
BP	75.12	2
t_e	73.80	5
t_e (d,e)	73.79	5
$\Delta Hv/T_e$	19.34	5
d | 10 to	87.93	5
e | 100 °C	0.1394	5
d' | to		
e' | °C		
d_c g/ml	0.27	2
v_c ml/g	3.70	2
t_c °C	282.	2
P_c mm	25840.	2
PV/RT		
25°C	0.9944	4
30 mm	1.0000	5
BP	0.9616	4
t_e	0.9541	5
t_c	0.27	2
ΔHc kcal/m	1030.27	2
ΔHf	-40.94	2
ΔFf	7.70	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33041	2
400	0.44519	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	-0.0720	4
n | 600 °K	0.0015	4
o |	-0.0_648	4
m' | 700 to	0.0530	4
n' | 1000 °K	0.0012	4
o' |	-0.0_642	4
Surface tension dynes/cm. 20°C	21.51	5
γ 30	20.47	5
40	19.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	281.5	5
Exp. L.1.%/wt. u.		
Dispersion	96.4	2
Flash Point °C	-10.0	5
Fire Point		
M Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	cis-1,3-Dimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_7H_{14}	Molecular Weight 98.182

		Ref.
F.P. °C	-133.975	2
F.P. 100%		
B.P. °C 760 mm	91.725	2
100	34.679	2
30	9.68	4
10	-9.2	4
1	-40.3	5
Pressure mm 25°C	64.58	4
t_e	994.	5
Density g/ml 20°C	0.74880	2
d_4^t 25	0.74435	2
30	0.73989	4
a	0.76659	4
b	-0.0_3388	4
Ref. Index n_D 20°C	1.41074	2
25	1.40813	2
30	1.40555	4
"C"	0.7303	4
MR (Obs.)	32.537	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03634	2
Dielectric	1.990	5
A, B, C 10 to 145 °C	6.83817, 1240.023, 221.621	2
A*, B* 10 to 110 °C	1.22680, 1157.47	4
K		
c		
t_k, t_x to °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac, Bc, Cc 145 to t_c °C	7.21251, 1528.2, 261.8	4
Cryos. A* consts. B*	0.04515	2
t_e °C	101.22	5

		Ref.
dt/dP °C/mm 25°C	0.3298	4
BP	0.04525	2
t_e	0.0367	5
30 mm	0.6246	4
ΔHm cal/g		
ΔHv cal/g 25°C	84.01	2
30 mm	86.44	5
BP	74.97	2
t_e	73.65	5
t_e (d, e)	73.64	5
$\Delta Hv/T_e$	19.31	5
d, e 10 to 101 °C	87.79, 0.1398	5
d', e' to °C		
d_c g/ml	0.27	2
v_c ml/g	3.70	2
t_c °C	282.	2
P_c mm	25840.	2
PV/RT 25°C	0.9948	4
30 mm	1.0000	5
BP	0.9613	4
t_e	0.9538	5
t_c	0.27	2
ΔHc kcal/m	1031.00	2
ΔHf	-40.19	2
ΔFf	8.45	2
Viscosity centistokes η °C		
B^v, A^v to °C		
(B^v), (A^v) to °C		
c_p liq. °K		
c_p vap. 300°K	0.33041	2
400	0.44519	2
c_v vap.		

		Ref.
f, g, h to °K		
f', g', h' to °K		
m, n, o 300 to 600 °K	0.0720, 0.0015, -0.0_648	4
m', n', o' 700 to 1000 °K	0.0530, 0.0012, -0.0_642	4
Surface tension dynes/cm. 20°C	21.21	5
γ 30	20.20	5
40	19.22	5
Parachor [P] 20°C		
30		
40		
Sugd.	281.5	5
Exp. L.1.%/wt. u. Dispersion	96.1	2
Flash Point °C	-10.0	5
Fire Point		
M. Spec.	Yes	1
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in + Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

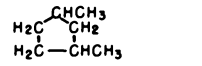
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	trans-1, 3-Dimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.65	Ref. 2	Molecular Formula C_7H_{14} — Molecular Weight 98.182



		Ref.
F.P. °C	-133.702	2
F. P. 100%		
B. P. °C		
760 mm	90.773	2
100	33.818	2
30	8.862	4
10	-10.0	4
1	-41.	5
Pressure mm 25°C	67.19	4
t_e	990.6	5
Density		
g/ml 20°C	0.74479	2
d_4^t 25	0.74025	2
30	0.73570	4
a	0.76295	4
b	-0.0_389	4
Ref. Index		
n_D 20°C	1.40894	2
25	1.40633	2
30	1.40369	4
"C"	0.7312	4
MR (Obs.)	32.587	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03654	2
Dielectric	1.985	5
A | 0 to	6.83715	2
B | 145 °C	1237.456	2
C	222.005	2
A* | 0 to	1.22690	4
B* | 110 °C	1155.03	4
K		
c		
t_x | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 145 to	7.48224	4
Bc | t_c °C	1753.6	4
Cc	291.5	4
Cryos. A°	0.04575	2
consts. B°		
t_e °C	100.14	5

		Ref.
dt/dP °C/mm		
25°C	0.3187	4
BP	0.04518	2
t_e	0.0368	5
30 mm	0.6235	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.52	2
30 mm	86.08	5
BP	74.68	2
t_e	73.38	5
t_e (d, e)	73.38	5
$\Delta Hv/T_e$	19.30	5
d | 0 to	87.32	5
e | 100 °C	0.1392	5
d' | to		
e' | °C		
d_c g/ml	0.28	2
v_c ml/g	3.57	2
t_c °C	282.	2
P_c mm	26600.	2
PV/RT		
25°C	0.9941	4
30 mm	1.0000	5
BP	0.9611	4
t_e	0.9537	5
t_c	0.27	2
ΔHc kcal/m	1030.47	2
ΔHf	-40.68	2
ΔFf	7.93	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300 °K	0.33041	2
400	0.44519	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to		-0.0720	4
n | 600 °K		0.0015	4
o |		-0.0_648	4
m' | 700 to		0.0530	4
n' | 1000 °K		0.0012	4
o' |		-0.0_642	4
Surface tension			
dynes/cm. 20°C		20.76	5
γ 30		19.75	5
40		18.76	5
Parachor [P]			
20°C			
30			
40			
Sugd.		281.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.3	2
Flash Point °C		-11.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	n-Propylcyclopentane	STRUCTURAL FORMULA
Mole % Pur. 99.997	Ref. 2	Molecular Formula C_8H_{16} — Molecular Weight 112.208

		Ref.
F. P. °C	-117.340	2
F. P. 100%		
B. P. °C 760 mm	130.949	2
100	69.143	2
30	41.94	4
10	21.23	5
1	-13.3	5
Pressure mm 25°C	12.379	5
t_e	1099.	5
Density g/ml 20°C	0.77633	2
d_4^t 25	0.77229	2
30	0.76825	4
a	0.79248	4
b	-0.0_3805	4
Ref. Index n_D 20°C	1.42626	2
25	1.42389	2
30	1.42156	4
"C"	0.7295	4
MR (Obs.)	37.052	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03810	2
Dielectric	2.034	5
A | 40 to	6.90392	2
B | 170 °C	1384.386	2
C	213.159	2
A* | 40 to	1.31959	5
B* | 155 °C	1297.41	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.24581	5
B' | 40 °C	1564.31	5
C'	229.2	5
A'* 25 to	1.64286	5
B'* 40 °C	1466.8	5
Ac | 170 to	7.3143	5
Bc | t_c °C	1716.3	5
Cc	256.6	5
Cryos. A° consts. B°		
t_e °C	145.23	5

		Ref.
dt/dP °C/mm		
25°C	1.4496	5
BP	0.04888	2
t_e	0.0367	5
30 mm	0.6805	4
ΔHm cal/g		
ΔHv cal/g 25°C	87.75	5
30 mm	86.15	5
BP	74.01	5
t_e	72.13	5
t_e (d, e)	72.06	5
$\Delta Hv/T_e$	19.34	5
d | 40 to	91.88	5
e | 145 °C	0.1364	5
d' | 20 to	90.12	5
e' | 40 °C	0.0945	5
d_c g/ml	0.269	5
v_c ml/g	3.72	5
t_c °C	317.1	5
P_c mm	21023.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9553	5
t_e	0.9444	5
t_c	0.265	5
ΔHc kcal/m	1179.40	2
ΔHf	-45.21	2
ΔFf	10.12	2
Viscosity centistokes		
η -20 °C	1.53	2
0	1.133	2
20	0.878	2
40	0.711	2
B^v | -30 to	447.66	4
A^v | 30 °C	Σ.41669	4
(B^v) | 30 to	375.76	4
(A^v) | 90 °C	Σ.65214	4
c_p liq. °K		
c_p vap. 300°K	0.33188	2
400	0.45300	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to		-0.1994	4
n | 600 °K		0.0022	4
o |		-0.0_514	4
m' | 700 to		0.0290	4
n' | 1000 °K		0.0013	4
o' |		-0.0_643	4
Surface tension dynes/cm. 20°C		24.17	5
30		23.17	5
40		22.20	5
Parachor [P] 20°C			
30			
40			
Sugd.		320.5	5
Exp. L. 1. %/wt. u.			
Dispersion		95.6	2
Flash Point °C		19.	5
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes 60°C		0.597	2
80		0.52	2

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

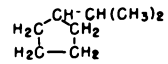
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	Isopropylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.
F.P. °C	-111.375	2
F.P. 100%		
B.P. °C 760 mm	126.419	2
100	64.338	2
30	37.05	4
10	16.3	5
1	-18.4	5
Pressure mm 25°C	16.206	4
t_e	1105.	5
Density g/ml 20°C	0.77653	2
d_4^{25}	0.77259	2
d_4^{30}	0.76864	4
a	0.79228	4
b	-0.0_3784	4
Ref. Index n_D 20°C	1.42582	2
25	1.42350	2
30	1.42124	4
"C"	0.7286	4
MR (Obs.)	37.011	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03756	2
Dielectric	2.033	5
A | 40 to	6.88622	2
B | 165 °C	1379.415	2
C	217.969	2
A* | 40 to	1.27908	5
B* | 150 °C	1284.92	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.22699	5
B' | 40 °C	1558.70	5
C'	234.0	5
A'* 15 to	1.62692	5
B'* 40 °C	1460.16	5
Ac | 165 to	7.30422	5
Bc | t_c °C	1718.9	5
Cc	262.6	5
Cryos. A*		
consts. B*		
t_e °C	140.99	5

		Ref.
dt/dP °C/mm		
25°C	1.1536	5
BP	0.04913	2
t_e	0.0367	5
30 mm	0.6825	4
ΔHm cal/g		
ΔHv cal/g		
25°C	84.22	5
30 mm	83.25	5
BP	73.00	5
t_e	71.29	5
t_e (d, e)	71.33	5
$\Delta Hv/T_e$	19.31	5
d | 40 to	87.50	5
e | 140 °C	0.1147	5
d' | 25 to	86.24	5
e' | 40 °C	0.0805	5
d_c g/ml		
v_c ml/g		
t_c °C	312.1	5
P_c mm	20568.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9688	4
t_e	0.9590	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	24.19	5
γ 30	23.22	5
40	22.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L. 1. %/wt. u.		
Dispersion	95.5	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

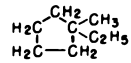
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	1-Ethyl-1-methylcyclopentane	STRUCTURAL FORMULA
		

Mole % Pur. 99.91	Ref. 2	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-143.800	2
F.P. 100%		
B.P. °C		
760 mm	121.522	2
100	60.116	2
30	33.15	4
10	12.63	5
1	-21.6	5
Pressure		
mm 25°C	19.80	5
t_e	1094.	5
Density		
g/ml 20°C	0.78093	2
d_4^t 25	0.77670	2
30	0.77246	4
a	0.79784	4
b	-0.03841	4
Ref. Index		
n_D 20°C	1.42718	2
25	1.42476	2
30	1.42239	4
"C"	0.7266	4
MR (Obs.)	36.904	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03672	2
Dielectric	2.037	5
A | 35 to	6.87148	2
B | 160 °C	1355.287	2
C	218.092	2
A* | 35 to	1.26648	5
B* | 145 °C	1261.35	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.21132	5
B' | 35 °C	1531.43	5
C'	233.92	5
A'* 20 to	1.60819	5
B'* 35 °C	1432.08	5
Ac | 160 to	7.2886	5
Bc | t_c °C	1689.3	5
Cc	262.1	5
Cryos. A°	0.0444	2
consts. B°		
t_e °C	135.53	5

		Ref.
dt/dP		
°C/mm		
25°C	0.9602	5
BP	0.04863	2
t_e	0.0366	5
30 mm	0.6742	4
ΔHm cal/g		
ΔHv cal/g		
25°C	82.82	5
30 mm	82.17	5
BP	72.12	5
t_e	70.48	5
t_e (d, e)	70.53	5
ΔHv/T_e	19.35	5
d | 35 to	85.94	5
e | 135 °C	0.1137	5
d' | 15 to	84.82	5
e' | 35 °C	0.0800	5
d_c g/ml	0.269	5
v_c ml/g	3.717	5
t_c °C	304.7	5
P_c mm	20351.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9710	4
t_e	0.9617	5
t_c	0.228	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	24.74	5
30	23.68	5
40	22.65	5
Parachor [P]		
20°C		
30		
40		
Sugd.	320.5	5
Exp. L.1.%/wt. u.		
Dispersion	95.8	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	cis-1-Ethyl-2-methylcyclopentane		STRUCTURAL FORMULA
Mole % Pur. 99.97	Ref. 2	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-105.95	2
F.P. 100%		
B.P. °C		
760 mm	128.050	2
100	66.116	2
30	38.86	4
10	18.10	5
1	-16.6	5
Pressure mm 25°C	14.70	4
t_e	1100.	5
Density g/ml 20°C	0.78522	2
d_4^{25}	0.78113	2
d_4^{30}	0.77704	4
a	0.80157	4
b	-0.0_3814	4
Ref. Index n_D 20°C	1.42933	2
25	1.42695	2
30	1.42459	4
"C"	0.7261	4
MR (Obs.)	36.864	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03672	2
Dielectric	2.043	5
A | 40 to	6.90561	2
B | 170 °C	1388.307	2
C	216.888	2
A* | 40 to	1.30956	5
B* | 155 °C	1297.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.24761	5
B' | 40 °C	1568.74	5
C'	233.0	5
A'* 15 to	1.64397	5
B'* 40 °C	1469.65	5
Ac | 170 to	7.32203	5
Bc | t_c °C	1727.1	5
Cc	261.3	5
Cryos. A°		
consts. B°		
t_e °C	142.39	5

		Ref.
dt/dP °C/mm		
25°C	1.2539	5
BP	0.04897	2
t_e	0.0367	5
30 mm	0.6820	4
ΔHm cal/g		
ΔHv cal/g		
25°C	85.45	5
30 mm	84.29	5
BP	73.31	5
t_e	71.55	5
t_e (d, e)	71.54	5
$\Delta Hv/T_e$	19.32	5
d | 40 to	89.07	5
e | 145 °C	0.1231	5
d' | 20 to	87.54	5
e' | 40 °C	0.0837	5
d_c g/ml	0.269	5
v_c ml/g	3.717	5
t_c °C	314.7	5
P_c mm	21054.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9619	4
t_e	0.9515	5
t_c	0.237	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C	25.29	5
γ 30	24.25	5
40	23.23	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L. 1. %/wt. u.		
Dispersion	94.6	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	trans-1-Ethyl-2-methylcyclopentane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	121.2	2
100	60.1	2
30	33.3	4
10	12.8	5
1	-21.2	5
Pressure		
mm 25°C	19.63	5
t_e	1086.	5
Density		
g/ml 20°C	0.7690	2
d_4^t 25	0.7649	2
30	0.7608	4
a	0.7854	4
b	-0.03815	4
Ref. Index		
n_D 20°C	1.4219	2
25	1.4195	2
30	1.4171	4
"C"	0.7293	4
MR (Obs.)	37.07	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0374	2
Dielectric	2.022	5
A | 35 to	6.8844	2
B | 160 °C	1356.0	2
C	217.5	2
A* | 35 to	1.2889	5
B* | 145 °C	1264.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.2251	5
B' | 35 °C	1532.2	5
C'	233.3	5
A'* 20 to	1.6227	5
B'* 35 °C	1433.3	5
Ac | 160 to	7.2999	5
Bc | t_c °C	1686.4	5
Cc	260.8	5
Cryos. A*		
consts. B*		
t_e °C	134.83	5

		Ref.
dt/dP		
°C/mm		
25°C	0.9631	5
BP	0.0483	4
t_e	0.0366	5
30 mm	0.6714	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.26	5
30 mm	82.59	5
BP	72.05	5
t_e	70.41	5
t_e (d, e)	70.42	5
$\Delta Hv/T_e$	19.36	5
d | 35 to	86.57	5
e | 35 °C	0.1198	5
d' | 15 to	85.31	5
e' | 35 °C	0.0818	5
d_c g/ml	0.263	5
v_c ml/g	3.802	5
t_c °C	302.4	5
P_c mm	20207.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9660	4
t_e	0.9565	5
t_c	0.238	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	23.27	5
30	22.28	5
40	21.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	320.5	5
Exp. L.l.%/wt. u.		
Dispersion	95.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	cis-1-Ethyl-3-methylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	121.4	2
100	60.3	2
30	33.5	4
10	13.1	5
1	-21.	5
Pressure mm 25°C	19.38	4
t_e	1085.	5
Density g/ml 20°C	0.7724	2
d_4^t 25	0.7681	2
30	0.7638	4
a	0.7896	4
b	-0.0_3855	4
Ref. Index n_D 20°C	1.4203	2
25	1.4179	2
30	1.4151	4
"C"	0.7231	4
MR (Obs.)	36.79	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0341	2
Dielectric	2.017	5
A | 35 to	6.8838	2
B | 160 °C	1355.0	2
C	217.1	2
A* | 35 to	1.2909	5
B* | 145 °C	1264.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.2244	5
B' | 35 °C	1531.1	5
C'	232.9	5
A'* 15 to	1.6225	5
B'* 35 °C	1432.5	5
Ac | 160 to	7.2986	5
Bc | t_c °C	1684.5	5
Cc	260.3	5
Cryos. A*		
consts. B*		
t_e °C	134.98	5

		Ref.
dt/dP °C/mm		
25°C	0.9734	5
BP	0.0483	4
t_e	0.0366	5
30 mm	0.6710	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.47	5
30 mm	82.76	5
BP	72.05	5
t_e	70.39	5
t_e (d, e)	70.39	5
$\Delta Hv/T_e$	19.35	5
d | 35 to	86.85	5
e | 135 °C	0.1219	5
d' | 15 to	85.54	5
e' | 35 °C	0.0830	5
d_c g/ml	0.265	5
v_c ml/g	3.773	5
t_c °C	302.5	5
P_c mm	20194.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9646	4
t_e	0.9550	5
t_c	0.233	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	23.68	5
30	22.64	5
40	21.62	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L.1.%/wt. u.		
Dispersion	95.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 15

NAME	trans-1-Ethyl-3-methylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F. P. °C	-108.	2
F. P. 100%		
B. P. °C 760 mm	120.8	2
100	59.7	2
30	32.8	4
10	12.4	5
1	-22.	5
Pressure mm 25°C	20.11	5
t_e	1088.	5
Density g/ml 20°C	0.7619	2
d_4^t 25	0.7577	2
30	0.7535	2
a	0.7787	4
b	-0.0_3835	4
Ref. Index n_D 20°C	1.4186	2
25	1.4162	2
30	1.4137	4
"C"	0.7307	4
MR (Obs.)	37.16	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0376	2
Dielectric	2.012	5
A | 35 to	6.8743	2
B | 155 °C	1351.0	2
C	217.5	2
A* | 35 to	1.2749	5
B* | 145 °C	1258.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.21432	5
B' | 35 °C	1526.6	5
C'	233.3	5
A'* 15 to	1.61239	5
B'* 35 °C	1427.8	5
Ac | 155 to	7.2895	5
Bc | t_c °C	1680.0	5
Cc	260.6	5
Cryos. A*		
consts. B*		
t_e °C	134.54	5

		Ref.
dt/dP °C/mm		
25°C	0.9434	5
BP	0.0484	4
t_e	0.0366	5
30 mm	0.6714	4
ΔHm cal/g		
ΔHv cal/g		
25°C	82.98	5
30 mm	82.34	5
BP	72.00	5
t_e	70.35	5
t_e (d, e)	70.39	5
$\Delta Hv/T_e$	19.36	5
d | 35 to	86.19	5
e | 135 °C	0.1175	5
d' | 15 to	85.02	5
e' | 35 °C	0.0816	5
d_c g/ml	0.263	5
v_c ml/g	3.802	5
t_c °C	300.6	5
P_c mm	19781.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9686	4
t_e	0.9592	5
t_c	0.231	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g |	°K		
h			
f'	to		
g' |	°K		
h'			
m	to		
n |	°K		
o			
m'	to		
n' |	°K		
o'			
Surface tension dynes/cm. 20°C		22.42	5
30		21.44	5
40		20.48	5
Parachor [P] 20°C			
30			
40			
Sugd.		320.5	5
Exp. L. l. %/wt. u.			
Dispersion		95.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 16

NAME	1,1,2-Trimethylcyclopentane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-21.64	2
F.P. 100%		
B.P. °C		
760 mm	113.729	2
100	53.03	2
30	26.46	4
10	6.38	4
1	-26.6	5
Pressure		
mm 25°C	27.86	4
t_e	1078.	5
Density		
g/ml 20°C	0.77252	2
d_4^t 25	0.76817	2
30	0.76380	4
a	0.78991	4
b	-0.03386	4
Ref. Index		
n_D 20°C	1.42298	2
25	1.42051	2
30	1.41792	4
"C"	0.7278	4
MR (Obs.)	36.986	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03672	2
Dielectric	2.025	5
A | 20 to	6.82205	2
B | 150 °C	1309.618	2
C	218.557	2
A* | 20 to	1.21721	5
B* | 140 °C	1215.70	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 150 to	7.23621	5
Bc | t_c °C	1633.5	5
Cc	261.7	5
Cryos. A* consts. B*		
t_e °C	127.04	5

		Ref.
dt/dP °C/mm		
25°C	0.7061	4
BP	0.04818	2
t_e	0.0367	5
30 mm	0.6636	4
ΔHm cal/g		
ΔHv cal/g		
25°C	80.03	5
30 mm	79.88	5
BP	70.34	5
t_e	68.82	5
t_e (d, e)	68.89	5
ΔHv/T_e	19.29	5
d | 20 to	82.77	5
e | 130 °C	0.1093	5
d' | to		
e' | °C		
d_c g/ml	0.265	5
v_c ml/g	3.773	5
t_c °C	292.18	5
P_c mm	19376.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9765	4
t_e	0.9680	5
t_c	0.230	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		23.69	5
γ 30		22.63	5
40		21.57	5
Parachor [P]			
20°C			
30			
40			
Sugd.		320.5	5
Exp. L. 1. %/wt. u.			
Dispersion		96.9	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

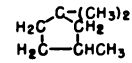
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 17

NAME	1,1,3-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.			Ref.			Ref.
F.P. °C	-142.44	2	dt/dP °C/mm			f | to		
F.P. 100%			25°C	0.5137	4	g | °K		
B.P. °C			BP	0.04724	2	h		
760 mm	104.893	2	t_e	0.0365	5	f' | to		
100	45.410	2	30 mm	0.6496	4	g' | °K		
30	19.39	4	ΔHm cal/g			h'		
10	-0.26	4	ΔHv cal/g			m | to		
1	-32.5	5	25°C	77.17	5	n | °K		
Pressure			30 mm	77.79	5	o		
mm 25°C	39.73	4	BP	68.91	5	m' | to		
t_e	1059.	5	t_e	67.58	5	n' | °K		
Density			t_e (d, e)	67.62	5	o'		
g/ml 20°C	0.74825	2	ΔHv/T_e	19.42	5			
d_4^t 25	0.74392	2	d | 20 to	79.81	5	Surface tension		
30	0.73958	4	e | 120 °C	0.1039	5	dynes/cm. 20°C	20.84	5
a	0.76556	4	d' | to			γ 30	19.88	5
b	-0.0_3856	4	e' | °C			40	18.95	5
Ref. Index			d_c g/ml	0.260	5	Parachor [P]		
n_D 20°C	1.41119	2	v_c ml/g	3.846	5	20°C		
25	1.40870	2	t_c °C	276.1	5	30		
30	1.40614	4	P_c mm	18455.	5	40		
"C"	0.7316	4	PV/RT			Sugd.	320.5	5
MR (Obs.)	37.249	2	25°C	0.9917	5	Exp. L.,l.%/wt. u.		
MR (Calc.)	36.944	5	30 mm	1.0000	5	Dispersion	98.6	2
(nD-d/2)	1.03707	2	BP	0.9826	5	Flash Point °C		
Dielectric	1.991	5	t_e	0.9751	5	Fire Point		
A | 20 to	6.80947	2	t_c	0.230	5	M. Spec.		
B | 140 °C	1275.998	2	ΔHc kcal/m			Ultra V.		
C	219.899	2	ΔHf			X-Ray Dif.		
A* | 20 to	1.2043	5	ΔFf			Infrared	Yes	2
B* | 130 °C	1181.7	5	Viscosity centistokes			Solubility in +		
K			η °C			Acetone	∞	
c						Carbon tet.	∞	
t_k | to						Benzene	∞	
t_x | °C						Ether	∞	
A' | to			B^v | to			n-Heptane	∞	
B' | °C			A^v | °C			Ethanol	∞	
C'			(B^v) | to			Water		
A'* to			(A^v) | °C			Water in		
B'* °C			c_p liq. °K					
Ac | 140 to	7.22512	5	c_p vap. °K					
Bc | t_c °C	1591.6	5	c_v vap.					
Cc	261.8	5						
Cryos. A* consts. B*								
t_e °C	117.27	5						

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

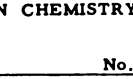
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	1, cis-2, cis-3-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16} — Molecular Weight 112.208



		Ref.
F.P. °C	-116.430	2
F.P. 100%		
B.P. °C		
760 mm	123.0	2
100	61.2	2
30	34.2	4
10	13.6	5
1	-21.	5
Pressure mm 25°C	18.82	5
t_e	1102.	5
Density g/ml 20°C	0.7792	2
d_4^t 25	0.7751	2
30	0.7710	4
a	0.7956	4
b	-0.03815	4
Ref. Index n_D 20°C	1.4262	2
25	1.4238	2
30	1.4214	4
"C"	0.7267	4
MR (Obs.)	36.91	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0366	2
Dielectric	2.034	5
A | 35 to	6.8485	2
B | 160 °C	1349.0	2
C	217.0	2
A* | 35 to	1.2378	5
B* | 145 °C	1254.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.1869	5
B' | 35 °C	1524.3	5
C'	232.8	5
A'* 15 to	1.5845	5
B'* 35 °C	1425.6	5
Ac | 160 to	7.2644	5
Bc | t_c °C	1682.9	5
Cc	261.3	5
Cryos. A° consts. B°		
t_e °C	137.42	5

		Ref.
dt/dP °C/mm		
25°C	1.0064	5
BP	0.0490	4
t_e	0.0367	5
30 mm	0.6769	4
ΔHm cal/g		
ΔHv cal/g		
25°C	83.14	5
30 mm	82.38	5
BP	72.38	5
t_e	70.71	5
t_e (d, e)	70.76	5
$\Delta Hv/T_e$	19.32	5
d | 35 to	86.23	5
e | 135 °C	0.1126	5
d' | 15 to	85.21	5
e' | 35 °C	0.0828	5
d_c g/ml	0.265	5
v_c ml/g	3.773	5
t_c °C	307.4	5
P_c mm	20192.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9739	4
t_e	0.9647	5
t_c	0.233	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C	24.53	5
γ 30	23.50	5
40	22.50	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L.1.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

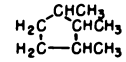
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	1, cis-2, trans-3-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{16} Molecular Weight 112.208	

		Ref.
F. P. °C	-112.	2
F. P. 100%		
B. P. °C 760 mm	117.5	2
100	56.5	2
30	29.8	4
10	9.5	5
1	-24.	5
Pressure mm 25°C	23.48	4
t_e	1084.	5
Density g/ml 20°C	0.7704	2
d_4^t 25	0.7661	2
30	0.7618	4
a	0.7876	4
b	-0.0_3385	4
Ref. Index n_D 20°C	1.4218	2
25	1.4194	2
30	1.4166	4
"C"	0.7278	4
MR (Obs.)	37.00	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0366	2
Dielectric	2.022	5
A | 30 to	6.8480	2
B | 155 °C	1331.0	2
C	218.0	2
A* | 30 to	1.2456	5
B* | 140 °C	1237.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.1864	4
B' | 30 °C	1504.0	4
C'	233.6	4
A'* 15 to	1.5864	5
B'* 30 °C	1405.6	5
Ac | 155 to	7.2638	5
Bc | t_c °C	1658.8	5
Cc	261.4	5
Cryos. A° consts. B°		
t_e °C	131.1	5

		Ref.
dt/dP °C/mm		
25°C	0.8224	5
BP	0.0483	4
t_e	0.0367	5
30 mm	0.6680	4
ΔHm cal/g		
ΔHv cal/g		
25°C	81.53	5
30 mm	81.15	5
BP	71.21	5
t_e	69.62	5
t_e (d, e)	69.67	5
$\Delta Hv/T_e$	19.32	5
d | 30 to	84.53	5
e | 130 °C	0.1133	5
d' | 15 to	83.50	5
e' | 30 °C	0.0789	5
d_c g/ml	0.263	5
v_c ml/g	3.802	5
t_c °C	297.2	5
P_c mm	19664.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9726	5
t_e	0.9635	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	23.43	5
γ 30	22.40	5
40	21.38	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L.l.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	1, trans-2, cis-3-Trimethylcyclopentane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-112.705	2
F.P. 100%		
B.P. °C		
760 mm	110.2	2
100	50.0	2
30	23.7	4
10	3.8	5
1	-29.	5
Pressure		
mm 25°C	32.04	4
t_e	1070.8	5
Density		
g/ml 20°C	0.7535	2
d_4^t 25	0.7492	2
30	0.7449	4
a	0.7707	4
b	-0.0_3852	4
Ref. Index		
n_D 20°C	1.4138	2
25	1.4114	2
30	1.4088	4
"C"	0.7308	4
MR (Obs.)	37.20	2
MR (Calc.)	36.944	5
(nD-d/2)	1.0370	2
Dielectric	1.999	5
A | 25 to	6.8268	2
B | 145 °C	1301.0	2
C	219.5	2
A* | 25 to	1.2210	5
B* | 135 °C	1206.6	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 145 to	7.2431	5
Bc | t_c °C	1622.2	5
Cc	262.	5
Cryos. A°		
consts. B°		
t_e °C	123.13	5

		Ref.
dt/dP		
°C/mm		
25°C	0.6228	5
BP	0.0477	4
t_e	0.0366	5
30 mm	0.6581	4
ΔHm cal/g		
ΔHv cal/g		
25°C	78.93	5
30 mm	79.07	5
BP	69.87	5
t_e	68.41	5
t_e (d, e)	68.50	5
$\Delta Hv/T_e$	19.37	5
d | 25 to	81.59	5
e | 120 °C	0.1063	5
d' | to		
e' | °C		
d_c g/ml	0.260	5
v_c ml/g	3.846	5
t_c °C	284.4	5
P_c mm	18809.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9792	5
t_e	0.9711	5
t_c	0.230	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h			
f' | | to			
g' | | °K			
h'			
m | | to			
n | | °K			
o			
m' | | to			
n' | | °K			
o'			
Surface tension			
dynes/cm. 20°C		21.44	5
γ 30		20.47	5
40		19.52	5
Parachor [P]			
20°C			
30			
40			
Sugd.		320.5	5
Exp. L.1.%/wt. u.			
Dispersion		96.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XV. CYCLOPENTANES

No. 21

NAME	1, cis-2, cis-4-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.			Ref.			Ref.
F. P. °C			dt/dP °C/mm			f | | to		
F. P. 100%			25°C	0.8266	5	g | | °K		
B. P. °C			BP	0.0486	4	h		
760 mm	118.	2	t_e	0.0366	5	f' | | to		
100	57.	2	30 mm	0.6715	4	g' | | °K		
30	29.8	4	ΔHm cal/g			h'		
10	9.4	5	ΔHv cal/g			m | | to		
1	-25.	5	25°C	81.10	5	n | | °K		
Pressure mm 25°C	23.49	5	30 mm	80.74	5	o		
t_e	1094.	5	BP	71.47	5	m' | | to		
Density			t_e	69.87	5	n' | | °K		
g/ml 20°C	0.766	2	t_e (d, e)	69.99	5	o'		
d_4^t 25	0.762	2	ΔHv/T_e	19.35	5	Surface tension		
30	0.758	4	d | 30 to	83.87	5	dynes/cm. 20°C	22.90	5
a	0.782	4	e | 130 °C	0.1051	5	γ 30	21.95	5
b	-0.0$_3$79	4	d' | 10 to	83.00	5	40	21.02	5
Ref. Index			e' | 30 °C	0.0760	5	Parachor [P]		
n_D 20°C	1.422	2	d_c g/ml			20°C		
25	1.420	2	v_c ml/g			30		
30	1.417	4	t_c °C	298.7	5	40		
"C"	0.7323	4	P_c mm	19618.	5	Sugd.	320.5	5
MR (Obs.)	37.2	2	PV/RT			Exp. L. 1. %/wt. u.		
MR (Calc.)	36.944	5	25°C	1.0000	5	Dispersion	96.	2
(nD-d/2)	1.039	2	30 mm	1.0000	5	Flash Point °C		
Dielectric	2.022	5	BP	0.9795	4	Fire Point		
A | 30 to	6.842	2	t_e	0.9703	5	M. Spec.		
B | 155 °C	1335.	2	t_c			Ultra V.		
C	219.	2	ΔHc kcal/m			X-Ray Dif.		
A* | 30 to	1.227	5	ΔHf			Infrared		
B* | 140 °C	1238.	5	ΔFf			Solubility in +		
K			Viscosity centistokes			Acetone	∞	
c			η °C			Carbon tet.	∞	
t_k | to						Benzene	∞	
t_x | °C			B^v | to			Ether	∞	
A' | 10 to	7.180	5	A^v | °C			n-Heptane	∞	
B' | 30 °C	1509.	5	(B^v) | to			Ethanol	∞	
C'	235.	5	(A^v) | °C			Water		
A'* 15 to	1.578	5	c_p liq. °K			Water in		
B'* 30 °C	1409.	5	c_p vap. °K					
Ac | 155 to	7.260	5	c_v vap.					
Bc | t_c °C	1667.	5						
Cc	263.	5						
Cryos. A* consts. B*								
t_e °C	132.04	5						

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 22

NAME	1, cis-2, trans-4-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F. P. °C	-132.55	2
F. P. 100%		
B. P. °C		
760 mm	116.731	2
100	55.824	2
30	29.11	4
10	8.8	5
1	-25.	5
Pressure		
mm 25°C	24.36	5
t_e	1086.	5
Density		
g/ml 20°C	0.76345	2
d_4^{25}	0.75920	2
d_4^{30}	0.75494	4
a	0.78044	4
b	-0.0384	4
Ref. Index		
n_D 20°C	1.41855	2
25	1.41612	2
30	1.41363	4
"C"	0.7291	4
MR (Obs.)	37.082	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03683	2
Dielectric	2.012	5
A | 30 to	6.85448	2
B | 155 °C	1333.894	2
C	218.952	2
A* | 30 to	1.24624	5
B* | 140 °C	1238.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.19325	5
B' | 30 °C	1507.26	5
C'	234.6	5
A'* 15 to	1.59246	5
B'* 30 °C	1408.3	5
Ac | 155 to	7.27153	5
Bc | t_c °C	1662.38	5
Cc	262.3	5
Cryos. A°		
consts. B°		
t_e °C	130.36	5

		Ref.
dt/dP		
°C/mm		
25°C	0.7969	5
BP	0.04827	2
t_e	0.0366	5
30 mm	0.6678	4
ΔHm cal/g		
ΔHv cal/g		
25°C	81.10	5
30 mm	80.79	5
BP	71.25	5
t_e	69.69	5
t_e (d, e)	69.77	5
$\Delta Hv/T_e$	19.38	5
d | 30 to	83.95	5
e | 130 °C	0.1088	5
d' | 15 to	82.99	5
e' | 30 °C	0.0757	5
d_c g/ml	0.262	5
v_c ml/g	3.817	5
t_c °C	295.4	5
P_c mm	19513.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9759	4
t_e	0.9672	5
t_c	0.233	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h | |			
f' | | to			
g' | | °K			
h' | |			
m | | to			
n | | °K			
o | |			
m' | | to			
n' | | °K			
o' | |			
Surface tension			
dynes/cm. 20°C		22.60	5
30		21.60	5
40		20.63	5
Parachor [P]			
20°C			
30			
40			
Sugd.		320.5	5
Exp. L. l. %/wt. u.			
Dispersion		95.7	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	1, trans-2, cis-4-Trimethylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F. P. °C	-130.78	2
F. P. 100%		
B. P. °C 760 mm	109.290	2
100	49.519	2
30	23.31	4
10	3.48	5
1	-29.	5
Pressure mm 25°C	32.68	4
t_e	1070.	5
Density g/ml 20°C	0.74727	2
d_4^t 25	0.74302	2
30	0.73876	4
a	0.76426	4
b	-0.03842	4
Ref. Index n_D 20°C	1.41060	2
25	1.40812	2
30	1.40565	4
"C"	0.7315	4
MR (Obs.)	37.251	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03696	2
Dielectric	1.990	5
A | 25 to	6.84970	2
B | 145 °C	1306.153	2
C	219.808	2
A* | 25 to	1.24227	5
B* | 130 °C	1211.22	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 145 to	7.2659	5
Bc | t_c °C	1626.0	5
Cc	261.84	5
Cryos. A° consts. B°		
t_e °C	122.08	5

		Ref.
dt/dP °C/mm		
25°C	0.6098	4
BP	0.04738	2
t_e	0.0363	5
30 mm	0.6551	4
ΔHm cal/g		
ΔHv cal/g		
25°C	79.05	4
30 mm	79.23	5
BP	70.16	5
t_e	68.72	5
t_e (d, e)	68.81	5
$\Delta Hv/T_e$	19.51	5
d | 25 to	81.68	5
e | 120 °C	0.1054	5
d' | to		
e' | °C		
d_c g/ml		
v_c ml/g		
t_c °C	282.2	5
P_c mm	18944.	5
PV/RT		
25°C	1.0000	4
30 mm	1.0000	5
BP	0.9805	4
t_e	0.9726	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	20.74	5
γ 30	19.80	5
40	18.88	5
Parachor [P] 20°C		
30		
40		
Sugd.	320.5	5
Exp. L.l.%/wt. u.		
Dispersion	96.8	2
Flash Point °C	3.0	5
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	n-Butylcyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Molecular Formula C_9H_{18}	Molecular Weight 126.234

		Ref.
F.P. °C	-107.985	2
F.P. 100%		
B.P. °C		
760 mm	156.56	2
100	91.8	2
30	63.3	4
10	41.6	5
1	5.3	5
Pressure		
mm 25°C	3.8013	5
t_e	1168.	5
Density		
g/ml 20°C	0.7846	2
d_4^{25}	0.7808	2
d_4^{30}	0.7770	4
a	0.7998	4
b	-0.0_376	4
Ref. Index		
n_D 20°C	1.4316	2
25	1.4293	2
30	1.4272	4
"C"	0.7303	4
MR (Obs.)	41.70	2
MR (Calc.)	41.562	5
(nD-d/2)	1.0393	2
Dielectric	2.049	5
A | 65 to	6.9189	2
B | 190 °C	1460.0	2
C	205.0	2
A* | 65 to	1.3699	5
B* | 185 °C	1371.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.2617	5
B' | 65 °C	1649.8	5
C'	221.9	5
A'* 15 to	1.7021	5
B'* 65 °C	1553.3	5
Ac | 190 to	7.3197	5
Bc | t_c °C	1793.2	5
Cc	247.7	5
Cryos. A*		
consts. B*		
t_e °C	174.06	5

		Ref.
dt/dP		
°C/mm		
25°C	4.2217	5
BP	0.0512	2
t_e	0.0366	5
30 mm	0.7137	4
ΔHm cal/g		
ΔHv cal/g		
25°C	87.23	5
30 mm	83.25	5
BP	70.75	5
t_e	68.54	5
t_e (d, e)	68.40	5
$\Delta Hv/T_e$	19.35	5
d | 65 to	91.73	5
e | 175 °C	0.1340	5
d' | 15 to	89.82	5
e' | 65 °C	0.1039	5
d_c g/ml	0.270	5
v_c ml/g	3.70	5
t_c °C	343.5	5
P_c mm	19349.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9515	5
t_e	0.9383	5
t_c	0.235	5
ΔHc kcal/m	1326.42	2
ΔHf	-51.22	2
ΔFf gas	14.69	2
Viscosity centistokes		
η 20 °C	1.134	2
40	0.889	2
60	0.724	2
80	0.61	2
B^V | -30 to	496.67	4
A^V | 30 °C	Z.36065	4
(B^V) | 30 to	452.36	4
(A^V) | 90 °C	Z.50458	4
c_p liq. °K		
c_p vap. 300 °K	0.33858	2
400	0.45764	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	-0.1745	4
n | 600 °K	0.0021	4
o |	-0.0_513	4
m' | 700 to	0.0340	4
n' | 1000 °K	0.0013	4
o' |	-0.0_644	4
Surface tension		
dynes/cm. 20°C	24.93	5
30	23.97	5
40	23.04	5
Parachor [P]		
20°C		
30		
40		
Sugd.	359.5	5
Exp. L.1.%/wt. u.		
Dispersion	96.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		
Viscosity centistokes		
-20°C	2.10	2
0	1.508	2

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

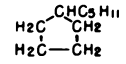
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	n-Pentylcyclopentane 1-Cyclopentylpentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{20}$
		Molecular Weight 140.260



		Ref.
F. P. °C	-83.	2
F. P. 100%		
B. P. °C		
760 mm	180.	2
100	113.	2
30	83.	4
10	60.	5
1	22.	5
Pressure		
mm 25°C	1.1934	5
t_e	1236.	5
Density		
g/ml 20°C	0.7912	2
d_4^t 25	0.7874	2
30	0.7836	4
a	0.8064	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4358	2
25	1.4336	2
30	1.4313	4
"C"	0.7308	4
MR (Obs.)	46.33	2
MR (Calc.)	46.180	5
(nD-d/2)	1.0402	2
Dielectric	2.062	5
A | 85 to	6.929	2
B | 220 °C	1526.	2
C	197.	2
A* | 85 to	1.405	5
B* | 210 °C	1435.	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.272	5
B' | 85 °C	1724.	5
C'	215.	5
A'* 20 to	1.755	5
B'* 85 °C	1630.	5
Ac | 220 to	7.405	5
Bc | t_c °C	1948.	5
Cc	251.	5
Cryos. A°		
consts. B°		
t_e °C	200.71	5

		Ref.
dt/dP		
°C/mm		
25°C	12.120	5
BP	0.0532	4
t_e	0.0364	5
30 mm	0.7432	4
ΔHm cal/g		
ΔHv cal/g		
25°C	87.11	5
30 mm	80.58	5
BP	68.06	5
t_e	65.63	5
t_e (d, e)	65.39	5
$\Delta Hv/T_e$	19.42	5
d | 85 to	91.26	5
e | 200 °C	0.1289	5
d' | 25 to	89.93	5
e' | 85 °C	0.1128	5
d_c g/ml		
v_c ml/g		
t_c °C	366.0	5
P_c mm	17703.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9515	4
t_e	0.9375	5
t_c		
ΔHc kcal/m	1473.34	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -20 °C	2.82	2
0	2.02	2
20	1.458	2
40	1.102	2
B^v | -30 to	531.71	4
A^v | 30 °C	Σ.35028	4
(B^v) | 30 to	511.21	4
(A^v) | 90 °C	Σ.40996	4
c_p liq. °K		
c_p vap. 300°K	0.34386	2
400	0.46136	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.1550	4
n | 600 °K		0.0020	4
o		-0.0_512	4
m' | 700 to		0.0428	4
n' | 1000 °K		0.0013	4
o'		-0.0_643	4
Surface tension			
dynes/cm. 20°C		25.53	5
γ 30		24.57	5
40		23.62	5
Parachor [P]			
20°C			
30			
40			
Sugd.		398.5	5
Exp. L. 1. %/wt. u.			
Dispersion		96.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
60°C		0.875	2
80		0.72	2

$T_R = 0.77\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

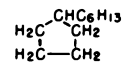
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 26

NAME	n-Hexylcyclopentane 1-Cyclopentylhexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{22}$
		Molecular Weight 154.286



		Ref.
F.P. °C	-73.	2
F.P. 100%		
B.P. °C		
760 mm	203.	2
100	133.	2
30	102.	4
10	79.	5
1	39.	5
Pressure		
mm 25°C	0.3548	5
t_e	1286.	5
Density		
g/ml 20°C	0.7965	2
d_4^{25}	0.7927	2
d_4^{30}	0.7889	4
a	0.8117	4
b	-0.0_376	4
Ref. Index		
n_D 20°C	1.4392	2
25	1.4370	2
30	1.4349	4
"C"	0.7313	4
MR (Obs.)	50.97	2
MR (Calc.)	50.798	5
(nD-d/2)	1.0410	2
Dielectric	2.071	5
A | 100 to	6.934	2
B | 240 °C	1589.	2
C	189.	2
A* | 100 to	1.4510	5
B* | 235 °C	1501.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.278	5
B' | 100 °C	1796.	5
C'	207.	5
A'* 25 to	1.796	5
B'* 100 °C	1702.	5
Ac | 240 to	7.444	5
Bc | t_c °C	2058.	5
Cc	249.	5
Cryos. A*		
consts. B*		
t_e °C	226.4	5

		Ref.
dt/dP		
°C/mm		
25°C	36.80	5
BP	0.05527	5
t_e	0.0367	5
30 mm	0.7725	4
ΔHm cal/g		
ΔHv cal/g		
25°C	87.71	5
30 mm	78.32	5
BP	65.18	5
t_e	62.36	5
t_e (d, e)	62.13	5
$\Delta Hv/T_e$	19.26	5
d | 100 to	91.64	5
e | 225 °C	0.1303	5
d' | 25 to	90.76	5
e' | 100 °C	0.1217	5
d_c g/ml		
v_c ml/g		
t_c °C	387.0	5
P_c mm	16025.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9434	5
t_e	0.9249	5
t_c		
ΔHc kcal/m	1620.28	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -20 °C	3.77	2
0	2.64	2
20	1.87	2
40	1.378	2
B^V | -30 to	563.28	4
A^V | 30 °C	Σ.35169	4
(B^V) | 30 to	552.35	4
(A^V) | 90 °C	Σ.37568	4
c_p liq. °K		
c_p vap. 300°K	0.34825	2
400	0.46440	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.1387	4
n | 600 °K		0.0020	4
o |		-0.0_512	4
m' | 700 to		0.0494	4
n' | 1000 °K		0.0012	4
o' |		-0.0_643	4
Surface tension			
dynes/cm. 20°C		26.02	5
30		25.04	5
40		24.09	5
Parachor [P]			
20°C			
30			
40			
Sugd.		437.5	5
Exp. L.1.%/wt. u.			
Dispersion		96.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
60°C		1.068	2
80		0.87	2

$T_R = 0.78\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	n-Heptylcyclopentane 1-Cyclopentylheptane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{12}H_{24}$ Molecular Weight 168.312	

		Ref.
F. P. °C	-53.	2
F. P. 100%		
B. P. °C 760 mm	224.	2
100	152.	2
30	120.	4
10	95.	5
1	55.	5
Pressure mm 25°C	0.1101	5
t_e	1329.	5
Density g/ml 20°C	0.8010	2
d_4^t 25	0.7973	2
30	0.7936	4
a	0.8158	4
b	-0.0_374	4
Ref. Index n_D 20°C	1.4421	2
25	1.4400	2
30	1.4376	4
"C"	0.7317	4
MR (Obs.)	55.61	2
MR (Calc.)	55.416	5
(nD-d/2)	1.0416	2
Dielectric	2.080	5
A 120 to	6.942	2
B 270 °C	1649.	2
C	182.	2
A* 120 to	1.497	5
B* 260 °C	1564.	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.286	5
B' 120 °C	1863.	5
C'	201.	5
A'* 25 to	1.838	5
B'* 120 °C	1772.	5
Ac 270 to	7.564	5
Bc t_c °C	2259.	5
Cc	259.	5
Cryos. A*		
consts. B*		
t_e °C	249.9	5

		Ref.
dt/dP °C/mm		
25°C	108.11	5
BP	0.0571	5
t_e	0.0370	5
30 mm	0.7993	4
ΔHm cal/g		
ΔHv cal/g		
25°C	88.18	5
30 mm	76.02	5
BP	62.39	5
t_e	59.35	5
t_e (d, e)	59.01	5
$\Delta Hv/T_e$	19.10	5
d 120 to	91.68	5
e 250 °C	0.1308	5
d' 25 to	91.39	5
e' 120 °C	0.1283	5
d_c g/ml		
v_c ml/g		
t_c °C	405.8	5
P_c mm	14654.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9345	4
t_e	0.9135	5
t_c		
ΔHc kcal/m	1767.20	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -20 °C	4.94	2
0	3.40	2
20	2.35	2
40	1.698	2
B^v -30 to	598.84	4
A^v 30 °C	Σ.32863	4
(B^v) 30 to	612.13	4
(A^v) 90 °C	Σ.27551	4
c_p liq. °K		
c_p vap. 300°K	0.35185	2
400	0.46699	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.1262	4
n	600 °K	0.0019	4
o		-0.0_511	4
m'	700 to	0.0593	4
n'	1000 °K	0.0012	4
o'		-0.0_642	4
Surface tension dynes/cm. 20°C		26.44	5
σ 30		25.48	5
40		24.54	5
Parachor [P] 20°C			
30			
40			
Sugd.		476.5	5
Exp. L.1.%/wt. u.			
Dispersion		96.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes 60°C		1.284	2
80		1.02	2

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	n-Octylcyclopentane 1-Cyclopentyloctane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{13}H_{26}$ — Molecular Weight 182.338

		Ref.
F. P. °C	-44.	2
F. P. 100%		
B. P. °C		
760 mm	243.	2
100	169.	2
30	136.	4
10	111.	5
1	69.	5
Pressure		
mm 25°C	0.0342	5
t_e	1373.	5
Density		
g/ml 20°C	0.8048	2
d_4^{25}	0.8011	2
d_4^{30}	0.7974	4
a	0.8196	4
b	-0.0_374	4
Ref. Index		
n_D 20°C	1.4446	2
25	1.4425	2
30	1.4403	4
"C"	0.7322	4
MR (Obs.)	60.25	2
MR (Calc.)	60.034	5
(nD-d/2)	1.0422	2
Dielectric	2.087	5
A | 135 to	6.957	2
B | 295 °C	1704.	2
C	175.	2
A* | 135 to	1.543	5
B* | 280 °C	1620.	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.302	5
B' | 135 °C	1925.	5
C'	195.	5
A'* 25 to	1.884	5
B'* 135 °C	1836.	5
Ac | 295 to	7.740	5
Bc | t_c °C	2521.	5
Cc	277.	5
Cryos. A*		
consts. B*		
t_e °C	271.1	5

		Ref.
dt/dP		
°C/mm		
25°C	318.2	5
BP	0.0586	5
t_e	0.0370	5
30 mm	0.8215	4
ΔHm cal/g		
ΔHv cal/g		
25°C	89.10	5
30 mm	74.03	5
BP	60.16	5
t_e	56.93	5
t_e (d, e)	56.51	5
ΔHv/T_e	19.07	5
d | 135 to	91.65	5
e | 265 °C	0.1296	5
d' | 25 to	92.50	5
e' | 135 °C	0.1358	5
d_c g/ml		
v_c ml/g		
t_c °C	421.3	5
P_c mm	13445.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9294	4
t_e	0.9064	5
t_c		
ΔHc kcal/m	1914.12	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -20 °C	6.39	2
0	4.32	2
20	2.93	2
40	2.07	2
B^V | -30 to	628.48	4
A^V | 30 °C	2.32334	4
(B^V) | 30 to	664.89	4
(A^V) | 90 °C	2.19308	4
c_p liq. °K		
c_p vap. 300 °K	0.35489	2
400	0.46913	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.1267	4
n | 600 °K		0.0019	4
o |		-0.0_512	4
m' | 700 to		0.0638	4
n' | 1000 °K		0.0012	4
o' |		-0.0_642	4
Surface tension			
dynes/cm. 20°C		26.80	5
γ 30		25.83	5
40		24.88	5
Parachor [P]			
20°C			
30			
40			
Sugd.		515.5	5
Exp. L. l. %/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
60°C		1.528	2
80		1.19	2

$T_R = 0.82\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 29

NAME	n-Nonylcyclopentane 1-Cyclopentylnonane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{28}$
		Molecular Weight 196.364

		Ref.
F.P. °C	-29.	2
F.P. 100%		
B.P. °C		
760 mm	262.	2
100	186.	2
30	152.	4
10	126.	5
1	83.	5
Pressure		
mm 25°C	0.00998	5
t_e	1411.	5
Density		
g/ml 20°C	0.8081	2
d_4^t 25	0.8045	2
30	0.8009	4
a	0.8225	4
b	-0.0_372	4
Ref. Index		
n_D 20°C	1.4467	2
25	1.4446	2
30	1.4425	4
"C"	0.7324	4
MR (Obs.)	64.89	2
MR (Calc.)	64.652	5
(nD-d/2)	1.0427	2
Dielectric	2.093	5
A, B: 150 to 310 °C	6.967	2
B	1757.	2
C	168.	2
A*, B*: 150 to 300 °C	1.585	5
B*	1677.	5
K		
c		
t_k, t_x: to °C		
A', B': 20 to 150 °C	7.313	5
B'	1985.	5
C'	188.	5
A'*, B'*: 25 to 150 °C	1.924	5
B'*	1897.	5
Ac, Bc, Cc: to t_c °C		
Cryos. A* consts. B*		
t_e °C	292.2	5

		Ref.
dt/dP °C/mm		
25°C	996.11	5
BP	0.0601	5
t_e	0.0371	5
30 mm	0.8439	4
ΔHm cal/g		
ΔHv cal/g		
25°C	90.54	5
30 mm	72.28	5
BP	57.97	5
t_e	54.61	5
t_e (d, e)	54.03	5
$\Delta Hv/T_e$	18.97	5
d, e: 150 to 285 °C	92.07	5
	0.1301	5
d', e': 25 to 150 °C	94.13	5
	0.1437	5
d_c g/ml		
v_c ml/g		
t_c °C	437.4	5
P_c mm	12418.	5
PV/RT		
25°C	1.0000	4
30 mm	1.0000	5
BP	0.9210	4
t_e	0.8968	5
t_c		
ΔHc kcal/m	2061.05	2
ΔHf		
ΔFf		
Viscosity centistokes		
η -20 °C	8.14	2
0	5.41	2
20	3.60	2
40	2.49	2
B^v, A^v: -30 to 30 °C	657.60	4
	Σ.31346	4
(B^v): 30 to 90 °C	708.87	4
(A^v):	Σ.13289	4
c_p liq. °K		
c_p vap. 300 °K	0.35755	2
400	0.47096	2
c_v vap.		

			Ref.
f, g, h: to °K			
f'	300 to	-0.1049	4
g'	600 °K	0.0018	4
h'		-0.0_510	4
m	700 to	0.0647	4
n	1000 °K	0.0012	4
o		-0.0_642	4
Surface tension			
dynes/cm. 20°C		27.12	5
γ 30		26.16	5
40		25.23	5
Parachor [P]			
20°C			
30			
40			
Sugd.		554.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
60°C		1.80	2
80		1.38	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

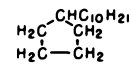
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	n-Decylcyclopentane 1-Cyclopentyldecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{30}$ — Molecular Weight 210.390



		Ref.
F.P. °C	-22.13	2
F.P. 100%		
B.P. °C		
760 mm	279.2	2
100	201.3	2
30	166.9	4
10	140.6	5
1	96.6	5
Pressure mm 25°C	0.00285	5
t_e	1446.	5
Density g/ml 20°C	0.81097	2
d_4^t 25	0.80739	2
30	0.80381	4
a	0.82529	4
b	-0.0_3716	4
Ref. Index n_D 20°C	1.44862	2
25	1.44659	2
30	1.44438	4
"C"	0.7327	4
MR (Obs.)	69.534	2
MR (Calc.)	69.276	5
(nD-d/2)	1.04314	2
Dielectric	2.098	5
A | 165 to	6.971	2
B | 330 °C	1798.	2
C	160.4	2
A* | 165 to	1.619	5
B* | 320 °C	1721.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.317	5
B' | 165 °C	2032.	5
C'	181.	5
A'* 25 to	1.9563	5
B'* 165 °C	1946.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	311.4	5

		Ref.
dt/dP °C/mm		
25°C	3179.1	5
BP	0.0614	5
t_e	0.0372	5
30 mm	0.8624	4
ΔHm cal/g		
ΔHv cal/g		
25°C	92.57	5
30 mm	70.70	5
BP	56.06	5
t_e	52.52	5
t_e (d, e)	51.86	5
$\Delta Hv/T_e$	18.90	5
d | 165 to	92.46	5
e | 300 °C	0.1304	5
d' | 25 to	96.43	5
e' | 165 °C	0.1541	5
d_c g/ml		
v_c ml/g		
t_c °C	450.6	5
P_c mm	11416.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9153	4
t_e	0.8889	5
t_c		
ΔHc kcal/m	2207.97	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 0 °C	6.69	2
20	4.37	2
40	2.96	2
60	2.10	2
B^v | -10 to	757.56	4
A^v | 50 °C	Σ.05252	4
(B^v) | 50 to	689.68	4
(A^v) | 110 °C	Σ.25236	4
c_p liq. °K		
c_p vap. 300 °K	0.35981	2
400	0.47255	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	300 to	-0.0965	4
n |	600 °K	0.0018	4
o |		-0.0_698	4
m' |	700 to	0.0711	4
n' |	1000 °K	0.0012	4
o' |		-0.0_641	4
Surface tension dynes/cm.	20°C	27.39	5
γ	30	26.44	5
	40	25.51	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	593.5	5
Exp. L.1.%/wt. u.			
Dispersion		96.9	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
80°C		1.59	2
100		1.26	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	n-Undecylcyclopentane 1-Cyclopentylundecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{32}$ — Molecular Weight 224.416

		Ref.
F. P. °C	-10.	2
F. P. 100%		
B. P. °C 760 mm	296.	2
100	216.	2
30	180.	4
10	153.	5
1	108.	5
Pressure mm 25°C	0.00103	5
t_e	1498.	5
Density g/ml 20°C	0.8135	2
d_4^t 25	0.8100	2
30	0.8065	4
a	0.8275	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4503	2
25	1.4482	2
30	1.4459	4
"C"	0.7336	4
MR (Obs.)	74.18	2
MR (Calc.)	73.888	5
(nD-d/2)	1.0435	2
Dielectric	2.103	5
A | 180 to	6.974	2
B | 350 °C	1854.	2
C	157.	2
A* | 180 to	1.633	5
B* | 340 °C	1773.	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.320	5
B' | 180 °C	2095.	5
C'	178.	5
A'* 25 to	1.982	5
B'* 180 °C	2010.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	331.1	5

		Ref.
dt/dP °C/mm		
25°C	8312.7	5
BP	0.0632	5
t_e	0.0373	5
30 mm	0.8883	4
ΔHm cal/g		
ΔHv cal/g		
25°C	91.95	5
30 mm	68.33	5
BP	54.28	5
t_e	50.73	5
t_e (d, e)	50.02	5
ΔHv/T_e	18.84	5
d | 180 to	90.23	5
e | 325 °C	0.1215	5
d' | 25 to	95.75	5
e' | 180 °C	0.1521	5
d_c g/ml		
v_c ml/g		
t_c °C	465.2	5
P_c mm	10554.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9170	4
t_e	0.8908	5
t_c		
ΔHc kcal/m	2354.89	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 0 °C	8.19	2
20	5.25	2
40	3.49	2
60	2.44	2
B^v | -10 to	792.45	4
A^v | 50 °C	$\bar{7}.01266$	4
(B^v) | 50 to	730.87	4
(A^v) | 110 °C	$\bar{7}.19391$	4
c_p liq. °K		
c_p vap. 300°K	0.36183	2
400	0.47394	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0890	4
n | 600 °K		0.0018	4
o		-0.0_695	4
m' | 700 to		0.0741	4
n' | 1000 °K		0.0012	4
o'		-0.0_641	4
Surface tension dynes/cm. 20°C		27.63	5
30		26.70	5
40		25.78	5
Parachor [P] 20°C			
30			
40			
Sugd.		632.5	5
Exp. L. 1. %/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes 80°C		1.81	2
100		1.42	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 32

NAME	n-Dodecylcyclopentane 1-Cyclopentyldodecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{34}$ — Molecular Weight 238.442

		Ref.
F. P. °C	-5.	2
F. P. 100%		
B. P. °C		
760 mm	312.	2
100	230.	2
30	194.	4
10	166.	5
1	120.	5
Pressure		
mm 25°C	0.0_3298	5
t_e	1530.	5
Density		
g/ml 20°C	0.8158	2
d_4^t 25	0.8123	2
30	0.8088	4
a	0.8298	4
b	-0.0_370	4
Ref. Index		
n_D 20°C	1.4518	2
25	1.4497	2
30	1.4470	4
"C"	0.7322	4
MR (Obs.)	78.82	2
MR (Calc.)	78.506	5
(nD-d/2)	1.0439	2
Dielectric	2.108	5
A | 195 to	6.985	2
B | 365 °C	1900.	2
C	151.	2
A* | 195 to	1.670	5
B* | 360 °C	1821.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.332	5
B' | 195 °C	2147.	5
C'	173.	5
A'* 25 to	2.017	5
B'* 195 °C	2063.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	348.9	5

		Ref.
dt/dP		
°C/mm		
25°C	26542.	5
BP	0.0645	2
t_e	0.0373	5
30 mm	0.9067	4
ΔHm cal/g		
ΔHv cal/g		
25°C	93.70	5
30 mm	66.87	5
BP	52.64	5
t_e	48.97	5
t_e (d, e)	48.19	5
ΔHv/T_e	18.77	5
d | 195 to	90.25	5
e | 340 °C	0.1205	5
d' | 25 to	97.67	5
e' | 195 °C	0.1588	5
d_c g/ml		
v_c ml/g		
t_c °C	476.7	5
P_c mm	9718.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9116	5
t_e	0.8837	5
t_c		
ΔHc kcal/m	2501.82	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 0 °C	9.92	2
20	6.25	2
40	4.08	2
60	2.80	2
B^v | -10 to	825.39	4
A^v | 50 °C	3.97532	4
(B^v) | 50 to	764.01	4
(A^v) | 110 °C	2.15422	4
c_p liq. °K		
c_p vap. 300 °K	0.36357	2
400	0.47517	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0825	4
n | 600 °K		0.0018	4
o |		-0.0_693	4
m' | 700 to		0.0766	4
n' | 1000 °K		0.0012	4
o' |		-0.0_641	4
Surface tension			
dynes/cm. 20°C		27.86	5
30		26.92	5
40		26.00	5
Parachor [P]			
20°C			
30			
40			
Sugd.		671.5	5
Exp. L. 1. %/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
80°C		2.05	2
100		1.59	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

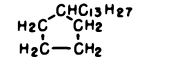
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XV. CYCLOPENTANES

No. 33

NAME	n-Tridecylcyclopentane 1-Cyclopentyltridecane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{18}H_{36}$ Molecular Weight 252.468	

		Ref.
F.P. °C	5	2
F.P. 100%		
B.P. °C 760 mm	327.	2
100	244.	2
30	207.	4
10	178.	5
1	131.	5
Pressure mm 25°C	0.0_4924	5
t_e	1581.	5
Density g/ml 20°C	0.8178	2
d_4^t 25	0.8143	2
30	0.8108	4
a	0.8318	4
b	-0.0_370	4
Ref. Index n_D 20°C	1.4531	2
25	1.4510	2
30	1.4490	4
"C"	0.7334	4
MR (Obs.)	83.46	2
MR (Calc.)	83.124	5
(nD-d/2)	1.0442	2
Dielectric	2.111	5
A | 205 to	6.993	2
B | 385 °C	1945.	2
C	146.	2
A* | 205 to	1.684	5
B* | 375 °C	1862.	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.341	5
B' | 205 °C	2198.	5
C'	168.	5
A'* 25 to	2.047	5
B'* 205 °C	2115.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	366.6	5

		Ref.
dt/dP °C/mm 25°C	79840.	5
BP	0.0657	5
t_e	0.0371	5
30 mm	0.9255	4
ΔHm cal/g		
ΔHv cal/g 25°C	94.88	5
30 mm	65.27	5
BP	51.59	5
t_e	47.80	5
t_e (d, e)	47.09	5
$\Delta Hv/T_e$	18.86	5
d | 205 to	88.75	5
e | 360 °C	0.1136	5
d' | 25 to	98.95	5
e' | 205 °C	0.1630	5
d_c g/ml		
v_c ml/g		
t_c °C	488.2	5
P_c mm	9025.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9174	4
t_e	0.8881	5
t_c		
ΔHc kcal/m	2648.74	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	7.39	2
40	4.74	2
60	3.20	2
80	2.31	2
B^v | 10 to	887.77	4
A^v | 70 °C	3.84077	4
(B^v) | 70 to	792.48	4
(A^v) | 110 °C	2.12228	4
c_p liq. °K		
c_p vap 300°K	0.36512	2
400	0.47626	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0767	4
n | 600 °K		0.0017	4
o		-0.0_690	4
m' | 700 to		0.0789	4
n' | 1000 °K		0.0012	4
o'		-0.0_641	4
Surface tension dynes/cm. 20°C		28.06	5
γ 30		27.11	5
40		26.18	5
Parachor [P] 20°C			
30			
40			
Sugd.		710.5	5
Exp. L.l.%/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes 100°C		1.77	2
110		1.55	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	n-Tetradecylcyclopentane 1-Cyclopentyltetradecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{38}$	Molecular Weight 266.494

		Ref.
F.P. °C	9.	2
F. P. 100%		
B. P. °C		
760 mm	341.	2
100	256.	2
30	219.	4
10	190.	5
1	142.	5
Pressure		
mm 25°C	0.0_428	5
t_e	1614.	5
Density		
g/ml 20°C	0.8196	2
d_4^t 25	0.8162	2
30	0.8128	4
a	0.8332	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4543	2
25	1.4522	2
30	1.4503	4
"C"	0.7337	4
MR (Obs.)	88.10	2
MR (Calc.)	88.742	5
(nD-d/2)	1.0445	2
Dielectric	2.115	5
A 220 to	7.003	2
B 400 °C	1987.	2
C	141.	2
A* 220 to	1.713	5
B* 390 °C	1905.	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.351	5
B' 220 °C	2245.	5
C'	164.	5
A'* 25 to	2.078	5
B'* 220 °C	2164.	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	382.6	5

		Ref.
dt/dP		
°C/mm		
25°C	244430.	5
BP	0.0668	5
t_e	0.0371	5
30 mm	0.9420	4
ΔHm cal/g		
ΔHv cal/g		
25°C	96.32	5
30 mm	63.81	5
BP	50.24	5
t_e	46.34	5
t_e (d, e)	45.63	5
ΔHv/T_e	18.83	5
d 220 to	88.05	5
e 375 °C	0.1109	5
d' 25 to	100.52	5
e' 220 °C	0.1679	5
d_c g/ml		
v_c ml/g		
t_c °C	499.2	5
P_c mm	8481.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9158	4
t_e	0.8845	5
t_c		
ΔHc kcal/m	2795.66	2
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	8.67	2
40	5.47	2
60	3.63	2
80	2.59	2
B^v 10 to	923.48	4
A^v 70 °C	3.78836	4
(B^v) 70 to	813.43	4
(A^v) 120 °C	2.11027	4
c_p liq. °K		
c_p vap. 300 °K	0.36654	2
400	0.47723	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0713	4
n	600 °K	0.0017	4
o		-0.0_688	4
m'	700 to	0.0811	4
n'	1000 °K	0.0012	4
o'		-0.0_641	4
Surface tension			
dynes/cm. 20°C		28.23	5
30		27.31	5
40		26.40	5
Parachor [P]			
20°C			
30			
40			
Sugd.		749.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity			
centistokes			
100°C		1.96	2
110		1.71	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 35

NAME	n-Pentadecylcyclopentane 1-Cyclopentylpentadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{20}H_{40}$ Molecular Weight 280.520	

		Ref.
F.P. °C	17.	2
F.P. 100%		
B.P. °C		
760 mm	355.	2
100	269.	2
30	231.	4
10	201.	5
1	152.	5
Pressure		
mm 25°C	0.0_581	5
t_e	1649.	5
Density		
g/ml 20°C	0.8213	2
d_4^t 25	0.8178	2
30	0.8143	4
a	0.8353	4
b	-0.0_37	4
Ref. Index		
n_D 20°C	1.4554	2
25	1.4533	2
30	1.4513	4
"C"	0.7339	4
MR (Obs.)	92.74	2
MR (Calc.)	92.360	5
(nD-d/2)	1.0447	2
Dielectric	2.118	5
A 230 to	7.013	2
B 410 °C	2029.	2
C	136.	2
A* 230 to	1.739	5
B* 405 °C	1947.	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.362	5
B' 230 °C	2293.	5
C'	159.	5
A'* 25 to	2.109	5
B'* 230 °C	2213.	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	398.53	5

		Ref.
dt/dP		
°C/mm		
25°C	794272.	5
BP	0.0679	5
t_e	0.0371	5
30 mm	0.9585	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.13	5
30 mm	62.51	5
BP	49.04	5
t_e	45.05	5
t_e (d, e)	44.33	5
$\Delta Hv/T_e$	18.81	5
d 230 to	87.46	5
e 390 °C	0.1082	5
d' 25 to	102.46	5
e' 230 °C	0.1733	5
d_c g/ml		
v_c ml/g		
t_c °C	507.2	5
P_c mm	7723.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9146	4
t_e	0.8822	5
t_c		
ΔHc kcal/m	2942.58	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 30 °C	7.88	2
40	6.27	2
60	4.09	2
80	2.89	2
B^v 20 to	959.11	4
A^v 70 °C	3.73324	4
(B^v) 70 to	842.49	4
(A^v) 120 °C	2.07561	4
c_p liq. °K		
c_p vap. 300°K	0.36778	2
400	0.47811	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0667	4
n	600 °K	0.0017	4
o		-0.0_686	4
m'	700 to	0.0847	4
n'	1000 °K	0.0012	4
o'		-0.0_641	4
Surface tension			
dynes/cm. 20°C		28.40	5
30		27.45	5
40		26.51	5
Parachor [P]			
20°C			
30			
40			
Sugd.		788.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		2.16	2
110		1.88	2

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 36

NAME	n-Hexadecylcyclopentane 1-Cyclopentylhexadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{21}H_{42}$ — Molecular Weight 294.546

		Ref.
F.P. °C	21.	2
F.P. 100%		
B.P. °C 760 mm	368.	2
100	280.	2
30	241.	4
10	212.	2
1	162.	4
Pressure mm 25°C	$0.0_5 26$	5
t_e	1687.	5
Density g/ml 20°C	0.8228	2
d_4^{25}	0.8194	2
d_4^{30}	0.8160	4
a	0.8364	4
b	$-0.0_3 68$	4
Ref. Index n_D 20°C	1.4564	2
25	1.4543	2
30	1.4524	4
"C"	0.7340	4
MR (Obs.)	97.38≠	2
MR (Calc.)	96.978	5
(nD-d/2)	1.0450≠	2
Dielectric	2.121	5
A | 240 to	7.021	2
B | 430 °C	2070.	2
C	132.	2
A* | 240 to	1.758	2
B* | 420 °C	1986.	2
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.370	5
B' | 240 °C	2339.	5
C'	156.	5
A'* 25 to	2.135	5
B'* 240 °C	2261.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	413.62	5

		Ref.
dt/dP °C/mm		
25°C	2.3×10^6	5
BP	0.0690	5
t_e	0.0370	5
30 mm	0.9750	5
ΔHm cal/g		
ΔHv cal/g		
25°C	99.15	5
30 mm	61.08	5
BP	47.89	5
t_e	43.89	5
t_e (d, e)	43.14	5
ΔHv/T_e	18.82	5
d | 240 to	86.21	5
e | 410 °C	0.1041	5
d' | 25 to	103.55	5
e' | 240 °C	0.1759	5
d_c g/ml		
v_c ml/g		
t_c °C	517.5	5
P_c mm	7302.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9151	5
t_e	0.8828	5
t_c		
ΔHc kcal/m	3089.51	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 30 °C	9.04	2
40	7.14	2
60	4.60	2
80	3.21	2
B^V | 20 to	988.07	4
A^V | 70 °C	3.69736	4
(B^V) | 70 to	869.10	4
(A^V) | 120 °C	2.04496	4
c_p liq. °K		
c_p vap. 300°K	0.36894	2
400	0.47891	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		0.0625	4
n | 600 °K		0.0017	4
o |		$-0.0_6 85$	4
m' | 700 to		0.0849	4
n' | 1000 °K		0.0012	4
o' |		$-0.0_6 41$	4
Surface tension dynes/cm. 20°C		28.55	5
γ 30		27.62	5
40		26.71	5
Parachor [P] 20°C			
30			
40			
Sugd.		827.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			
Viscosity centistokes			
100°C		2.38	2
110		2.06	2

≠ for undercooled liquid

+ grams/100 grams solvent

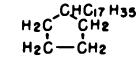
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 37

NAME	n-Heptadecylcyclopentane 1-Cyclopentylheptadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{22}H_{44}$ Molecular Weight 308.572	

		Ref.
F.P. °C	27.	2
F.P. 100%		
B.P. °C 760 mm	380.	2
100	290.	5
30	249.	5
10	218.	5
1	164.	5
Pressure mm 25°C	0.0_4134	5
t_e	1724.	5
Density g/ml 20°C	0.8241≠	2
d_4^t 25	0.8207≠	2
30	0.8173	4
a	0.8377	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4572≠	2
25	1.4552≠	2
30	1.4532	4
"C"	0.7341	4
MR (Obs.)	102.02≠	2
MR (Calc.)	101.596 ≠	5
(nD-d/2)	1.0452≠	2
Dielectric	2.123	5
A | 250 to	7.37712	5
B | 445 °C	2473.0	5
C	170.	5
A* | 250 to	2.10488	5
B* | 435 °C	2368.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7488	5
B' | 250 °C	2794.	5
C'	196.	5
A'* 25 to	2.4848	5
B'* 250 °C	2687.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	427.	5

		Ref.
dt/dP °C/mm		
25°C	5.68×10^5	5
BP	0.0699	5
t_e	0.0363	5
30 mm	1.0284	5
ΔHm cal/g		
ΔHv cal/g		
25°C	75.17	5
30 mm	56.95	5
BP	46.89	5
t_e	43.47	5
t_e (d, e)	43.26	5
$\Delta Hv/T_e$	19.15	5
d | 250 to	76.11	5
e | 425 °C	0.0769	5
d' | 25 to	77.20	5
e' | 250 °C	0.0813	5
d_c g/ml		
v_c ml/g		
t_c °C	525.	5
P_c mm	7031.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9165	5
t_e	0.8846	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	28.68	5
σ 30	27.74	5
40	26.83	5
Parachor [P] 20°C		
30		
40		
Sugd.	866.5	5
Exp. L.1.%/wt. u.		
Dispersion	97.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 38

NAME	n-Octadecylcyclopentane 1-Cyclopentyloctadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{23}H_{46}$ — Molecular Weight 322.598

		Ref.
F.P. °C	30.	2
F.P. 100%		
B.P. °C 760 mm	391.	2
100	300.	5
30	258.	5
10	226.	5
1	172.	5
Pressure mm 25°C	0.0_5704	5
t_e	1755.	5
Density g/ml 20°C	0.8254≠	2
d_4^t 25	0.8220≠	2
30	0.8186	4
a	0.8390	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4581≠	2
25	1.4560≠	2
30	1.4541	4
"C"	0.7343	4
MR (Obs.)	106.66≠	2
MR (Calc.)	106.214	5
(nD-d/2)	1.0454≠	2
Dielectric	2.126	5
A | 260 to	7.41131	5
B | 460 °C	2541.6	5
C	170.	5
A* | 260 to	2.14959	5
B* | 450 °C	2434.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.7852	5
B' | 260 °C	2872.	5
C'	197.	5
A'* 25 to	2.5346	5
B'* 260 °C	2763.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	440.	5

		Ref.
dt/dP °C/mm		
25°C	$1.06x10^6$	5
BP	0.07076	5
t_e	0.0362	5
30 mm	1.0448	5
ΔHm cal/g		
ΔHv cal/g		
25°C	73.51	5
30 mm	55.51	5
BP	45.81	5
t_e	42.40	5
t_e (d, e)	42.23	5
ΔHv/T_e	19.18	5
d | 260 to	74.40	5
e | 440 °C	0.0731	5
d' | 25 to	75.44	5
e' | 260 °C	0.0771	5
d_c g/ml		
v_c ml/g		
t_c °C	531.	5
P_c mm	6541.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9169	5
t_e	0.8846	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to _ _ °K		
f' g' h'	| to _ _ °K		
m n o	| to _ _ °K		
m' n' o'	| to _ _ °K		
Surface tension dynes/cm.	20°C	28.81	5
γ	30	27.87	5
	40	26.96	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	905.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

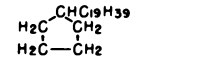
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	n-Nonadecylcyclopentane 1-Cyclopentylnonadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{24}H_{48}$
		Molecular Weight 336.624



		Ref.			Ref.			Ref.
F.P. °C	35.	2	dt/dP °C/mm 25°C	2.00×10^{6}	5	f | to		
F.P. 100%			BP	0.07157	5	g | °K		
B.P. °C			t_e	0.0345	5	h		
760 mm	402.	2	30 mm	1.0608	5	f' | to		
100	310.	5	ΔHm cal/g			g' | °K		
30	268.	5	ΔHv cal/g			h'		
10	235.	5	25°C	72.03	5	m | to		
1	180.	5	30 mm	54.24	5	n | °K		
Pressure mm 25°C	0.0_5364	5	BP	46.83	5	o		
t_e	1891.	5	t_e	43.57	5	m' | to		
Density g/ml 20°C	0.8266≠	2	t_e (d, e)	43.84	5	n' | °K		
d_4^t 25	0.8232≠	2	ΔHv/T_e	20.10	5	o'		
30	0.8198	4	d | 270 to	68.97	5	Surface tension dynes/cm. 20°C	28.93	5
a	0.8402	4	e | 450 °C	0.0551	5	σ 30	27.99	5
b	-0.0_3368	4	d' | 25 to	73.86	5	40	27.08	5
Ref. Index n_D 20°C	1.4588≠	2	e' | 270 °C	0.0734	5	Parachor [P] 20°C		
25	1.4568≠	2	d_c g/ml			30		
30	1.4548	4	v_c ml/g			40		
"C"	0.7343	4	t_c °C	542.	5	Sugd.	944.5	5
MR (Obs.)	111.30≠	2	P_c mm	6403.	5	Exp. L. l. %/wt. u.		
MR (Calc.)	110.832	5	PV/RT 25°C	1.0000	5	Dispersion	97.≠	2
(nD-d/2)	1.0456≠	2	30 mm	1.0000	5	Flash Point °C		
Dielectric	2.128	5	BP	0.9572	5	Fire Point		
A | 270 to	7.44786	5	t_e	0.9315	5	M. Spec.		
B | 475 °C	2612.4	5	t_c			Ultra V.		
C	170.	5	ΔHc kcal/m			X-Ray Dif.		
A* | 270 to	2.11794	5	ΔHf			Infrared		
B* | 465 °C	2468.4	5	ΔFf			Solubility in +		
K			Viscosity centistokes			Acetone	∞	
c			η °C			Carbon tet.	∞	
t_k | to						Benzene	∞	
t_x | °C			B^v | to			Ether	∞	
A' | 25 to	7.8240	5	A^v | °C			n-Heptane	∞	
B' | 270 °C	2952.	5	(B^v) | to			Ethanol	∞	
C'	198.	5	(A^v) | °C			Water		
A'* 25 to	2.5861	5	c_p liq. °K			Water in		
B'* 270 °C	2842.	5	c_p vap. °K					
Ac | to			c_v vap.					
Bc | t_c °C								
Cc								
Cryos. A° consts. B°								
t_e °C	456.	5						

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 40

NAME	n-Eicosylcyclopentane 1-Cyclopentyleicosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{25}H_{50}$	Molecular Weight 350.650

		Ref.
F.P. °C	38.	2
F.P. 100%		
B.P. °C		
760 mm	413.	2
100	321.	5
30	279.	5
10	246.	5
1	190.	5
Pressure mm 25°C	0.0_5134	5
t_e	1876.	5
Density g/ml 20°C	0.8276≠	2
d_4^t 25	0.8242≠	2
30	0.8208	4
a	0.8412	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4595≠	2
25	1.4575≠	2
30	1.4554	4
"C"	0.7344	4
MR (Obs.)	115.94≠	2
MR (Calc.)	115.450	5
(nD-d/2)	1.0457≠	2
Dielectric	2.130	5
A | 280 to	7.56514	5
B | 485 °C	2731.0	5
C	170.	5
A* | 280 to	2.27815	5
B* | 475 °C	2598.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9487	5
B' | 280 °C	3086.	5
C'	198.	5
A'* 25 to	2.7216	5
B'* 280 °C	2974.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	466.	5

		Ref.
dt/dP °C/mm		
25°C	$5.24x10^6$	5
BP	0.07112	5
t_e	0.0343	5
30 mm	1.0667	5
ΔHm cal/g		
ΔHv cal/g		
25°C	71.84	5
30 mm	53.92	5
BP	45.89	5
t_e	42.54	5
t_e (d, e)	42.70	5
$\Delta Hv/T_e$	20.17	5
d | 280 to	70.56	5
e | 455 °C	0.0597	5
d' | 25 to	73.60	5
e' | 280 °C	0.0707	5
d_c g/ml		
v_c ml/g		
t_c °C	545.	5
P_c mm	5959.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9406	5
t_e	0.9118	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		29.03	5
γ 30		28.09	5
40		27.17	5
Parachor [P]			
20°C			
30			
40			
Sugd.		983.5	5
Exp. L.1.%/wt. u.			
Dispersion		97.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

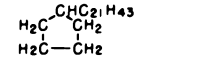
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 41

NAME	n-Heneicosylcyclopentane 1-Cyclopentylheneicosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{26}H_{52}$ Molecular Weight 364.676	

		Ref.
F.P. °C	42.	2
F.P. 100%		
B.P. °C 760 mm	423.	2
100	328.	5
30	285.	5
10	252.	5
1	195.	5
Pressure mm 25°C	0.0_5101	5
t_e	1950.	5
Density g/ml 20°C	0.8286≠	2
d_4^t 25	0.8252≠	2
30	0.8218	4
a	0.8422	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4602≠	2
25	1.4582≠	2
30	1.4562	4
"C"	0.7345	4
MR (Obs.)	120.58≠	2
MR (Calc.)	120.068	5
(nD-d/2)	1.0459≠	2
Dielectric	2.132	5
A | 285 to	7.51897	5
B | 500 °C	2750.4	5
C	170.	5
A* | 285 to	2.21011	5
B* | 490 °C	2600.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.8996	5
B' | 285 °C	3108.	5
C'	199.	5
A'* 25 to	2.6854	5
B'* 285 °C	2994.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	480.	5

		Ref.
dt/dP °C/mm		
25°C	$6.9x10^6$	5
BP	0.07306	5
t_e	0.0343	5
30 mm	1.0907	5
ΔHm cal/g		
ΔHv cal/g		
25°C	69.31	5
30 mm	51.93	5
BP	44.94	5
t_e	41.69	5
t_e (d, e)	42.03	5
$\Delta Hv/T_e$	20.17	5
d | 285 to	66.40	5
e | 470 °C	0.0507	5
d' | 25 to	70.98	5
e' | 285 °C	0.0668	5
d_c g/ml		
v_c ml/g		
t_c °C	553.	5
P_c mm	5559.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9563	5
t_e	0.9301	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.13	5
30	28.19	5
40	27.27	5
Parachor [P] 20°C		
30		
40		
Sugd.	1022.5	5
Exp. L.1.%/wt. u.		
Dispersion	97.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water	∞	
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

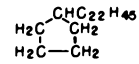
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 42

NAME	n-Docosylcyclopentane 1-Cyclopentyldocosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{27}H_{54}$ — Molecular Weight 378.702



		Ref.
F. P. °C	45.	2
F. P. 100%		
B. P. °C 760 mm	433.	2
100	337.	4
30	294.	5
10	260.	5
1	202.	5
Pressure mm 25°C	0.0_6546	5
t_e	1985.	5
Density g/ml 20°C	0.8295≠	2
d_4^t 25	0.8262≠	2
30	0.8229	4
a	0.8427	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4608≠	2
25	1.4588≠	2
30	1.4568	4
"C"	0.7346	4
MR (Obs.)	125.22≠	2
MR (Calc.)	124.686	5
(nD-d/2)	1.0460≠	2
Dielectric	2.134	5
A | 295 to	7.55306	5
B | 510 °C	2817.4	5
C	170.	5
A* | 295 to	2.24989	5
B* | 500 °C	2663.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9358	5
B' | 295 °C	3184.	5
C'	199.	5
A'* 25 to	2.7329	5
B'* 295 °C	3069.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	492.	5

		Ref.
dt/dP °C/mm		
25°C	$1.26x10^7$	5
BP	0.07375	5
t_e	0.0340	5
30 mm	1.1048	5
ΔHm cal/g		
ΔHv cal/g 25°C	68.04	5
30 mm	50.88	5
BP	44.20	5
t_e	40.96	5
t_e (d, e)	41.37	5
$\Delta Hv/T_e$	20.27	5
d | 295 to	64.96	5
e | 475 °C	0.0479	5
d' | 25 to	69.64	5
e' | 295 °C	0.0639	5
d_c g/ml		
v_c ml/g		
t_c °C	561.	5
P_c mm	5343.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.9584	5
t_e	0.9321	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.23	5
30	28.31	5
40	27.41	5
Parachor [P] 20°C		
30		
40		
Sugd.	1061.5	5
Exp. L. 1. %/wt. u.		
Dispersion	97.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 43

NAME	n-Tricosylcyclopentane 1-Cyclopentyltricosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{28}H_{56}$ Molecular Weight 392.728	

		Ref.
F.P. °C	49.	2
F.P. 100%		
B.P. °C 760 mm	442.	2
100	345.	5
30	301.	5
10	267.	5
1	208.	5
Pressure mm 25°C	0.0_631	5
t_e	2010.	5
Density g/ml 20°C	0.8304≠	2
d_4^t 25	0.8270≠	2
30	0.8236	4
a	0.8440	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4614≠	2
25	1.4593≠	2
30	1.4573	4
"C"	0.7347	4
MR (Obs.)	129.86≠	2
MR (Calc.)	129.304	5
(nD-d/2)	1.0462≠	2
Dielectric	2.136	5
A | 300 to	7.58769	5
B | 515 °C	2880.6	5
C	170.	5
A* | 300 to	2.29492	5
B* | 510 °C	2723.8	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.9727	5
B' | 300 °C	3255.	5
C'	200.	5
A'* 25 to	2.7809	5
B'* 300 °C	3139.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	502.	5

		Ref.
dt/dP °C/mm		
25°C	$2.2x10^7$	5
BP	0.0743	5
t_e	0.0339	5
30 mm	1.1168	5
ΔHm cal/g		
ΔHv cal/g		
25°C	66.79	5
30 mm	49.86	5
BP	43.34	5
t_e	40.09	5
t_e (d, e)	40.54	5
$\Delta Hv/T_e$	20.30	5
d | 300 to	63.85	5
e | 500 °C	0.0464	5
d' | 25 to	68.32	5
e' | 300 °C	0.0612	5
d_c g/ml		
v_c ml/g		
t_c °C	563.	5
P_c mm	4535.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9579	5
t_e	0.9315	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.32	5
γ 30	28.37	5
40	27.44	5
Parachor [P] 20°C		
30		
40		
Sugd.	1100.5	5
Exp. L.1.%/wt. u.		
Dispersion	97.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 44

NAME	n-Tetracosylcyclopentane 1-Cyclopentyltetracosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{29}H_{58}$ — Molecular Weight 406.754

		Ref.
F.P. °C	51.	2
F.P. 100%		
B.P. °C 760 mm	451.	2
100	354.	5
30	310.	5
10	277.	5
1	219.	5
Pressure mm 25°C	0.0_624	5
t_e	2032.	5
Density g/ml 20°C	0.8312≠	2
d_4^t 25	0.8278≠	2
30	0.8244	4
a	0.8448	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4619≠	2
25	1.4599≠	2
30	1.4578	4
"C"	0.7273	4
MR (Obs.)	134.50≠	2
MR (Calc.)	133.922	5
(nD-d/2)	1.0463≠	2
Dielectric	2.137	5
A | 310 to	7.43095	5
B | 520 °C	2711.9	5
C	145.	5
A* | 310 to	2.16291	5
B* | 515 °C	2567.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.8060	5
B' | 310 °C	3064.	5
C'	174.	5
A'* 25 to	2.6513	5
B'* 310 °C	2966.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	513.	5

		Ref.
dt/dP		
°C/mm		
25°C	$2.3x10^8$	5
BP	0.07485	5
t_e	0.0341	5
30 mm	1.1075	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.64	5
30 mm	50.10	5
BP	42.53	5
t_e	38.93	5
t_e (d, e)	39.21	5
ΔHv/T_e	20.15	5
d | 310 to	66.81	5
e | 510 °C	0.0534	5
d' | 25 to	80.05	5
e' | 310 °C	0.0965	5
d_c g/ml		
v_c ml/g		
t_c °C	567.1	5
P_c mm	4194.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9291	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.40	5
γ 30	28.45	5
40	27.52	5
Parachor [P] 20°C		
30		
40		
Sugd.	1139.5	5
Exp. L.1.%/wt. u.		
Dispersion	97.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

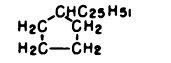
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 45

NAME	n-Pentacosylcyclopentane 1-Cyclopentylpentacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{30}H_{60}$ Molecular Weight 420.780	

		Ref.			Ref.			Ref.
F.P. °C	54.	2	dt/dP °C/mm			f | to		
F.P. 100%			25°C	4.3×10^{8}	5	g | °K		
B.P. °C			BP	0.07539	5	h		
760 mm	460.	2	t_e	0.03395	5	f' | to		
100	363.	5	30 mm	1.1196	5	g' | °K		
30	318.	5	ΔHm cal/g			h'		
10	284.	5	ΔHv cal/g			m | to		
1	225.	5	25°C	76.41	5	n | °K		
Pressure			30 mm	49.18	5	o		
mm 25°C	0.0_713	5	BP	41.83	5	m' | to		
t_e	2058.	5	t_e	38.26	5	n' | °K		
Density			t_e (d, e)	38.56	5	o'		
g/ml 20°C	0.8319≠	2	ΔHv/T_e	20.22	5	Surface tension		
d_4^t 25	0.8286≠	2	d | 320 to	65.67	5	dynes/cm. 20°C	29.47	5
30	0.8253	4	e | 520 °C	0.0518	5	30	28.55	5
a	0.8451	4	d' | 25 to	78.73	5	40	27.64	5
b	-0.0_366	4	e' | 320 °C	0.0929	5	Parachor [P]		
Ref. Index			d_c g/ml			20°C		
n_D 20°C	1.4624≠	2	v_c ml/g			30		
25	1.4604≠	2	t_c °C	574.	5	40		
30	1.4584	4	P_c mm	4047.	5	Sugd.	1178.5	5
"C"	0.7348	4	PV/RT			Exp. L.1.%/wt. u.		
MR (Obs.)	139.14≠	2	25°C	1.0000	5	Dispersion	98.≠	2
MR (Calc.)	138.546	5	30 mm	1.0000	5	Flash Point °C		
(nD-d/2)	1.0464≠	2	BP	0.9570	5	Fire Point		
Dielectric	2.139	5	t_e	0.9289	5	M. Spec.		
A | 320 to	7.46658	5	t_c			Ultra V.		
B | 540 °C	2774.4	5	ΔHc kcal/m			X-Ray Dif.		
C	145.	5	ΔHf			Infrared		
A* | 320 to	2.20707	5	ΔFf			Solubility in +		
B* | 530 °C	2627.7	5	Viscosity centistokes			Acetone	∞	
K			η °C			Carbon tet.	∞	
c						Benzene	∞	
t_k | to						Ether	∞	
t_x | °C						n-Heptane	∞	
A' | 25 to	7.8439	5	B^v | to			Ethanol	∞	
B' | 320 °C	3135.	5	A^v | °C			Water		
C'	174.	5	(B^v) | to			Water in		
A'* 25 to	2.6992	5	(A^v) | °C					
B'* 320 °C	3035.	5	c_p liq. °K					
Ac | to			c_p vap. °K					
Bc | t_c °C			c_v vap.					
Cc								
Cryos. A° consts. B°								
t_e °C	523.	5						

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

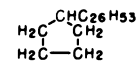
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 46

NAME	n-Hexacosylcyclopentane 1-Cyclopentylhexacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{31}H_{62}$
		Molecular Weight 434.806



		Ref.
F.P. °C	56.	2
F.P. 100%		
B.P. °C		
760 mm	468.	2
100	370.	5
30	325.	5
10	290.	5
1	231.	5
Pressure		
mm 25°C	$0.0_8 77$	5
t_e	2089.	5
Density		
g/ml 20°C	0.8326≠	2
d_4^t 25	0.8293≠	2
30	0.8260	4
a	0.8458	4
b	$-0.0_3 66$	4
Ref. Index		
n_D 20°C	1.4628≠	2
25	1.4608≠	2
30	1.4588	4
"C"	0.7348	4
MR (Obs.)	143.78≠	2
MR (Calc.)	143.158	5
(nD-d/2)	1.0465≠	2
Dielectric	2.140	5
A | 325 to	7.48387	5
B | 540 °C	2821.7	5
C	145.	5
A* | 325 to	2.22858	5
B* | 540 °C	2670.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.8623	5
B' | 325 °C	3188.	5
C'	175.	5
A'* 25 to	2.7278	5
B'* 325 °C	3088.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	533.	5

		Ref.
dt/dP		
°C/mm		
25°C	7.03×10^8	5
BP	0.07610	5
t_e	0.03384	5
30 mm	1.1321	5
ΔHm cal/g		
ΔHv cal/g		
25°C	74.89	5
30 mm	48.11	5
BP	41.07	5
t_e	37.52	5
t_e (d, e)	37.89	5
ΔHv/T_e	20.24	5
d | 325 to	64.08	5
e | 530 °C	0.0492	5
d' | 25 to	77.13	5
e' | 325 °C	0.0893	5
d_c g/ml		
v_c ml/g		
t_c °C	578.	5
P_c mm	3797.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9594	5
t_e	0.9315	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.54	5
30	28.62	5
40	27.71	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1217.5	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 47

NAME	n-Heptacosylcyclopentane 1-Cyclopentylheptacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{32}H_{64}$	Molecular Weight 448.832

		Ref.
F.P. °C	59.	2
F.P. 100%		
B.P. °C		
760 mm	476.	2
100	377.	5
30	332.	5
10	297.	5
1	237.	5
Pressure		
mm 25°C	0.0_840	5
t_e	2103.	5
Density		
g/ml 20°C	0.8333≠	2
d_4^t 25	0.8299≠	2
30	0.8265	4
a	0.8469	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4633≠	2
25	1.4612≠	2
30	1.4592	4
"C"	0.7349	4
MR (Obs.)	148.42≠	2
MR (Calc.)	147.776	5
(nD-d/2)	1.0466≠	2
Dielectric	2.141	5
A | 330 to	7.53111	5
B | 550 °C	2887.8	5
C	145.	5
A* | 330 to	2.28943	5
B* | 540 °C	2736.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9125	5
B' | 330 °C	3263.	5
C'	175.	5
A'* 25 to	2.7876	5
B'* 330 °C	3162.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	541.	5

		Ref.
dt/dP		
°C/mm		
25°C	1.3×10^9	5
BP	0.07631	5
t_e	0.03367	5
30 mm	1.1406	5
ΔHm cal/g		
ΔHv cal/g		
25°C	73.92	5
30 mm	47.39	5
BP	40.39	5
t_e	36.81	5
t_e (d, e)	37.22	5
$\Delta Hv/T_e$	20.29	5
d | 330 to	63.53	5
e | 530 °C	0.0486	5
d' | 25 to	76.07	5
e' | 330 °C	0.0864	5
d_c g/ml		
v_c ml/g		
t_c °C	578.	5
P_c mm	3434.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9565	5
t_e	0.9283	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.62	5
30	28.66	5
40	27.73	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1256.5	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 48

NAME	n-Octacosylcyclopentane 1-Cyclopentyloctacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{33}H_{66}$ Molecular Weight 462.858	

		Ref.
F. P. °C	61.	2
F. P. 100%		
B. P. °C 760 mm	483.	2
100	384.	5
30	338.	5
10	301.	5
1	243.	5
Pressure mm 25°C	0.0_824	5
t_e	2123.	5
Density g/ml 20°C	0.8339≠	2
d_4^{t} 25	0.8306≠	2
30	0.8273	4
a	0.8471	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4637≠	2
25	1.4617≠	2
30	1.4597	4
"C"	0.7350	4
MR (Obs.)	153.06≠	2
MR (Calc.)	152.394	5
(nD-d/2)	1.0467≠	2
Dielectric	2.142	5
A | 340 to	7.56023	5
B | 560 °C	2938.7	5
C	145.	5
A* | 340 to	2.32753	5
B* | 550 °C	2785.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.9435	5
B' | 340 °C	3321.	5
C'	175.	5
A'* 25 to	2.8282	5
B'* 340 °C	3218.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	549.	5

		Ref.
dt/dP °C/mm		
25°C	2.2×10^9	5
BP	0.07669	5
t_e	0.03354	5
30 mm	1.1497	5
ΔHm cal/g		
ΔHv cal/g		
25°C	72.66	5
30 mm	46.52	5
BP	39.70	5
t_e	36.15	5
t_e (d, e)	36.59	5
$\Delta Hv/T_e$	20.35	5
d | 340 to	62.42	5
e | 540 °C	0.0470	5
d' | 25 to	74.75	5
e' | 340 °C	0.0835	5
d_c g/ml		
v_c ml/g		
t_c °C	583.	5
P_c mm	3333.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9566	5
t_e	0.9280	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension dynes/cm. 20°C	29.68	5
γ 30	28.75	5
40	27.84	5
Parachor [P] 20°C		
30		
40		
Sugd.	1295.5	5
Exp. L. l. %/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

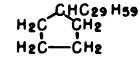
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 49

NAME	n-Nonacosylcyclopentane 1-Cyclopentylnonacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{34}H_{68}$ Molecular Weight 476.884	

		Ref.			Ref.			Ref.
F.P. °C	63.	2	dt/dP °C/mm			f | to		
F.P. 100%			25°C	3.9×10^{9}	5	g | °K		
B.P. °C			BP	0.07712	5	h		
760 mm	491.	2	t_e	0.03340	5	f' | to		
100	391.	5	30 mm	1.1599	5	g' | °K		
30	345.	5	ΔHm cal/g			h'		
10	309.	5	ΔHv cal/g			m | to		
1	249.	5	25°C	71.61	5	n | °K		
Pressure mm 25°C	0.0_813	5	30 mm	45.77	5	o		
t_e	2146.	5	BP	39.10	5	m' | to		
Density			t_e	35.55	5	n' | °K		
g/ml 20°C	0.8345≠	2	t_e (d, e)	36.03	5	o'		
d_4^t 25	0.8312≠	2	ΔHv/T_e	20.39	5	Surface tension		
30	0.8279	4	d | 345 to	61.55	5	dynes/cm. 20°C	29.74	5
a	0.8477	4	e | 550 °C	0.0457	5	30	28.81	5
b	-0.0_3366	4	d' | 25 to	73.63	5	40	27.90	5
Ref. Index			e' | 345 °C	0.0874	5	Parachor [P]		
n_D 20°C	1.4640≠	2	d_c g/ml			20°C		
25	1.4620≠	2	v_c ml/g			30		
30	1.4600	4	t_c °C	586.	5	40		
"C"	0.7349	4	P_c mm	3123.	5	Sugd.	1334.5	5
MR (Obs.)	157.71≠	2	PV/RT			Exp. L.1.%/wt. u.		
MR (Calc.)	157.012	5	25°C	1.0000	5	Dispersion	98.≠	2
(nD-d/2)	1.0468≠	2	30 mm	1.0000	5	Flash Point °C		
Dielectric	2.143	5	BP	0.9562	5	Fire Point		
A | 345 to	7.59341	5	t_e	0.9276	5	M. Spec.		
B | 575 °C	2997.2	5	t_c			Ultra V.		
C	145.	5	ΔHc kcal/m			X-Ray Dif.		
A* | 345 to	2.36899	5	ΔHf			Infrared		
B* | 570 °C	2841.9	5	ΔFf			Solubility in +		
K			Viscosity centistokes			Acetone	∞	
c			η °C			Carbon tet.	∞	
t_k | to						Benzene	∞	
t_x | °C			B^v | to			Ether	∞	
A' | 25 to	7.9787	5	A^v | °C			n-Heptane	∞	
B' | 345 °C	3387.	5	(B^v) | to			Ethanol	∞	
C'	176.	5	(A^v) | °C			Water		
A'* 25 to	2.8723	5	c_p liq. °K			Water in		
B'* 345 °C	3283.	5	c_p vap. °K					
Ac | to			c_v vap.					
Bc | t_c °C								
Cc								
Cryos. A* consts. B*								
t_e °C	558.	5						

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 50

NAME	n-Triacontylcyclopentane 1-Cyclopentyltriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{35}H_{70}$ — Molecular Weight 490.910

		Ref.
F. P. °C	65.	2
F. P. 100%		
B. P. °C		
760 mm	498.	2
100	397.	5
30	351.	5
10	315.	5
1	254.	5
Pressure		
mm 25°C	0.0_978	5
t_e	2166.	5
Density		
g/ml 20°C	0.8350≠	2
d_4^t 25	0.8317≠	2
30	0.8284	4
a	0.8482	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4644≠	2
25	1.4624≠	2
30	1.4604	4
"C"	0.7350	4
MR (Obs.)	162.35≠	2
MR (Calc.)	161.630	5
(nD-d/2)	1.0469≠	2
Dielectric	2.144	5
A | 350 to	7.62314	5
B | 580 °C	3049.3	5
C	145.	5
A* | 350 to	2.40704	5
B* | 575 °C	2892.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0103	5
B' | 350 °C	3446.	5
C'	176.	5
A'* 25 to	2.9130	5
B'* 350 °C	3341.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	566.	5

		Ref.
dt/dP		
°C/mm		
25°C	$6.6x10^9$	5
BP	0.07748	5
t_e	0.03326	5
30 mm	1.1686	5
ΔHm cal/g		
ΔHv cal/g		
25°C	70.51	5
30 mm	45.01	5
BP	38.48	5
t_e	34.94	5
t_e (d, e)	35.45	5
$\Delta Hv/T_e$	20.43	5
d | 350 to	60.61	5
e | 565 °C	0.0444	5
d' | 25 to	72.46	5
e' | 350 °C	0.0782	5
d_c g/ml		
v_c ml/g		
t_c °C	589.	5
P_c mm	2929.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9561	5
t_e	0.9273	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm.. 20°C	29.79	5
30	28.86	5
40	27.95	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1373.5	5
Exp. L. 1. %/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XV. CYCLOPENTANES

No. 51

NAME	n-Hentriacontylcyclopentane 1-Cyclopentylhentriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{36}H_{72}$	Molecular Weight 504.936

		Ref.
F.P. °C	67.	2
F.P. 100%		
B.P. °C 760 mm	505.	2
100	404.	5
30	357.	5
10	321.	5
1	259.	5
Pressure mm 25°C	0.0_945	5
t_e	2185.	5
Density g/ml 20°C	0.8356≠	2
d_4^t 25	0.8322≠	2
30	0.8288	4
a	0.8492	4
b	-0.0_368	4
Ref. Index n_D 20°C	1.4648≠	2
25	1.4628≠	2
30	1.4607	4
"C"	0.7351	4
MR (Obs.)	166.99≠	2
MR (Calc.)	166.248	5
(nD-d/2)	1.0470≠	2
Dielectric	2.146	5
A | 355 to	7.65505	5
B | 580 °C	3103.3	5
C	145.	5
A* | 355 to	2.44753	5
B* | 570 °C	2944.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0443	5
B' | 355 °C	3507.	5
C'	177.	5
A'* 25 to	2.9556	5
B'* 355 °C	3401.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	574.	5

		Ref.
dt/dP °C/mm		
25°C	1.1×10^{10}	5
BP	0.0778	5
t_e	0.0331	5
30 mm	1.1770	5
ΔHm cal/g		
ΔHv cal/g 25°C	69.50	5
30 mm	44.31	5
BP	37.90	5
t_e	34.32	5
t_e (d, e)	34.90	5
$\Delta Hv/T_e$	20.45	5
d | 355 to	59.81	5
e | 565 °C	0.0434	5
d' | 25 to	71.39	5
e' | 355 °C	0.0758	5
d_c g/ml		
v_c ml/g		
t_c °C	588.	5
P_c mm	2637.	5
PV/RT 25°C	1.0000	5
30 mm	1.0000	5
BP	0.0956	5
t_e	0.0927	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.85	5
γ 30	28.89	5
40	27.96	5
Parachor [P] 20°C		
30		
40		
Sugd.	1412.5	5
Exp. L.l.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 52

NAME	n-Dotriacontylcyclopentane 1-Cyclopentyldotriacontane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{37}H_{74}$	Molecular Weight 518.962

		Ref.
F.P. °C	69.	2
F.P. 100%		
B.P. °C		
760 mm	512.	2
100	410.	5
30	363.	5
10	327.	5
1	265.	5
Pressure		
mm 25°C	$0.0_9 27$	5
t_e	2215.	5
Density		
g/ml 20°C	0.8360≠	2
d_4^t 25	0.8327≠	2
30	0.8294	4
a	0.8492	4
b	$-0.0_3 66$	4
Ref. Index		
n_D 20°C	1.4651≠	2
25	1.4631≠	2
30	1.4611	4
"C"	0.7352	4
MR (Obs.)	171.63≠	2
MR (Calc.)	170.866	5
(nD-d/2)	1.0471≠	2
Dielectric	2.146	5
A | 365 to	7.68178	5
B | 595 °C	3154.2	5
C	145.	5
A* | 365 to	2.47545	5
B* | 590 °C	2990.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.0727	5
B' | 365 °C	3564.	5
C'	177.	5
A'* 25 to	2.9924	5
B'* 365 °C	3458.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	582.	5

		Ref.
dt/dP		
°C/mm		
25°C	1.8×10^{10}	5
BP	0.0782	5
t_e	0.0329	5
30 mm	1.1861	5
ΔHm cal/g		
ΔHv cal/g		
25°C	68.47	5
30 mm	43.61	5
BP	37.46	5
t_e	33.93	5
t_e (d, e)	34.55	5
$\Delta Hv/T_e$	20.58	5
d | 365 to	58.63	5
e | 570 °C	0.0413	5
d' | 25 to	70.30	5
e' | 365 °C	0.0735	5
d_c g/ml		
v_c ml/g		
t_c °C	594.	5
P_c mm	2584.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9588	5
t_e	0.9306	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.89	5
γ 30	28.96	5
40	28.05	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1451.5	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

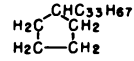
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 53

NAME	n-Tritriacontylcyclopentane 1-Cyclopentyltritriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{38}H_{76}$ Molecular Weight 532.988	

		Ref.
F.P. °C	70.	2
F.P. 100%		
B.P. °C		
760 mm	518.	2
100	416.	5
30	369.	5
10	332.	5
1	269.	5
Pressure		
mm 25°C	0.0_916	5
t_e	2230.	5
Density		
g/ml 20°C	0.8365≠	2
d_4^t 25	0.8332≠	2
30	0.8299	4
a	0.8497	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4654≠	2
25	1.4634≠	2
30	1.4614	4
"C"	0.7351	4
MR (Obs.)	176.27≠	2
MR (Calc.)	175.484	5
(nD-d/2)	1.0471≠	2
Dielectric	2.147	5
A | 370 to	7.71327	5
B | 600 °C	3203.9	5
C	145.	5
A* | 370 to	2.51605	5
B* | 590 °C	3038.7	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.1061	5
B' | 370 °C	3620.	5
C'	177.	5
A'* 25 to	3.0344	5
B'* 370 °C	3513.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	589.	5

		Ref.
dt/dP		
°C/mm		
25°C	3.98×10^{10}	5
BP	0.0784	5
t_e	0.0327	5
30 mm	1.1926	5
ΔHm cal/g		
ΔHv cal/g		
25°C	67.49	5
30 mm	42.94	5
BP	36.90	5
t_e	33.37	5
t_e (d, e)	34.02	5
$\Delta Hv/T_e$	20.63	5
d | 370 to	57.88	5
e | 570 °C	0.0450	5
d' | 25 to	69.27	5
e' | 370 °C	0.0714	5
d_c g/ml		
v_c ml/g		
t_c °C	595.	5
P_c mm	2595.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9582	5
t_e	0.9298	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	29.94	5
30	29.01	5
40	28.10	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1490.5	5
Exp. L.l.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 54

NAME	n-Tetratriacontylcyclopentane 1-Cyclopentyltetratriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{78}$
		Molecular Weight 547.014

		Ref.
F.P. °C	72.	2
F.P. 100%		
B.P. °C		
760 mm	525.	2
100	422.	5
30	375.	5
10	338.	5
1	274.	5
Pressure		
mm 25°C	$0.0_{10}98$	5
t_e	2247.	5
Density		
g/ml 20°C	0.8370≠	2
d_4^t 25	0.8336≠	2
30	0.8302	4
a	0.8506	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4657≠	2
25	1.4637≠	2
30	1.4616	4
"C"	0.7351	4
MR (Obs.)	180.91≠	2
MR (Calc.)	180.102	5
(nD-d/2)	1.0472≠	2
Dielectric	2.148	5
A | 375 to	7.73950	5
B | 600 °C	3255.3	5
C	145.	5
A* | 375 to	2.55168	5
B* | 600 °C	3089.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 250 to	8.1340	5
B' | 375 °C	3678.	5
C'	178.	5
A'* 25 to	3.0702	5
B'* 375 °C	3570.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	597.	5

		Ref.
dt/dP		
°C/mm		
25°C	$4.95x10^{10}$	5
BP	0.0788	5
t_e	0.0327	5
30 mm	1.2016	5
ΔHm cal/g		
ΔHv cal/g		
25°C	66.56	5
30 mm	42.32	5
BP	36.33	5
t_e	32.74	5
t_e (d, e)	33.46	5
$\Delta Hv/T_e$	20.59	5
d | 375 to	57.26	5
e | 580 °C	0.0399	5
d' | 25 to	68.29	5
e' | 375 °C	0.0693	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9569	5
t_e	0.9281	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		30.00	5
γ 30		29.04	5
40		28.10	5
Parachor [P]			
20°C			
30			
40			
Sugd.		1529.5	5
Exp. L.1.%/wt. u.			
Dispersion		98.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

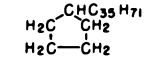
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 55

NAME	n-Pentatriacontylcyclopentane 1-Cyclopentylpentatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{40}H_{80}$ Molecular Weight 561.040	

		Ref.
F. P. °C	74.	2
F. P. 100%		
B. P. °C 760 mm	531.	2
100	428.	5
30	380.	5
10	343.	5
1	279.	5
Pressure mm 25°C	$0.0_{10}61$	5
t_e	2263.	5
Density g/ml 20°C	0.8374≠	2
d_4^t 25	0.8341≠	2
30	0.8308	4
a	0.8506	4
b	-0.0_3366	4
Ref. Index n_D 20°C	1.4660≠	2
25	1.4640≠	2
30	1.4620	4
"C"	0.7352	4
MR (Obs.)	185.55≠	2
MR (Calc.)	184.720	5
(nD-d/2)	1.0473≠	2
Dielectric	2.149	5
A | 380 to	7.76813	5
B | 600 °C	3303.8	5
C	145.	5
A* | 380 to	2.58832	5
B* | 600 °C	3136.4	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	8.1645	5
B' | 380 °C	3733.	5
C'	178.	5
A'* 25 to	3.1086	5
B'* 380 °C	3624.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	604.	5

		Ref.
dt/dP °C/mm		
25°C	$7.9x10^{10}$	5
BP	0.07904	5
t_e	0.03256	5
30 mm	1.2085	5
ΔHm cal/g		
ΔHv cal/g		
25°C	65.64	5
30 mm	41.71	5
BP	35.83	5
t_e	32.28	5
t_e (d, e)	33.00	5
$\Delta Hv/T_e$	20.66	5
d | 380 to	56.51	5
e | 590 °C	0.03895	5
d' | 25 to	67.33	5
e' | 380 °C	0.0674	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9566	5
t_e	0.9277	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	30.04	5
γ 30	29.10	5
40	28.19	5
Parachor [P] 20°C		
30		
40		
Sugd.	1568.5	5
Exp. L.l.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 56

NAME	n-Hexatriacontylcyclopentane 1-Cyclopentylhexatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{41}H_{82}$
		Molecular Weight 575.066

		Ref.
F.P. °C	75.	2
F.P. 100%		
B.P. °C		
760 mm	537.	2
100	433.	5
30	385.	5
10	348.	5
1	284.	5
Pressure		
mm 25°C	$0.0_{10}38$	5
t_e	2283.	5
Density		
g/ml 20°C	0.8378≠	2
d_4^t 25	0.8345≠	2
30	0.8312	4
a	0.8510	4
b	-0.0_3366	4
Ref. Index		
n_D 20°C	1.4662≠	2
25	1.4642≠	2
30	1.4621	4
"C"	0.7350	4
MR (Obs.)	190.19≠	2
MR (Calc.)	189.748	5
(nD-d/2)	1.0473≠	2
Dielectric	2.150	5
A | 385 to	7.79534	5
B | 610 °C	3351.7	5
C	145.	5
A* | 385 to	2.62093	5
B* | 610 °C	3181.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	8.1934	5
B' | 385 °C	3787.	5
C'	179.	5
A'* 25 to	3.1453	5
B'* 385 °C	3678.	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	610.	5

		Ref.
dt/dP		
°C/mm		
25°C	$1.3x10^{11}$	5
BP	0.0793	5
t_e	0.0324	5
30 mm	1.2155	5
ΔHm cal/g		
ΔHv cal/g		
25°C	64.76	5
30 mm	41.12	5
BP	35.38	5
t_e	31.83	5
t_e (d, e)	32.60	5
$\Delta Hv/T_e$	20.72	5
d | 385 to	55.71	5
e | 600 °C	0.0379	5
d' | 25 to	66.40	5
e' | 385 °C	0.0656	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9574	5
t_e	0.9286	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| to | °K		
m' n' o'	| to | °K		
Surface tension			
dynes/cm.	20°C	30.08	5
γ	30	29.14	5
	40	28.23	5
Parachor [P]			
	20°C		
	30		
	40		
	Sugd.	1607.5	5
Exp. L.1.%/wt. u.			
Dispersion		98.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 1

NAME	Cyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_5H_8	Molecular Weight 68.114

		Ref.
F.P. °C	-135.076	2
F.P. 100%		
B.P. °C 760 mm	44.242	2
100	-5.465	4
30	-27.36	5
10	-43.97	5
1	-71.35	5
Pressure mm 25°C	380.22	5
t_e	855.03	5
Density g/ml 20°C	0.77199	2
d_4^t 25	0.76653	2
30	0.76104	4
a	0.79404	4
b	-0.00104	4
Ref. Index n_D 20°C	1.42246	2
25	1.41940	2
30	1.41612	4
"C"	0.7275	4
MR (Obs.)	22.443	2
MR (Calc.)	22.623	5
(nD-d/2)	1.03646	2
Dielectric		
A -30 to	6.92066	4
B 105 °C	1121.818	4
C	233.446	5
A* -30 to	1.20562	5
B* 65 °C	1047.1	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 105 to	7.35778	5
Bc t_c °C	1436.9	5
Cc	278.	5
Cryos. A* consts. B*		
t_e °C	47.80	5

		Ref.
dt/dP °C/mm		
25°C	0.06801	5
BP	0.03928	2
t_e	0.03582	5
30 mm	0.5481	5
ΔHm cal/g	11.80	3
ΔHv cal/g		
25°C	97.98	5
30 mm	107.24	5
BP	94.25	5
t_e	93.60	5
t_e (d, e)	93.60	5
$\Delta Hv/T_e$	19.86	5
d -30 to	102.30	5
e 60 °C	0.1814	5
d' to		
e' °C		
d_c g/ml	0.277	5
v_c ml/g	3.613	5
t_c °C	231.	5
P_c mm	34112.	5
PV/RT		
25°C	0.9767	4
30 mm	1.0000	5
BP	0.9605	5
t_e	0.9574	5
t_c	0.267	5
ΔHc kcal/m		
ΔHf	1.16	2
ΔFf		
Viscosity centistokes		
η 30 °C	0.410	3
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap 300°K	0.26544	2
400	0.36821	2
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m 300 to		-0.08343	4
n 600 °K		0.00126	4
o		-0.0_6338	4
m' 700 to		-0.03077	4
n' 1000 °K		0.00122	4
o'		-0.0_6433	4
Surface tension dynes/cm. 20°C		22.65	3
γ 30		21.32	3
40			
Parachor [P] 20°C		192.81	4
30			
40			
Sugd.		192.5	5
Exp. L.l.%/wt. u.			
Dispersion		118.7	2
Flash Point °C			
Fire Point			
M. Spec.			2
Ultra V.			
X-Ray Dif.			
Infrared			1
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Timmermans

No. 2

NAME	1-Methylcyclopentene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140

		Ref.
F.P. °C	-127.	2
F.P. 100%		
B.P. °C		
760 mm	75.8	2
100	21.38	5
30	-2.51	5
10	-20.60	5
1	-50.36	5
Pressure mm 25°C	117.6	5
t_e	943.17	5
Density		
g/ml 20°C	0.7802	2
d_4^t 25	0.7752	2
30	0.7702	4
a	0.8003	4
b	-0.0_3982	4
Ref. Index		
n_D 20°C	1.4330	2
25	1.4302	2
30	1.4271	4
"C"	0.7367	4
MR (Obs.)	27.36	2
MR (Calc.)	27.241	5
(nD-d/2)	1.0429	2
Dielectric		
A -5 to	6.86884	4
B 130 °C	1199.6	4
C	225.	5
A* -5 to	1.2041	5
B* 105 °C	1121.3	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 130 to	7.29519	5
Bc t_c °C	1524.9	5
Cc	271.	5
Cryos. A°		
consts. B°		
t_e °C	83.04	5

		Ref.
dt/dP		
°C/mm		
25°C	0.1924	5
BP	0.04310	2
t_e	0.03642	5
30 mm	0.5974	5
ΔHm cal/g		
ΔHv cal/g		
25°C	95.69	5
30 mm	98.91	5
BP	85.80	5
t_e	84.61	5
t_e (d, e)	84.59	5
$\Delta Hv/T_e$	19.51	5
d -5 to	98.49	5
e 90 °C	0.1675	5
d' to		
e' °C		
d_c g/ml	0.273	5
v_c ml/g	3.658	5
t_c °C	269.	5
P_c mm	29596.	5
PV/RT		
25°C	0.9921	4
30 mm	1.0000	5
BP	0.9578	5
t_e	0.9516	5
t_c	0.263	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300°K	0.29584	2
400	0.39567	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.04019	4
n	600 °K	0.00121	4
o		-0.0_6304	4
m'	700 to	-0.03654	4
n'	1000 °K	0.00130	4
o'		-0.0_6487	4
Surface tension			
dynes/cm. 20°C		23.33	5
γ 30		22.12	5
40		20.95	5
Parachor [P]			
20°C			
30			
40			
Sugd.		231.5	5
Exp. L. 1. %/wt. u.			
Dispersion		124.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

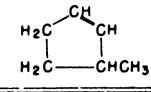
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 3

NAME	3-Methylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10} Molecular Weight 82.140



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	65.0	2
100	12.22	4
30	-10.97	4
10	-28.52	5
1	-57.40	5
Pressure		
mm 25°C	176.7	5
t_e	913.32	5
Density		
g/ml 20°C	0.7622	2
d_4^t 25	0.7572	2
30	0.7522	4
a	0.7822	4
b	-0.0_397	4
Ref. Index		
n_D 20°C	1.4207	2
25	1.4179	2
30	1.4148	4
"C"	0.7339	4
MR (Obs.)	27.31	2
MR (Calc.)	27.24	4
(nD-d/2)	1.0396	2
Dielectric		
A -10 to	6.87259	4
B 119 °C	1165.6	4
C	227.	5
A* -10 to	1.21879	5
B* 80 °C	1089.0	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 119 to	7.29924	5
Bc t_c °C	1479.7	5
Cc	271.	5
Cryos. A°		
consts. B°		
t_e °C	70.96	5

		Ref.
dt/dP °C/mm		
25°C	0.1339	5
BP	0.0418	2
t_e	0.03622	5
30 mm	0.5796	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.28	5
30 mm	95.67	5
BP	83.17	5
t_e	82.20	5
t_e (d, e)	82.19	5
$\Delta Hv/T_e$	19.62	5
d -10 to	93.87	5
e 80 °C	0.1646	5
d' to		
e' °C		
d_c g/ml	0.268	5
v_c ml/g	3.735	5
t_c °C	250.	5
P_c mm	28713.	5
PV/RT		
25°C	0.9720	5
30 mm	1.0000	5
BP	0.9590	5
t_e	0.9538	5
t_c	0.27	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m 300 to		-0.0608	4
n 600 °K		0.0013	4
o		-0.0_637	4
m' 700 to		0.0098	4
n' 1000 °K		0.0012	4
o'		-0.0_643	4
Surface tension			
dynes/cm. 20°C		21.22	5
γ 30		20.10	5
40		19.00	5
Parachor [P]			
20°C			
30			
40			
Sugd.		231.5	5
Exp. L.1.%/wt. u.			
Dispersion		119.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in [+]			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

[+] grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	4-Methylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}
		Molecular Weight 82.140

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	75.2	2
100	20.91	5
30	-2.94	5
10	-20.98	5
1	-50.68	5
Pressure mm 25°C	120.16	5
t_e	941.63	5
Density g/ml 20°C	0.7796	2
d_4^t 25	0.7747	2
30	0.7698	5
a	0.7992	5
b	-0.03958	5
Ref. Index n_D 20°C	1.4306	2
25	1.4278	2
30	1.4249	4
"C"	0.7334	4
MR (Obs.)	27.25	2
MR (Calc.)	27.241	5
(nD-d/2)	1.0408	2
Dielectric		
A | -2 to	6.87015	4
B | 130 °C	1197.6	4
C	225.	5
A* | -2 to	1.20598	5
B* | 100 °C	1119.4	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 130 to	7.29635	5
Bc | t_c °C	1522.2	5
Cc	271.	5
Cryos. A°		
consts. B°		
t_e °C	82.37	5

		Ref.
dt/dP °C/mm		
25°C	0.1886	5
BP	0.04300	2
t_e	0.0364	5
30 mm	0.5961	5
ΔHm cal/g		
ΔHv cal/g		
25°C	93.10	5
30 mm	98.82	5
BP	85.72	5
t_e	84.54	5
t_e (d, e)	84.52	5
$\Delta Hv/T_e$	19.53	5
d | -2 to	98.32	5
e | 100 °C	0.1676	5
d' | to		
e' | °C		
d_c g/ml	0.276	5
v_c ml/g	3.627	5
t_c °C	268.	5
P_c mm	29679.	5
PV/RT		
25°C	0.9920	4
30 mm	1.0000	5
BP	0.9579	5
t_e	0.9518	5
t_c	0.262	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300 °K	0.29340	2
400	0.39688	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	-0.06816	4
n | 600 °K	0.00133	4
o |	-0.0_6426	4
m' | 700 to	0.0427	4
n' | 1000 °K	0.00111	4
o' |	-0.0_6365	4
Surface tension dynes/cm. 20°C	23.25	5
γ 30	22.08	5
40	20.93	5
Parachor [P] 20°C		
30		
40		
Sugd.	231.5	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

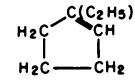
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	1-Ethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_7H_{12}	Molecular Weight 96.166



		Ref.
F.P. °C	-118.4	2
F.P. 100%		
B.P. °C		
760 mm	106.3	2
100	47.36	5
30	21.49	5
10	1.91	5
1	-30.28	5
Pressure		
mm 25°C	35.86	5
t_e	1026.0	5
Density		
g/ml 20°C	0.7982	2
d_4^t 25	0.7936	2
30	0.7889	4
a	0.8167	4
b	-0.0_392	4
Ref. Index		
n_D 20°C	1.4410	2
25	1.4384	2
30	1.4355	4
"C"	0.7325	4
MR (Obs.)	31.82	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0419	2
Dielectric		
A 20 to	6.86113	4
B 160 °C	1294.8	4
C	219.	5
A* 20 to	1.23806	5
B* 135 °C	1212.6	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 160 to	7.28115	5
Bc t_c °C	1631.7	5
Cc	265.	5
Cryos. A* consts. B*		
t_e °C	117.31	5

		Ref.
dt/dP °C/mm		
25°C	0.5569	5
BP	0.0467	2
t_e	0.03698	5
30 mm	0.6466	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.96	5
30 mm	92.51	5
BP	79.58	5
t_e	77.96	5
t_e (d, e)	77.90	5
$\Delta Hv/T_e$	19.20	5
d 20 to	95.78	5
e 30 °C	0.1524	5
d' to		
e' °C		
d_c g/ml	0.264	5
v_c ml/g	3.784	5
t_c °C	303.	5
P_c mm	25668.	5
PV/RT		
25°C	0.9995	4
30 mm	1.0000	5
BP	0.9534	5
t_e	0.9443	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		25.39	5
γ 30		24.22	5
40		23.08	5
Parachor [P]			
20°C			
30			
40			
Sugd.		270.5	5
Exp. L.1.%/wt. u.			
Dispersion		119.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

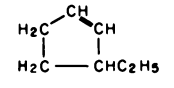
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	3-Ethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}
		Molecular Weight 96.166



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	98.1	2
100	40.33	5
30	14.99	5
10	-4.18	5
1	-35.68	5
Pressure		
mm 25°C	49.73	5
t_e	1005.7	5
Density		
g/ml 20°C	0.7830	2
d_4^t 25	0.7784	2
30	0.7738	4
a	0.8014	4
b	-0.0_391	4
Ref. Index		
n_D 20°C	1.4319	2
25	1.4293	2
30	1.4265	4
"C"	0.7323	4
MR (Obs.)	31.85	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0404	2
Dielectric		
A | 10 to	6.84968	4
B | 150 °C	1262.5	4
C	220.	5
A* | 10 to	1.23151	5
B* | 130 °C	1181.1	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 150 to	7.26899	5
Bc | t_c °C	1589.9	5
Cc	265.	5
Cryos. A*		
consts. B*		
t_e °C	108.16	5

		Ref.
dt/dP		
°C/mm		
25°C	0.4152	5
BP	0.0458	2
t_e	0.03683	5
30 mm	0.63319	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.99	5
30 mm	90.35	5
BP	77.89	5
t_e	76.42	5
t_e (d, e)	76.38	5
$\Delta Hv/T_e$	19.27	5
d | 10 to	92.60	5
e | 120 °C	0.1499	5
d' | to		
e' | °C		
d_c g/ml	0.262	5
v_c ml/g	3.821	5
t_c °C	288.	5
P_c mm	24859.	5
PV/RT		
25°C	1.0000	4
30 mm	1.0000	5
BP	0.9561	5
t_e	0.9479	5
t_c	0.261	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 20°C		23.51	5
γ 30		22.40	5
40		21.33	5
Parachor [P]			
20°C			
30			
40			
Sugd.		270.5	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

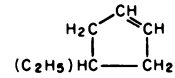
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XVI. CYCLOPENTENES

No. 7

NAME	4-Ethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166



		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | to		
F.P. 100%			25°C	0.5431	5	g | °K		
B.P. °C			BP	0.04700	2	h		
760 mm	106.	2	t_e	0.03725	5	f' | to		
100	46.76	5	30 mm	0.6483	5	g' | °K		
30	20.81	5	ΔHm cal/g			h'		
10	1.19	5	ΔHv cal/g			m | to		
1	-31.04	5	25°C	91.16	5	n | °K		
Pressure mm 25°C	37.07	5	30 mm	91.84	5	o		
t_e	1025.4	5	BP	78.95	5	m' | to		
Density g/ml 20°C	0.798	2	t_e	77.34	5	n' | °K		
d_4^t 25	0.793	2	t_e (d, e)	77.28	5	o'		
30	0.788	4	ΔHv/T_e	19.06	5	Surface tension dynes/cm. 20°C	25.37	5
a	0.8176	4	d | 15 to	94.99	5	δ 30	24.13	5
b	-0.0397	4	e | 125 °C	0.1514	5	40	22.93	5
Ref. Index			d' | to			Parachor [P]		
n_D 20°C	1.440	2	e' | °C			20°C		
25	1.437	2	d_c g/ml	0.256	5	30		
30	1.434	4	v_c ml/g	3.898	5	40		
"C"	0.7312	4	t_c °C	302.	5	Sugd.	270.5	5
MR (Obs.)	31.8	2	P_c mm	24877.	5	Exp. L.1.%/wt.		
MR (Calc.)	31.859	5	PV/RT			u.		
(nD-d/2)	1.041	2	25°C	0.9988	4	Dispersion		
Dielectric			30 mm	1.0000	5	Flash Point °C		
A | 15 to	6.83219	4	BP	0.9535	5	Fire Point		
B | 160 °C	1284.2	4	t_e	0.9443	5	M. Spec.		
C	219.	5	t_c	0.260	5	Ultra V.		
A* | 15 to	1.20935	5	ΔHc kcal/m			X-Ray Dif.		
B* | 130 °C	1202.0	5	ΔHf			Infrared		
K			ΔFf			Solubility in +		
c			Viscosity centistokes			Acetone		
t_k | to			η °C			Carbon tet.		
t_x | °C						Benzene		
A' | to			B^v | to			Ether		
B' | °C			A^v | °C			n-Heptane		
C'			(B^v) | to			Ethanol		
A'* to			(A^v) | °C			Water		
B'* °C			c_p liq. °K			Water in		
Ac | 160 to	7.25226	5	c_p vap. °K					
Bc | t_c °C	1620.5	5	c_v vap.					
Cc	266.	5						
Cryos. A° consts. B°								
t_e °C	117.06	5						

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1,2-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12} — Molecular Weight 96.166

		Ref.
F.P. °C	-90.4	2
F.P. 100%		
B.P. °C		
760 mm	105.8	2
100	46.87	4
30	21.02	4
10	1.46	5
1	-30.70	5
Pressure mm 25°C	36.71	5
t_e	1025.8	5
Density g/ml 20°C	0.7976	2
d_4^t 25	0.7928	2
30	0.7878	4
a	0.8171	4
b	-0.0_397	4
Ref. Index n_D 20°C	1.4448	2
25	1.4420	2
30	1.4392	4
"C"	0.7391	4
MR (Obs.)	32.08	2
MR (Calc.)	31.859	4
(nD-d/2)	1.0460	2
Dielectric		
A | 21 to	6.85494	4
B | 158 °C	1290.8	4
C	219.	5
A* | 21 to	1.23077	5
B* | 126 °C	1208.3	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 158 to	7.27475	5
Bc | t_c °C	1626.6	5
Cc	265.	5
Cryos. A° consts. B°		
t_e °C	116.81	5

		Ref.
dt/dP °C/mm		
25°C	0.5457	5
BP	0.0467	2
t_e	0.03699	5
30 mm	0.6461	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.59	5
30 mm	92.29	5
BP	79.45	5
t_e	77.84	5
t_e (d,e)	77.78	5
$\Delta Hv/T_e$	19.19	5
d | 21 to	95.47	5
e | 125 °C	0.1514	5
d' | to		
e' | °C		
d_c g/ml	0.262	5
v_c ml/g	3.815	5
t_c °C	301.	5
P_c mm	25374.	5
PV/RT		
25°C	0.9992	5
30 mm	1.0000	5
BP	0.9544	5
t_e	0.9454	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0167	4
n	600 °K	0.0012	4
o		-0.0_631	4
m'	700 to	0.0260	4
n'	1000 °K	0.0012	4
o'		-0.0_642	4
Surface tension dynes/cm. 20°C		25.32	5
γ 30		24.09	5
40		22.90	5
Parachor [P] 20°C			
30			
40			
Sugd.		270.5	5
Exp. L.1.%/wt. u.			
Dispersion		125.8	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	1,3-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	92.	2
100	35.19	4
30	10.24	4
10	-8.64	5
1	-39.71	5
Pressure		
mm 25°C	62.99	5
t_e	989.21	5
Density		
g/ml 20°C	0.766	2
d_4^t 25	0.761	2
30	0.756	4
a	0.7861	4
b	-0.0_3399	4
Ref. Index		
n_D 20°C	1.428	2
25	1.425	2
30	1.423	4
"C"	0.7422	4
MR (Obs.)	32.3	2
MR (Calc.)	31.859	4
(nD-d/2)	1.045	2
Dielectric		
A | 10 to	6.86807	4
B | 137 °C	1252.0	4
C	222.	5
A* | 10 to	1.25419	5
B* | 111 °C	1170.8	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 137 to	7.28841	5
Bc | t_c °C	1573.3	5
Cc	266.	5
Cryos. A*		
consts. B*		
t_e °C	101.28	5

			Ref.
dt/dP			
°C/mm			
25°C		0.3360	5
BP		0.045	2
t_e		0.03665	5
30 mm		0.6236	5
ΔHm cal/g			
ΔHv cal/g			
25°C		86.54	5
30 mm		88.73	5
BP		76.75	5
t_e		75.41	5
t_e (d, e)		75.39	5
$\Delta Hv/T_e$		19.37	5
d | 10 to		90.23	5
e | 110 °C		0.1466	5
d' | to			
e' | °C			
d_c g/ml		0.253	5
v_c ml/g		3.949	5
t_c °C		276.	5
P_c mm		24077.	5
PV/RT			
25°C		0.9972	5
30 mm		1.0000	5
BP		0.9571	5
t_e		0.9494	5
t_c		0.267	5
ΔHc kcal/m			
ΔHf			
ΔFf			
Viscosity centistokes			
η °C			
B^v | to			
A^v | °C			
(B^v) | to			
(A^v) | °C			
c_p liq. °K			
c_p vap. °K			
c_v vap.			

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0406	4
n | 600 °K		0.0013	4
o		-0.0_642	4
m' | 700 to		0.0291	4
n' | 1000 °K		0.0012	4
o'		-0.0_642	4
Surface tension			
dynes/cm. 20°C		21.52	5
30		20.40	5
40		19.31	5
Parachor [P]			
20°C			
30			
40			
Sugd.		270.5	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1,4-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}
		Molecular Weight 96.166

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	93.2	2
100	35.35	5
30	10.09	5
10	-8.97	5
1	-40.22	5
Pressure mm 25°C	62.90	5
t_e	989.12	5
Density g/ml 20°C	0.779	2
d_4^t 25	0.774	2
30	0.769	4
a	0.7990	4
b	-0.0_399	4
Ref. Index n_D 20°C	1.4283	2
25	1.4255	2
30	1.4225	4
"C"	0.7303	4
MR (Obs.)	31.8	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0388	2
Dielectric		
A 0 to	6.78405	4
B 140 °C	1226.4	4
C	221.	5
A* 0 to	1.17518	5
B* 140 °C	1146.7	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 140 to	7.20417	5
Bc t_c °C	1549.7	5
Cc	266.	5
Cryos. A° consts. B°		
t_e °C	102.69	5

		Ref.
dt/dP °C/mm		
25°C	0.3407	5
BP	0.046	2
t_e	0.03751	5
30 mm	0.6304	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.45	5
30 mm	87.69	5
BP	75.33	5
t_e	73.96	5
t_e (d, e)	73.92	5
$\Delta Hv/T_e$	18.92	5
d 0 to	89.19	5
e 120 °C	0.1488	5
d' to		
e' °C		
d_c g/ml	0.246	5
v_c ml/g	4.058	5
t_c °C	280.	5
P_c mm	23075.	5
PV/RT		
25°C	0.9963	4
30 mm	1.0000	5
BP	0.9538	5
t_e	0.9458	5
t_c	0.261	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. 300 °K	0.31508	2
400	0.41595	2
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m 300 to		-0.03121	4
n 600 °K		0.00126	4
o		-0.0_6364	4
m' 700 to		0.02807	4
n' 1000 °K		0.00118	4
o'		-0.0_6416	4
Surface tension dynes/cm. 20°C		23.02	5
γ 30		21.84	5
40		20.70	5
Parachor [P] 20°C			
30			
40			
Sugd.		270.5	5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	1,5-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}
		Molecular Weight 96.166

		Ref.
F.P. °C	-118.	2
F.P. 100%		
B.P. °C		
760 mm	102.	2
100	43.89	5
30	18.36	5
10	-0.98	5
1	-32.81	5
Pressure		
mm 25°C	42.04	5
t_e	1013.58	5
Density		
g/ml 20°C	0.780	2
d_4^t 25	0.775	2
30	0.770	4
a	0.8003	4
b	-0.00101	4
Ref. Index		
n_D 20°C	1.4331	2
25	1.4304	2
30	1.4271	4
"C"	0.7369	4
MR (Obs.)	32.1	2
MR (Calc.)	31.859	5
(nD-d/2)	1.043	2
Dielectric		
A | 0 to	6.88081	4
B | 150 °C	1288.0	4
C	220.	5
A* | 0 to	1.26224	5
B* | 130 °C	1206.5	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 150 to	7.30037	5
Bc | t_c °C	1618.1	5
Cc	265.	5
Cryos. A°		
consts. B°		
t_e °C	112.39	5

		Ref.
dt/dP °C/mm		
25°C	0.4814	5
BP	0.046	2
t_e	0.03675	5
30 mm	0.6386	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.71	5
30 mm	91.69	5
BP	78.96	5
t_e	77.43	5
t_e (d, e)	77.38	5
$\Delta Hv/T_e$	19.31	5
d | 0 to	94.49	5
e | 120 °C	0.1522	5
d' | to		
e' | °C		
d_c g/ml	0.263	5
v_c ml/g	3.796	5
t_c °C	292.	5
P_c mm	24909.	5
PV/RT		
25°C	0.9990	4
30 mm	1.0000	5
BP	0.9534	5
t_e	0.9448	5
t_c	0.258	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.31508	2
400	0.41699	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.04057	4
n | 600 °K		0.00131	4
o		-0.0_6416	4
m' | 700 to		-0.0_4	4
n' | 1000 °K		0.00126	4
o'		-0.0_6468	4
Surface tension			
dynes/cm. 20°C		23.15	5
γ 30		21.96	5
40		20.80	5
Parachor [P]			
20°C			
30			
40			
Sugd.		270.5	5
Exp. L.1.%/wt. u.			
Dispersion		120.8	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	3,3-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	88.	2
100	31.32	5
30	6.51	5
10	-12.23	5
1	-43.00	5
Pressure mm 25°C	75.30	5
t_e	974.25	5
Density g/ml 20°C	0.771	2
d_4^{25}	0.766	2
30	0.761	4
a	0.7910	4
b	-0.0$_2$99	4
Ref. Index n_D 20°C	1.423	2
25	1.420	2
30	1.417	4
"C"	0.7292	4
MR (Obs.)	31.8	2
MR (Calc.)	31.859	5
(nD-d/2)	1.038	2
Dielectric		
A | 5 to	6.81726	4
B | 130 °C	1220.3	4
C	222.	5
A* | 5 to	1.21398	5
B* | 120 °C	1141.5	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 130 to	7.23721	5
Bc | t_c °C	1538.1	5
Cc	266.	5
Cryos. A°		
consts. B°		
t_e °C	96.73	5

		Ref.
dt/dP °C/mm		
25°C	0.2884	5
BP	0.045	2
t_e	0.03711	5
30 mm	0.6195	5
ΔHm cal/g		
ΔHv cal/g		
25°C	85.68	5
30 mm	87.00	5
BP	74.84	5
t_e	73.58	5
t_e (d, e)	73.54	5
$\Delta Hv/T_e$	19.13	5
d | 5 to	87.97	5
e | 110 °C	0.1492	5
d' | to		
e' | °C		
d_c g/ml	0.255	5
v_c ml/g	3.924	5
t_c °C	270.	5
P_c mm	23342.	5
PV/RT		
25°C	0.9905	4
30 mm	1.0000	5
BP	0.9540	5
t_e	0.9466	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.30780	2
400	0.41387	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to	-0.04785		4
n | 600 °K	0.00128		4
o	-0.$0_6$312		4
m' | 700 to	-0.03225		4
n' | 1000 °K	0.00136		4
o'	-0.$0_6$52		4
Surface tension dynes/cm. 20°C	22.08		5
γ 30	20.94		5
40	19.82		5
Parachor [P] 20°C			
30			
40			
Sugd.	270.5		5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	4,4-Dimethylcyclopentene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}
		Molecular Weight 96.166

		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | | to		
F.P. 100%			25°C	0.2884	5	g | _ _ _ °K		
B.P. °C			BP	0.0450	2	h		
760 mm	88.	2	t_e	0.03691	5	f' | | to		
100	31.32	5	30 mm	0.6195	5	g' | _ _ _ °K		
30	6.51	5	ΔHm cal/g			h'		
10	-12.23	5	ΔHv cal/g			m | | to		
1	-43.00	5	25°C	91.24	5	n | _ _ _ °K		
Pressure			30 mm	87.00	5	o		
mm 25°C	75.30	5	BP	75.30	5	m' | | to		
t_e	981.12	5	t_e	74.03	5	n' | _ _ _ °K		
Density			t_e (d, e)	74.01	5	o'		
g/ml 20°C	0.771	2	ΔHv/T_e	19.23	5			
d_4^t 25	0.766	2	d | 5 to	87.93	5	Surface tension		
30	0.761	4	e | 110 °C	0.1435	5	dynes/cm. 20°C	22.08	5
a	0.7911	4	d' | to			γ 30	20.93	5
b	-0.0_3399	4	e' | °C			40	19.81	5
Ref. Index			d_c g/ml	0.251	5	Parachor [P]		
n_D 20°C	1.423	2	v_c ml/g	3.991	5	20°C		
25	1.420	2	t_c °C	271.	5	30		
30	1.417	4	P_c mm	23432.	5	40		
"C"	0.7292	4	PV/RT			Sugd.	270.5	5
MR (Obs.)	31.8	2	25°C	0.9968	4	Exp. L.l.%/wt. u.		
MR (Calc.)	31.859	5	30 mm	1.0000	5	Dispersion		
(nD-d/2)	1.038	2	BP	0.9600	5	Flash Point °C		
Dielectric			t_e	0.9526	5	Fire Point		
A | 5 to	6.81726	4	t_c	0.265	5	M. Spec.		
B | 130 °C	1220.3	4	ΔHc kcal/m			Ultra V.		
C	222.	5	ΔHf			X-Ray Dif.		
A* | 5 to	1.20391	5	ΔFf			Infrared		
B* | 110 °C	1139.2	5	Viscosity centistokes			Solubility in +		
K			η °C			Acetone		
c			B^v | to			Carbon tet.		
t_k | to			A^v | °C			Benzene		
t_x | °C			(B^v) | to			Ether		
A' | to			(A^v) | °C			n-Heptane		
B' | °C			c_p liq. °K			Ethanol		
C'			c_p vap. °K			Water		
A'* to			c_v vap.			Water in		
B'* °C								
Ac | 130 to	7.23729	5						
Bc | t_c °C	1538.4	5						
Cc	266.	5						
Cryos. A° consts. B°								
t_e °C	96.99	5						

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XVII. THIACYCLOPENTANES

No.

TABLE XVII. THIACYCLOPENTANES

No. 1

NAME	Thiacyclopentane Tetrahydrothiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_4H_8S	Molecular Weight 88.170

		Ref.
F. P. °C	-96.16	2
F. P. 100%		
B. P. °C		
760 mm	121.117	2
100	61.152	5
30	34.681	5
10	14.477	5
1	-19.353	5
Pressure		
mm 25°C	18.10	5
t_e	1070.6	5
Density		
g/ml 20°C	0.99869	2
d_4^t 25	0.99379	2
30	0.98885	4
a	1.01836	4
b	-0.0_398	4
Ref. Index		
n_D 20°C	1.50483	2
25	1.50217	2
30	1.49921	4
"C"	0.6638	4
MR (Obs.)	26.179	2
MR (Calc.)	26.178	5
(nD-d/2)	1.00548	2
Dielectric		
A | 35 to	6.9518	4
B | 200 °C	1372.4	4
C	216.	5
A* | 35 to	1.27236	5
B* | 150 °C	1286.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.34491	5
B' | 35 °C	1576.6	5
C'	234.	5
A'* 10 to	1.63884	5
B'* 35 °C	1477.7	5
Ac | 200 to	7.37677	5
Bc | t_c °C	1748.6	5
Cc	270.	5
Cryos. A°		
consts. B°		
t_e °C	133.91	5

		Ref.
dt/dP		
°C/mm		
25°C	1.02067	5
BP	0.04732	2
t_e	0.03619	5
30 mm	0.6629	5
ΔHm cal/g		
ΔHv cal/g		
25°C	108.45	5
30 mm	107.43	5
BP	92.78	5
t_e	90.72	5
t_e (d, e)	90.61	5
$\Delta Hv/T_e$	19.65	5
d | 35 to	113.30	5
e | 140 °C	0.1695	5
d' | 10 to	111.10	5
e' | 35 °C	0.1049	5
d_c g/ml	0.333	5
v_c ml/g	3.00	5
t_c °C	358.	5
P_c mm	38746.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9550	5
t_e	0.9452	5
t_c	0.26	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	33.68	5
γ 30	32.37	5
40	31.10	5
Parachor [P]		
20°C		
30		
40		
Sugd.	212.7	5
Exp. L.l.%/wt. u.		
Dispersion	113.7	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

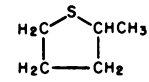
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	2-Methylthiacyclopentane Tetrahydro-2-methylthiophene	STRUCTURAL FORMULA
Mole % Pur. 99.75	Ref. 3	Molecular Formula $C_5H_{10}S$ — Molecular Weight 102.196



		Ref.
F.P. °C	-100.71	2
F.P. 100%		
B.P. °C		
760 mm	133.23	2
100	71.200	2
30	43.82	5
10	22.93	5
1	-12.02	5
Pressure mm 25°C	11.24	5
t_e	1103.1	5
Density g/ml 20°C	0.9552	2
d_4^{25}	0.9512	2
d_4^{30}	0.9472	4
a	0.9712	4
b	-0.0_380	4
Ref. Index n_D 20°C	1.4909	2
25	1.4884	2
30	1.4860	4
"C"	0.6770	4
MR (Obs.)	30.98	2
MR (Calc.)	30.981	5
(nD-d/2)	1.0133	2
Dielectric		
A | 45 to	6.94997	3
B | 200 °C	1418.506	3
C	215.368	3
A* | 45 to	1.32384	5
B* | 160 °C	1330.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.32227	5
B' | 45 °C	1618.1	5
C'	233.	5
A'* 15 to	1.67142	5
B'* 45 °C	1517.2	5
Ac | 200 to	7.37365	5
Bc | t_c °C	1795.7	5
Cc	268.	5
Cryos. A°		
consts. B°		
t_e °C	147.67	5

		Ref.
dt/dP		
°C/mm		
25°C	1.5897	5
BP	0.04895	4
t_e	0.03658	5
30 mm	0.6856	5
ΔHm cal/g		
ΔHv cal/g		
25°C	96.77	5
30 mm	95.01	5
BP	81.99	5
t_e	79.98	5
t_e (d, e)	79.89	5
$\Delta Hv/T_e$	19.42	5
d | 45 to	101.40	5
e | 150 °C	0.1457	5
d' | 15 to	99.10	5
e' | 45 °C	0.0935	5
d_c g/ml	0.33727	5
v_c ml/g	2.9649	5
t_c °C	362.	5
P_c mm	33467.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9533	5
t_e	0.9420	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.63	5
γ 30	29.61	5
40	28.61	5
Parachor [P]		
20°C		
30		
40		
Sugd.	251.7	5
Exp. L.1.%/wt. u.		
Dispersion	114.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

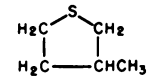
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al.

No. 3

NAME	3-Methylthiacyclopentane Tetrahydro-3-methylthiophene	STRUCTURAL FORMULA
Mole % Pur. 99.7	Ref. 3	Molecular Formula $C_5H_{10}S$ — Molecular Weight 102.196



		Ref.
F. P. °C	-81.16	2
F. P. 100%		
B. P. °C		
760 mm	138.67	2
100	75.90	5
30	48.14	5
10	26.95	5
1	-8.56	5
Pressure mm 25°C	8.9596	5
t_e	1118.8	5
Density g/ml 20°C	0.9634	2
d_4^t 25	0.9585	2
30	0.9536	4
a	0.9830	4
b	-0.0_398	4
Ref. Index n_D 20°C	1.4924	2
25	1.4902	2
30	1.4871	4
"C"	0.6732	4
MR (Obs.)	30.80	2
MR (Calc.)	30.797	5
(nD-d/2)	1.0107	2
Dielectric		
A, B, C (50 to 200 °C)	6.97939 1454.378 216.179	3 3 3
A*, B*, K (50 to 165 °C)	1.34598 1364.3	5 5
c		
t_k, t_x (to °C)		
A', B', C' (15 to 50 °C)	7.35036 1657.1 234.	5 5 5
A'*, B'* (15 to 50 °C)	1.69464 1554.6	5 5
Ac, Bc, Cc (200 to t_c °C)	7.40495 1838.5 269.	5 5 5
Cryos. A° consts. B°		
t_e °C	153.83	5

		Ref.
dt/dP °C/mm		
25°C	1.9622	5
BP	0.04961	4
t_e	0.03654	5
30 mm	0.6954	5
ΔHm cal/g		
ΔHv cal/g		
25°C	98.35	5
30 mm	96.24	5
BP	83.31	5
t_e	81.22	5
t_e (d, e)	81.14	5
$\Delta Hv/T_e$	19.44	5
d, e (50 to 155 °C)	103.10 0.1429	5 5
d', e' (15 to 50 °C)	100.60 0.0909	5 5
d_c g/ml	0.341	5
v_c ml/g	2.927	5
t_c °C	359.	5
P_c mm	33472.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9532	5
t_e	0.9417	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v, A^v (to °C)		
(B^v), (A^v) (to °C)		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h (to °K)		
f', g', h' (to °K)		
m, n, o (to °K)		
m', n', o' (to °K)		
Surface tension dynes/cm. 20°C	31.69	5
γ 30	30.42	5
40	29.18	5
Parachor [P] 20°C		
30		
40		
Sugd.	251.7	5
Exp. L. 1. %/wt. u.		
Dispersion	112.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

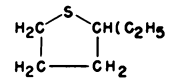
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430, (1952) P. T. White et al.

No. 4

NAME	2-Ethylthiacyclopentane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_6H_{12}S$
		Molecular Weight 116.222



		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	157.	2
100	91.	5
30	63.	5
10	41.	5
1	4.	5
Pressure		
mm 25°C	4.07475	5
t_e	1169.1	5
Density		
g/ml 20°C	0.944	2
d_4^{25}	0.939	2
d_4^{30}	0.934	4
a	0.964	4
b	-0.0_31	4
Ref. Index		
n_D 20°C	1.490	2
25	1.487	2
30	1.484	4
"C"	0.6838	4
MR (Obs.)	35.6	2
MR (Calc.)	35.595	5
(nD-d/2)	1.018	2
Dielectric		
A | 60 to	6.92152	4
B | 215 °C	1478.9	4
C	209.	5
A* | 60 to	1.33267	5
B* | 185 °C	1388.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.28229	5
B' | 60 °C	1681.4	5
C'	227.	5
A'* 25 to	1.68091	5
B'* 60 °C	1581.3	5
Ac | 215 to	7.33644	5
Bc | t_c °C	1852.2	5
Cc	260.	5
Cryos. A°		
consts. B°		
t_e °C	174.76	5

		Ref.
dt/dP		
°C/mm		
25°C	4.02546	5
BP	0.05176	4
t_e	0.03699	5
30 mm	0.7223	5
ΔHm cal/g		
ΔHv cal/g		
25°C	92.69	5
30 mm	89.00	5
BP	76.20	5
t_e	73.92	5
t_e (d, e)	73.79	5
$\Delta Hv/T_e$	19.18	5
d | 60 to	97.49	5
e | 180 °C	0.1356	5
d' | 20 to	95.14	5
e' | 60 °C	0.0981	5
d_c g/ml	0.3166	5
v_c ml/g	3.1586	5
t_c °C	379.	5
P_c mm	27149.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9513	5
t_e	0.9380	5
t_c	0.251	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	31.08	5
γ 30	29.78	5
40	28.52	5
Parachor [P]		
20°C		
30		
40		
Sugd.	290.7	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XVII. THIACYCLOPENTANES

No. 5

NAME	3-Ethylthiacyclopentane 3-Ethyltetrahydrothiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_6H_{12}S$	Molecular Weight 116.222

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	165.	2
100	98.22	5
30	68.80	5
10	46.39	5
1	8.94	5
Pressure		
mm 25°C	2.92058	5
t_e	1192.4	5
Density		
g/ml 20°C	0.950	2
d_4^t 25	0.945	2
30	0.940	4
a	0.96999	4
b	-0.0_3999	4
Ref. Index		
n_D 20°C	1.491	2
25	1.489	2
30	1.487	4
"C"	0.6821	4
MR (Obs.)	35.4	2
MR (Calc.)	35.409	4
(nD-d/2)	1.016	2
Dielectric		
A | 70 to	6.91995	4
B | 230 °C	1506.6	4
C	208.	5
A* | 70 to	1.32274	5
B* | 195 °C	1414.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.27389	5
B' | 70 °C	1708.9	5
C'	226.	5
A'* 25 to	1.66916	5
B'* 70 °C	1608.4	5
Ac | 230 to	7.33538	5
Bc | t_c °C	1888.2	5
Cc	260.	5
Cryos. A° consts. B°		
t_e °C	183.98	5

		Ref.
dt/dP		
°C/mm		
25°C	5.4821	5
BP	0.05277	4
t_e	0.03714	5
30 mm	0.7362	5
ΔHm cal/g		
ΔHv cal/g		
25°C	94.96	5
30 mm	90.55	5
BP	77.56	5
t_e	75.14	5
t_e (d, e)	75.00	5
$\Delta Hv/T_e$	19.10	5
d | 70 to	99.84	5
e | 185 °C	0.1350	5
d' | 25 to	97.48	5
e' | 70 °C	0.1007	5
d_c g/ml	0.306	5
v_c ml/g	3.264	5
t_c °C	392.	5
P_c mm	27341.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9514	5
t_e	0.9375	5
t_c	0.250	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		31.88	5
30		30.56	5
40		29.27	5
Parachor [P]			
20°C			
30			
40			
Sugd.		290.7	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

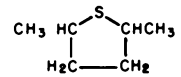
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	2, cis-5-Dimethylthiacyclopentane		STRUCTURAL FORMULA
Mole % Pur. 99.3	Ref. 3	Molecular Formula $C_6H_{12}S$	Molecular Weight 116.222



		Ref.
F. P. °C	-89.4	2
F. P. 100%		
B. P. °C 760 mm	142.28	2
100	78.99	5
30	51.14	5
10	29.92	5
1	-5.53	5
Pressure mm 25°C	7.5508	5
t_e	1131.4	5
Density g/ml 20°C	0.9222	2
d_4^t 25	0.9177	2
30	0.9132	4
a	0.9402	4
b	-0.0_390	4
Ref. Index n_D 20°C	1.4799	2
25	1.4774	2
30	1.4749	4
"C"	0.6864	4
MR (Obs.)	35.80	2
MR (Calc.)	35.793	4
(nD-d/2)	1.0188	2
Dielectric		
A | 50 to	6.90415	3
B | 200 °C	1417.766	3
C	210.102	3
A* | 50 to	1.32534	5
B* | 170 °C	1329.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.27596	5
B' | 50 °C	1618.7	5
C'	228.	5
A'* 20 to	1.68214	5
B'* 50 °C	1520.1	5
Ac | 200 to	7.31720	5
Bc | t_c °C	1774.9	5
Cc	259.	5
Cryos. A* consts. B*		
t_e °C	158.10	5

		Ref.
dt/dP °C/mm		
25°C	2.2744	5
BP	0.05005	4
t_e	0.03670	5
30 mm	0.6969	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.53	5
30 mm	86.04	5
BP	73.77	5
t_e	71.74	5
t_e (d, e)	71.64	5
$\Delta Hv/T_e$	19.33	5
d | 50 to	92.92	5
e | 160 °C	0.1346	5
d' | 20 to	90.91	5
e' | 50 °C	0.0953	5
d_c g/ml	0.3107	5
v_c ml/g	3.2189	5
t_c °C	355.	5
P_c mm	26598.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9549	5
t_e	0.9429	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension dynes/cm. 20°C	28.30	5
γ 30	27.21	5
40	26.15	5
Parachor [P] 20°C		
30		
40		
Sugd.	290.7	5
Exp. L. 1. %/wt. u.		
Dispersion	114.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al.

TABLE XVII. THIACYCLOPENTANES

No. 7

NAME	2, trans-5-Dimethylthiacyclopentane trans-Tetrahydro-2, 5-dimethylthiophene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_6H_{12}S$ Molecular Weight 116.222	

		Ref.
F. P. °C	-76.35	2
F. P. 100%		
B. P. °C		
760 mm	142.0	2
100	78.32	5
30	50.25	4
10	28.84	5
1	-6.97	5
Pressure		
mm 25°C	8.0545	5
t_e	1130.8	5
Density		
g/ml 20°C	0.9188	2
d_4^t 25	0.9142	2
30	0.9096	4
a	0.9372	4
b	-0.0392	4
Ref. Index		
n_D 20°C	1.4776	2
25	1.4752	2
30	1.4725	4
"C"	0.6859	4
MR (Obs.)	35.78	2
MR (Calc.)	35.678	5
(nD-d/2)	1.0182	2
Dielectric		
A | 50 to	6.94097	4
B | 197 °C	1449.3	4
C	215.	4
A* | 50 to	1.35769	5
B* | 168 °C	1358.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.31175	5
B' | 50 °C	1652.7	5
C'	233.	5
A'* 25 to	1.71163	5
B'* 50 °C	1550.5	5
Ac | 197 to	7.36133	5
Bc | t_c °C	1816.4	5
Cc	264.	5
Cryos. A°		
consts. B°		
t_e °C	157.80	5

		Ref.
dt/dP		
°C/mm		
25°C	2.1717	5
BP	0.05025	4
t_e	0.03683	5
30 mm	0.7028	5
ΔHm cal/g		
ΔHv cal/g		
25°C	86.92	5
30 mm	84.84	5
BP	73.30	5
t_e	71.45	5
t_e (d, e)	71.31	5
ΔHv/T_e	19.27	5
d | 50 to	91.17	5
e | 170 °C	0.1258	5
d' | 25 to	88.97	5
e' | 50 °C	0.0820	5
d_c g/ml	0.309	5
v_c ml/g	3.232	5
t_c °C	354.	5
P_c mm	26445.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9537	5
t_e	0.9430	5
t_c	0.254	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g |	°K		
h			
f'	to		
g' |	°K		
h'			
m	to		
n |	°K		
o			
m'	to		
n' |	°K		
o'			
Surface tension			
dynes/cm. 20°C		27.89	5
30		26.79	5
40		25.71	5
Parachor [P]			
20°C			
30			
40			
Sugd.		290.7	5
Exp. L. l. %/wt. u.			
Dispersion		114.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

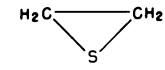
TABLE XVIII. THIACYCLOPROPANES

No.

TABLE XVIII. THIACYCLOPROPANES

No. 1

NAME	Thiacyclopropane (Ethylene sulfide)	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_2H_4S — Molecular Weight 60.118



		Ref.
F. P. °C	-109.	2
F. P. 100%		
B. P. °C		
760 mm	54.93	2
100	4.8	4
30	-17.39	5
10	-34.25	5
1	-62.12	5
Pressure		
mm 25°C	249.36	5
t_e	884.77	5
Density		
g/ml 20°C	1.013	2
d_4^t 25	1.007	2
30	1.001	4
a	1.0371	4
b	-0.02117	4
Ref. Index		
n_D 20°C	1.490	2
25	1.487	2
30	1.484	4
"C"	0.6373	4
MR (Obs.)	17.2	2
MR (Calc.)	16.926	5
(nD-d/2)	0.984	2
Dielectric		
A | -17 to	6.98816	4
B | 147 °C	1166.2	4
C	229.	5
A* | -17 to	1.20992	5
B* | 69 °C	1091.2	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 147 to	7.42828	5
Bc | t_c °C	1520.8	5
Cc	282.	5
Cryos. A°		
consts. B°		
t_e °C	59.57	5

		Ref.
dt/dP		
°C/mm		
25°C	0.09635	5
BP	0.0395	2
t_e	0.0350	5
30 mm	0.5559	5
ΔHm cal/g		
ΔHv cal/g		
25°C	120.81	5
30 mm	129.71	5
BP	113.50	5
t_e	112.48	5
t_e (d, e)	112.46	5
$\Delta Hv/T_e$	20.32	5
d | -17 to	125.81	5
e | 59 °C	0.2242	5
d' | to		
e' | °C		
d_c g/ml	0.373	5
v_c ml/g	2.684	5
t_c °C	287.	5
P_c mm	57381.	5
PV/RT		
25°C	0.9875	5
30 mm	1.0000	5
BP	0.9597	5
t_e	0.9556	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		33.53	5
δ 30		31.92	5
40		30.34	5
Parachor [P]			
20°C			
30			
40			
Sugd.		142.9	5
Exp. L.l.%/wt. u.			
Dispersion		128.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

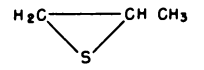
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 2

NAME	2-Methylthiacyclopropane 2-Methylthiirane	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula C_3H_6S	Molecular Weight 74.144

		Ref.
F.P. °C	-91.	2
F.P. 100%		
B.P. °C		
760 mm	74.4	2
100	22.2	4
30	-0.96	4
10	-18.62	5
1	-47.88	5
Pressure		
mm 25°C	113.84	5
t_e	941.2	5
Density		
g/ml 20°C	0.944	2
d_4^t 25	0.939	2
30	0.934	4
a	0.9640	4
b	-0.0_3979	4
Ref. Index		
n_D 20°C	1.475	2
25	1.472	2
30	1.469	4
"C"	0.6642	4
MR (Obs.)	22.1	2
MR (Calc.)	21.544	5
(nD-d/2)	1.003	2
Dielectric		
A | -1 to	7.05348	4
B | 150 °C	1249.3	4
C	225.	5
A* | -1 to	1.34217	5
B* | 91 °C	1170.5	5
K		
c		
t_x | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	81.22	5

		Ref.
dt/dP		
°C/mm		
25°C	0.1909	5
BP	0.041	2
t_e	0.03463	5
30 mm	0.5816	5
ΔHm cal/g		
ΔHv cal/g		
25°C	108.81	5
30 mm	113.84	5
BP	99.48	5
t_e	98.21	5
t_e (d, e)	98.18	5
$\Delta Hv/T_e$	20.55	5
d | -1 to	113.66	5
e | 90 °C	0.1906	5
d' | to		
e' | °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	0.9657	5
30 mm	1.0000	5
BP	0.9602	5
t_e	0.9545	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	28.72	5
30	27.50	5
40	26.30	5
Parachor [P]		
20°C		
30		
40		
Sugd.	181.9	5
Exp. L.1.%/wt. u.		
Dispersion	126.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XVIII. THIACYCLOPROPANES

No. 3

NAME	2-Ethylthiacyclopropane 2-Ethylthiirane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_4H_8S — Molecular Weight 88.170

		Ref.
F. P. °C		
F. P. 100%		
B. P. °C		
760 mm	105.	2
100	50.23	5
30	25.90	5
10	7.27	5
1	-24.06	5
Pressure		
mm 25°C	28.55	5
t_e	1022.6	5
Density		
g/ml 20°C	0.927	2
d_4^t 25	0.922	2
30	0.917	4
a	0.947	4
b	-0.0_3994	4
Ref. Index		
n_D 20°C	1.472	2
25	1.470	2
30	1.467	4
"C"	0.6724	4
MR (Obs.)	26.6	2
MR (Calc.)	26.162	5
(nD-d/2)	1.009	2
Dielectric		
A 25 to	7.04959	5
B 177 °C	1309.0	5
C	209.	5
A* 25 to	1.39875	5
B* 125 °C	1232.6	5
K		
c		
t_k to		
t_x °C		
A' 5 to	7.47659	5
B' 25 °C	1517.3	5
C'	227.	5
A'* 5 to	1.72303	5
B'* 25 °C	1404.3	5
Ac 177 to	7.45689	5
Bc t_c °C	1642.2	5
Cc	255.	5
Cryos. A°		
consts. B°		
t_e °C	115.02	5

		Ref.
dt/dP		
°C/mm		
25°C	0.6367	5
BP	0.04304	5
t_e	0.03406	5
30 mm	0.6102	5
ΔHm cal/g		
ΔHv cal/g		
25°C	110.24	5
30 mm	110.14	5
BP	93.80	5
t_e	91.89	5
t_e (d, e)	91.73	5
$\Delta Hv/T_e$	20.87	5
d 25 to	115.49	5
e 115 °C	0.2066	5
d' to		
e' °C		
d_c g/ml	0.385	5
v_c ml/g	2.598	5
t_c °C	327.	5
P_c mm	43307.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9552	5
t_e	0.9468	5
t_c	0.265	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		29.08	5
γ 30		27.84	5
40		26.63	5
Parachor [P]			
20°C			
30			
40			
Sugd.		220.9	5
Exp. L. l. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

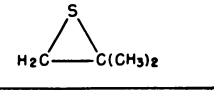
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	2,2-Dimethylthiacyclopropane 2,2-Dimethylthiirane	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula C_4H_8S	Molecular Weight 88.170

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm 100 30 10 1	 86. 32.79 9.15 -8.8 -36.7	 2 4 4 5 5
Pressure mm 25°C t_e	 69.01 966.97	 5 5
Density g/ml 20°C d_4^t 25 30		
a b		
Ref. Index n_D 20°C 25 30	 1.464 1.462	 2 2
"C"		
MR (Obs.) MR (Calc.) (nD-d/2)	 26.162	 5
Dielectric		
A | 0 to B | 200 °C C	 7.04835 1271.1 219.	 5 5 5
A* | 0 to B* | 110 °C K c t_k | to t_x | °C	 1.41469 1195.1	 5 5
A' | to B' | °C C'		
A'* to B'* °C		
Ac | to Bc | t_c °C Cc		
Cryos. A* consts. B*		
t_e °C	93.85	5

		Ref.
dt/dP °C/mm 25°C BP t_e 30 mm	 0.2948 0.04182 0.03458 0.5928	 5 5 5 5
ΔHm cal/g		
ΔHv cal/g 25°C 30 mm BP t_e t_e (d,e) $\Delta Hv/T_e$	 98.05 101.03 87.26 85.59 85.85 20.56	 5 5 5 5 5 5
d | 0 to e | 90 °C d' | to e' | °C	102.67 0.1792	5 5
d_c g/ml v_c ml/g t_c °C P_c mm		
PV/RT 25°C 30 mm BP t_e t_c	 0.9957 1.0000 0.9537 0.9469	 5 5 5 5
ΔHc kcal/m ΔHf ΔFf		
Viscosity centistokes η °C		
B^v | to A^v | °C (B^v) | to (A^v) | °C		
c_p liq. °K c_p vap. °K c_v vap.		

		Ref.
f | | to g | | °K h |		
f' | | to g' | | °K h' |		
m | | to n | | °K o |		
m' | | to n' | | °K o' |		
Surface tension dynes/cm. 20°C γ 30 40		
Parachor [P] 20°C 30 40 Sugd.	 220.9	 5
Exp. L.1.%/wt. u. Dispersion		
Flash Point °C Fire Point		
M Spec. Ultra V. X-Ray Dif. Infrared		
Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		

+ grams/100 grams solvent

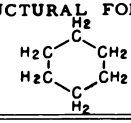
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 1

NAME	Cyclohexane			STRUCTURAL FORMULA
Mole % Pur. 99.997	Ref. 2	Molecular Formula C_6H_{12}	Molecular Weight 84.156	

		Ref.
F. P. °C	6.554	2
F. P. 100%		
B. P. °C		
760 mm	80.738	2
100	25.543	2
30	1.3	4
10	-17.0	4
1	-47.0	5
Pressure		
mm 25°C	97.582	4
t_e	964.9	5
Density		
g/ml 20°C	0.77855	2
d_4^t 25	0.77389	2
30	0.76922	4
a	0.79720	4
b	-0.0_3391	4
Ref. Index		
n_D 20°C	1.42623	2
25	1.42354	2
30	1.42084	4
"C"	0.7273	4
MR (Obs.)	27.709	2
MR (Calc.)	27.708	5
(nD-d/2)	1.03696	2
Dielectric	2.023	3²
A, B, C (-20 to 142 °C)	6.84498, 1203.526, 222.863	2
A*, B*, K, c (-20 to 100 °C)	1.17513, 1122.50	4
t_k, t_x to °C		
A', B', C' to °C		
A'*, B'* to °C		
Ac, Bc, Cc (142 to t_c °C)	7.32217, 1577.42, 275.8	4
Cryos. A*, consts. B*	0.00411, 0.0_3372	2
t_e °C	88.89	5

		Ref.
dt/dP °C/mm		
25°C	0.2272	4
BP	0.04376	4
t_e	0.0363	5
30 mm	0.6047	4
ΔHm cal/g	7.569	2
ΔHv cal/g		
25°C	93.81	2
30 mm	98.12	5
BP	85.4	2
t_e	84.10	5
t_e (d, e)	84.09	5
$\Delta Hv/T_e$	19.55	5
d, e (0 to 90 °C)	98.33, 0.1602	5, 5
d', e' to °C		
d_c g/ml	0.2718	3
v_c ml/g	3.6792	3
t_c °C	281.0	3
P_c mm	30835.	3
PV/RT		
25°C	0.9917	4
30 mm	1.0000	5
BP	0.9643	4
t_e	0.9578	5
t_c	0.2767	4
ΔHc kcal/m	881.67	2
ΔHf	-37.34	2
ΔFf	6.37	2
Viscosity centistokes		
η 20 °C	1.258	2
40	0.926	2
60	0.714	2
80	0.569	2
B^v, A^v (0 to 45 °C)	618.24, 3.99246	4, 4
(B^v), (A^v) (45 to 90 °C)	579.52, 2.11433	4, 4
c_p liq. °K		
c_p vap. 300°K	0.30396	2
400	0.42564	2
c_v vap.		

			Ref.
f, g, h to °K			
f', g', h' to °K			
m, n, o (300 to 600 °K)		-0.1031	4
		0.0015	4
		-0.0_635	4
m', n', o' (700 to 1000 °K)		-0.0853	4
		0.0016	4
		-0.0_658	4
Surface tension			
dynes/cm. 20°C		24.30	5
γ 30		23.13	5
40		21.99	5
Parachor [P]			
20°C			
30			
40			
Sugd.		240.1	5
Exp. L. l. %/wt. u.			
Dispersion		96.1	2
Flash Point °C		-17.2	3'
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Young; 3' NFPA 325; 3² NBS Circ. 514

No. 2

NAME	Methylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.80	Ref. 2	Molecular Formula C_7H_{14}
	Molecular Weight 98.182	

		Ref.
F.P. °C	-126.593	2
F.P. 100%		
B.P. °C		
760 mm	100.934	2
100	42.072	2
30	16.30	4
10	-3.18	5
1	-35.2	5
Pressure		
mm 25°C	46.33	4
t_e	1034.	5
Density		
g/ml 20°C	0.76939	2
d_4^t 25	0.76506	2
30	0.76072	4
a	0.78670	4
b	-0.0_3856	4
Ref. Index		
n_D 20°C	1.42312	2
25	1.42058	2
30	1.41803	4
"C"	0.7309	4
MR (Obs.)	32.503	2
MR (Calc.)	32.326	5
(nD-d/2)	1.03843	2
Dielectric	2.02	3'
A | 10 to	6.82689	2
B | 155 °C	1272.864	2
C	221.630	2
A* | 15 to	1.18499	5
B* | 130 °C	1183.08	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 155 to	7.3213	4
Bc | t_c °C	1673.1	4
Cc	277.	4
Cryos. A°	0.03779	2
consts. B°	0.0032	2
t_e °C	112.24	5

		Ref.
dt/dP		
°C/mm		
25°C	0.4479	4
BP	0.04671	2
t_e	0.0368	5
30 mm	0.6438	4
ΔHm cal/g	16.43	2
ΔHv cal/g		
25°C	86.07	2
30 mm	87.82	5
BP	77.2	2
t_e	75.74	5
t_e (d, e)	75.78	5
$\Delta Hv/T_e$	19.29	5
d | 15 to	89.87	5
e | 115 °C	0.1255	5
d' | to		
e' | °C		
d_c g/ml	0.285	3
v_c ml/g	3.509	3
t_c °C	299.13	3
P_c mm	26083.	3
PV/RT		
25°C	0.9927	4
30 mm	1.0000	5
BP	0.9719	4
t_e	0.9641	5
t_c	0.252	4
ΔHc kcal/m	1025.95	2
ΔHf	-45.45	2
ΔFf	4.86	2
Viscosity centistokes		
η 20 °C	0.954	2
40	0.750	2
60	0.608	2
80	0.50	2
B^V | -30 to	489.49	4
A^V | 30 °C	Σ.30973	4
(B^V) | 30 to	479.97	4
(A^V) | 85 °C	Σ.34257	4
c_p liq. °K		
c_p vap. 300°K	0.33112	2
400	0.45171	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to		-0.0905	4
n | 600 °K		0.0015	4
o |		-0.0_650	4
m' | 700 to		-0.0284	4
n' | 1000 °K		0.0015	4
o' |		-0.0_654	4
Surface tension			
dynes/cm. 20°C		23.81	1
30		22.78	1
40		21.76	1
Parachor [P]			
20°C		282.0	4
30		282.1	4
40		282.2	4
Sugd.		279.1	5
Exp. L.1.%/wt. u.			
Dispersion		97.8	2
Flash Point °C		-1.0	5
Fire Point			
M Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		Yes	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

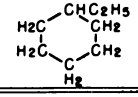
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Young; 3' NBS Cir. 514

No. 3

NAME	Ethylcyclohexane		STRUCTURAL FORMULA
Mole % Pur. 99.9	Ref. 2	Molecular Formula C_8H_{16}	Molecular Weight 112.208



		Ref.
F.P. °C	-111.323	2
F.P. 100%		
B.P. °C		
760 mm	131.783	2
100	69.044	2
30	41.49	4
10	20.5	5
1	-14.4	5
Pressure mm 25°C	12.83	5
t_e	1117.	5
Density g/ml 20°C	0.78792	2
d_4^t 25	0.78390	2
30	0.77988	4
a	0.80399	4
b	-0.0_38	4
Ref. Index n_D 20°C	1.43304	2
25	1.43073	2
30	1.42836	4
"C"	0.7295	4
MR (Obs.)	37.015	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03908	2
Dielectric	2.054	5
A | 40 to	6.87041	2
B | 170 °C	1384.036	2
C	215.128	2
A* | 40 to	1.26509	4
B* | 155 °C	1291.0	4
K		
c		
t_k to		
t_x °C		
A' | 10 to	7.21019	5
B' | 40 °C	1563.9	5
C'	231.3	5
A'* 10 to	1.6049	5
B'* 40 °C	1465.0	5
Ac | 170 to	7.2853	5
Bc | t_c °C	1724.55	5
Cc	260.2	5
Cryos. A°	0.03827	2
consts. B°	0.00308	2
t_e °C	146.94	5

		Ref.
dt/dP °C/mm		
25°C	1.4219	5
BP	0.04969	2
t_e	0.0368	5
30 mm	0.6888	4
ΔHm cal/g	17.735	2
ΔHv cal/g		
25°C	86.32	5
30 mm	84.87	5
BP	73.9	2
t_e	72.05	5
t_e (d, e)	72.06	5
$\Delta Hv/T_e$	19.24	5
d | 40 to	89.91	5
e | 145 °C	0.1215	5
d' | 10 to	88.52	5
e' | 40 °C	0.088	5
d_c g/ml	0.287	5
v_c ml/g	3.484	5
t_c °C	321.3	5
P_c mm	20883.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9656	4
t_e	0.9552	5
t_c	0.244	5
ΔHc kcal/m	1173.74	2
ΔHf	-50.72	2
ΔFf	6.96	2
Viscosity centistokes		
η 20 °C	1.069	2
40	0.843	2
60	0.692	2
80	0.59	2
B^v | -30 to	500.88	4
A^v | 30 °C	2.32067	4
(B^v) | 30 to	428.32	4
(A^v) | 90 °C	2.55816	4
c_p liq. °K		
c_p vap. 300°K	0.34071	2
400	0.45986	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0792	4
n | 600 °K		0.0016	4
o		-0.0_652	4
m' | 700 to		-0.0168	4
n' | 1000 °K		0.0015	4
o'		-0.0_653	4
Surface tension			
dynes/cm. 20°C		24.89	5
γ 30		23.88	5
40		22.90	5
Parachor [P]			
20°C			
30			
40			
Sugd.		318.1	5
Exp. L.1.%/wt. u.			
Dispersion		97.4	2
Flash Point °C		22.0	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

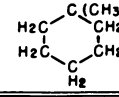
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	1,1-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.93	Ref. 2	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.
F.P. °C	-33.495	2
F.P. 100%		
B.P. °C		
760 mm	119.543	2
100	57.622	2
30	30.55	4
10	10.0	5
1	-24.0	5
Pressure mm 25°C	22.68	5
t_e	1081.	5
Density g/ml 20°C	0.78094	2
d_4^t 25	0.77677	2
30	0.77259	4
a	0.79761	4
b	-0.0383	4
Ref. Index n_D 20°C	1.42900	2
25	1.42662	2
30	1.42413	4
"C"	0.7297	4
MR (Obs.)	37.042	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03853	2
Dielectric	2.042	5
A | 30 to	6.80225	2
B | 160 °C	1323.861	2
C	218.053	2
A* | 30 to	1.20882	4
B* | 145 °C	1232.87	4
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.00032	5
B' | 30 °C	1424.18	5
C'	227.3	5
A'* 15 to	1.40884	5
B'* 30 °C	1330.3	5
Ac | 160 to	7.21947	5
Bc | t_c °C	1656.4	5
Cc	262.7	5
Cryos. A*	0.00424	2
consts. B*	0.00174	2
t_e °C	133.26	5

		Ref.
dt/dP °C/mm		
25°C	0.8561	5
BP	0.04920	2
t_e	0.0374	5
30 mm	0.6758	4
ΔHm cal/g	1.322	2
ΔHv cal/g		
25°C	81.11	5
30 mm	80.59	5
BP	70.2	2
t_e	68.58	5
t_e (d, e)	68.60	5
$\Delta Hv/T_e$	18.93	5
d | 30 to	84.16	5
e | 135 °C	0.1168	5
d' | 15 to	83.47	5
e' | 30 °C	0.0941	5
d_c g/ml	0.237	5
v_c ml/g	4.22	5
t_c °C	302.0	5
P_c mm	19310.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9658	4
t_e	0.9561	5
t_c	0.255	5
ΔHc kcal/m	1171.53	2
ΔHf	-52.31	2
ΔFf	6.34	2
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33153	2
400	0.45184	2
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | 300 to	-0.0775	4
n | 600 °K	0.0015	4
o |	-0.0_640	4
m' | 700 to	0.0136	4
n' | 1000 °K	0.0014	4
o' |	-0.0_653	4
Surface tension dynes/cm. 20°C	24.01	5
30	22.99	5
40	22.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	318.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.4	2
Flash Point °C	13.0	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

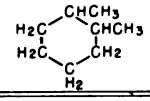
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 5

NAME	1, cis-2-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 2	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.
F. P. °C	-50.023	2
F. P. 100%		
B. P. °C 760 mm	129.728	2
100	66.824	2
30	39.25	4
10	18.3	5
1	-16.6	5
Pressure mm 25°C	14.47	5
t_e	1111.	5
Density g/ml 20°C	0.79627	2
d_4^{t} 25	0.79222	2
30	0.78817	4
a	0.81246	4
b	-0.0_3806	4
Ref. Index n_D 20°C	1.43596	2
25	1.43358	2
30	1.43128	4
"C"	0.7265	4
MR (Obs.)	36.842	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03783	2
Dielectric	2.062	5
A | 40 to	6.84164	2
B | 170 °C	1369.525	2
C	216.040	2
A* | 40 to	1.23717	4
B* | 155 °C	1276.40	4
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.17960	5
B' | 40 °C	1547.5	5
C'	232.1	5
A'* 15 to	1.57655	5
B'* 40 °C	1448.9	5
Ac | 170 to	7.25816	5
Bc | t_c °C	1711.3	5
Cc	261.7	5
Cryos. A°	0.00397	2
consts. B°	0.00133	2
t_e °C	144.76	5

		Ref.
dt/dP °C/mm		
25°C	1.2820	5
BP	0.04988	2
t_e	0.0371	5
30 mm	0.6889	4
ΔHm cal/g	3.5024	2
ΔHv cal/g		
25°C	84.87	5
30 mm	83.65	5
BP	72.9	2
t_e	71.10	5
t_e (d, e)	71.11	5
$\Delta Hv/T_e$	19.09	5
d | 40 to	88.32	5
e | 150 °C	0.1189	5
d' | 15 to	87.00	5
e' | 40 °C	0.0852	5
d_c g/ml	0.273	5
v_c ml/g	3.670	5
t_c °C	319.7	5
P_c mm	20630.	5
PV/RT		
25°C	1.0006	5
30 mm	1.0000	5
BP	0.9661	4
t_e	0.9557	5
t_c	0.251	5
ΔHc kcal/m	1173.64	2
ΔHf	-50.64	2
ΔFf	7.50	2
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33598	2
400	0.45540	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0757	4
n	600 °K	0.0015	4
o		-0.0_644	4
m'	700 to	0.0085	4
n'	1000 °K	0.0014	4
o'		-0.0_649	4
Surface tension dynes/cm. 20°C		25.96	5
ϑ 30		24.91	5
40		23.89	5
Parachor [P] 20°C			
30			
40			
Sugd.		318.1	5
Exp. L.l.%/wt. u.			
Dispersion		95.9	2
Flash Point °C		22.	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

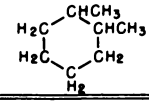
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	1, trans-2-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.92	Ref. 2	Molecular Formula C_8H_{16} — Molecular Weight 112.208



		Ref.
F.P. °C	-88.194	2
F.P. 100%		
B.P. °C 760 mm	123.419	2
100	61.005	2
30	33.66	4
10	12.9	5
1	-22.0	5
Pressure mm 25°C	19.40	5
t_e	1092.	5
Density g/ml 20°C	0.77601	2
d_4^t 25	0.77204	2
30	0.76806	4
a	0.79188	4
b	-0.0378	4
Ref. Index n_D 20°C	1.42695	2
25	1.42470	2
30	1.42229	4
"C"	0.7309	4
MR (Obs.)	37.121	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03895	2
Dielectric	2.036	5
A | 35 to	6.83722	2
B | 160 °C	1356.100	2
C	219.342	2
A* | 35 to	1.23855	4
B* | 150 °C	1263.29	4
K		
c		
t_x | to		
t_x | °C		
A' | 0 to	7.17491	5
B' | 35 °C	1532.4	5
C'	235.3	5
A'* 15 to	1.56941	5
B'* 35 °C	1431.86	5
Ac | 160 to	7.25729	5
Bc | t_c °C	1695.7	5
Cc	264.5	5
Cryos. A°	0.03664	2
consts. B°	0.00336	2
t_e °C	137.62	5

		Ref.
dt/dP °C/mm		
25°C	0.990	5
BP	0.04951	2
t_e	0.0374	5
30 mm	0.6833	4
ΔHm cal/g	22.342	2
ΔHv cal/g		
25°C	81.96	5
30 mm	75.93	5
BP	71.1	2
t_e	69.45	5
t_e (d, e)	69.48	5
$\Delta Hv/T_e$	18.97	5
d | 35 to	85.19	5
e | 140 °C	0.1142	5
d' | 10 to	83.71	5
e' | 35 °C	0.070	5
d_c g/ml	0.242	5
v_c ml/g	4.13	5
t_c °C	307.5	5
P_c mm	19616.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9652	4
t_e	0.9553	5
t_c	0.251	5
ΔHc kcal/m	1171.77	2
ΔHf	-52.19	2
ΔFf	6.06	2
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.34133	2
400	0.46253	2
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | 300 to	-0.0917	4
n | 600 °K	0.0016	4
o	-0.0_658	4
m' | 700 to	0.0185	4
n' | 1000 °K	0.0014	4
o'	-0.0_649	4
Surface tension dynes/cm. 20°C	23.41	5
30	22.46	5
40	21.53	5
Parachor [P] 20°C		
30		
40		
Sugd.	318.1	5
Exp. L.1.%/wt. u. Dispersion	97.9	2
Flash Point °C	17.	5
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared	Yes	2
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	1, cis-3-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.91	Ref. 2	Molecular Formula C_8H_{16}	Molecular Weight 112.208

		Ref.
F.P. °C	-75.573	2
F.P. 100%		
B.P. °C		
760 mm	120.088	2
100	58.547	2
30	31.57	4
10	11.1	5
1	-23.	5
Pressure		
mm 25°C	21.50	5
t_e	1082.	5
Density		
g/ml 20°C	0.76603	2
d_4^t 25	0.76196	2
30	0.75788	4
a	0.78230	4
b	-0.0_381	4
Ref. Index		
n_D 20°C	1.42294	2
25	1.42063	2
30	1.41822	4
"C"	0.7339	4
MR (Obs.)	37.296	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03993	2
Dielectric	2.025	5
A | 32 to	6.84293	2
B | 60 °C	1340.658	2
C	218.281	2
A* | 32 to	1.24982	5
B* | 145 °C	1249.65	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.18098	5
B' | 32 °C	1514.9	5
C'	234.0	5
A'* 15 to	1.57896	5
B'* 32 °C	1415.8	5
Ac | 160 to	7.2598	5
Bc | t_c °C	1671.9	5
Cc	262.1	5
Cryos. A*	0.03333	2
consts. B*	0.00345	2
t_e °C	133.70	5

		Ref.
dt/dP		
°C/mm		
25°C	0.8928	5
BP	0.04880	2
t_e	0.0371	5
30 mm	0.6741	4
ΔHm cal/g	23.047	2
ΔHv cal/g		
25°C	81.91	5
30 mm	81.34	5
BP	70.90	2
t_e	69.28	5
t_e (d, e)	69.29	5
$\Delta Hv/T_e$	19.10	5
d | 30 to	85.07	5
e | 135 °C	0.1180	5
d' | 15 to	83.83	5
e' | 30 °C	0.0787	5
d_c g/ml	0.239	5
v_c ml/g	4.188	5
t_c °C	301.	5
P_c mm	19427.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9651	4
t_e	0.9554	5
t_c	0.255	5
ΔHc kcal/m	1170.63	2
ΔHf	-53.30	2
ΔFf	5.02	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33777	2
400	0.45630	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to	-0.0660		4
n | 600 °K	0.0015		4
o	-0.0_640		4
m' | 700 to	-0.0207		4
n' | 1000 °K	0.0015		4
o'	-0.0_653		4
Surface tension			
dynes/cm. 20°C	22.23		5
γ 30	21.29		5
40	20.38		5
Parachor [P]			
20°C			
30			
40			
Sugd.	318.1		5
Exp. L.1.%/wt. u.			
Dispersion	99.1		2
Flash Point °C	15.		5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared	Yes		2
Solubility in +			
Acetone	∞		
Carbon tet.	∞		
Benzene	∞		
Ether	∞		
n-Heptane	∞		
Ethanol	∞		
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

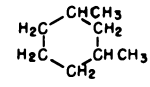
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1, trans-3-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.
F.P. °C	-90.108	2
F.P. 100%		
B.P. °C		
760 mm	124.450	2
100	62.549	2
30	35.42	4
10	15.0	5
1	-19.5	5
Pressure mm 25°C	17.60	5
t_e	1095.	5
Density g/ml 20°C	0.78472	2
d_4^{t} 25	0.78055	2
30	0.77637	4
a	0.80139	4
b	-0.0_3829	4
Ref. Index n_D 20°C	1.43085	2
25	1.42843	2
30	1.42602	4
"C"	0.7290	4
MR (Obs.)	37.002	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03849	2
Dielectric	2.047	5
A | 35 to	6.83866	2
B | 165 °C	1345.859	2
C	215.598	2
A* | 35 to	1.24195	5
B* | 150 °C	1254.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.17644	5
B' | 35 °C	1520.8	5
C'	231.4	5
A'* 20 to	1.57507	5
B'* 35 °C	1422.8	5
Ac | 165 to	7.25259	5
Bc | t_c °C	1678.3	5
Cc	259.9	5
Cryos. A°	0.0354	2
consts. B°	0.0031	2
t_e °C	138.65	5

		Ref.
dt/dP °C/mm		
25°C	1.0670	5
BP	0.04910	2
t_e	0.0370	5
30 mm	0.6778	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.86	5
30 mm	82.96	5
BP	72.1	2
t_e	70.37	5
t_e (d, e)	70.37	5
$\Delta Hv/T_e$	19.17	5
d | 35 to	87.28	5
e | 140 °C	0.1220	5
d' | 20 to	86.03	5
e' | 35 °C	0.0867	5
d_c g/ml	0.246	5
v_c ml/g	4.07	5
t_c °C	309.5	5
P_c mm	20187.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9656	5
t_e	0.9556	5
t_c	0.254	5
ΔHc kcal/m	1172.59	2
ΔHf	-51.57	2
ΔFf	6.44	2
Viscosity centistokes η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33777	2
400	0.45540	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to	-0.0632		4
n | 600 °K	0.0015		4
o |	-0.0_640		4
m' | 700 to	-0.0198		4
n' | 1000 °K	0.0014		4
o' |	-0.0_653		4
Surface tension dynes/cm. 20°C	24.48		5
γ 30	23.45		5
40	22.45		5
Parachor [P] 20°C			
30			
40			
Sugd.	318.1		5
Exp. L.1.%/wt. u.			
Dispersion	97.1		2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

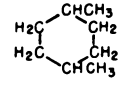
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 9

NAME	1,cis-4-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.94	Ref. 2	Molecular Formula C_8H_{16}
		Molecular Weight 112.208



		Ref.
F.P. °C	-87.436	2
F.P. 100%		
B.P. °C 760 mm	124.321	2
100	62.283	2
30	35.10	4
10	14.4	5
1	-20.0	5
Pressure mm 25°C	17.93	5
t_e	1095.	5
Density g/ml 20°C	0.78285	2
d_4^t 25	0.77870	2
30	0.77454	4
a	0.79944	4
b	-0.0_3383	4
Ref. Index n_D 20°C	1.42966	2
25	1.42731	2
30	1.42482	4
"C"	0.7289	4
MR (Obs.)	37.001	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03796	2
Dielectric	2.044	5
A | 35 to	6.83699	2
B | 165 °C	1347.794	2
C	216.360	2
A* | 35 to	1.23936	4
B* | 150 °C	1256.32	4
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.2554	5
B' | 35 °C	1566.5	5
C'	236.	5
A'* 15 to	1.64530	5
B'* 35 °C	1464.5	5
Ac | 165 to	7.2522	5
Bc | t_c °C	1681.8	5
Cc	260.8	5
Cryos. A°	0.03245	2
consts. B°	0.00272	2
t_e °C	138.55	5

		Ref.
dt/dP °C/mm		
25°C	1.0533	5
BP	0.04921	2
t_e	0.0371	5
30 mm	0.6792	4
ΔHm cal/g	19.820	2
ΔHv cal/g		
25°C	83.38	5
30 mm	82.62	5
BP	71.9	2
t_e	70.19	5
t_e (d, e)	70.19	5
$\Delta Hv/T_e$	19.13	5
d | 35 to	86.83	4
e | 140 °C	0.1201	4
d' | 10 to	85.26	4
e' | 35 °C	0.0752	4
d_c g/ml	0.244	5
v_c ml/g	4.10	5
t_c °C	309.	5
P_c mm	20030.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9658	4
t_e	0.9558	5
t_c	0.254	5
ΔHc kcal/m	1172.57	2
ΔHf	-51.55	2
ΔFf	6.85	2
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. 300 °K	0.33777	2
400	0.45540	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0632	4
n	600 °K	0.0015	4
o		-0.0_640	4
m'	700 to	-0.0198	4
n'	1000 °K	0.0014	4
o'		-0.0_654	4
Surface tension dynes/cm. 20°C		24.25	5
γ 30		23.23	5
40		22.24	5
Parachor [P] 20°C			
30			
40			
Sugd.		318.1	5
Exp. L.1.%/wt. u.			
Dispersion		97.1	2
Flash Point °C		16.0	5
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	2
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SCURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1,trans-4-Dimethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{16}
		Molecular Weight 112.208

		Ref.
F.P. °C	-36.962	2
F.P. 100%		
B.P. °C		
760 mm	119.351	2
100	57.6	2
30	30.54	4
10	10.0	5
1	-24.2	5
Pressure mm 25°C	22.69	5
t_e	1081.	5
Density g/ml 20°C	0.76255	2
d_4^t 25	0.75835	2
30	0.75414	4
a	0.77934	4
b	-0.0_383	4
Ref. Index n_D 20°C	1.42090	2
25	1.41853	2
30	1.41600	4
"C"	0.7338	4
MR (Obs.)	37.308	2
MR (Calc.)	36.944	5
(nD-d/2)	1.03963	2
Dielectric	2.019	5
A | 30 to	6.82180	2
B | 155 °C	1332.613	2
C	218.791	2
A* | 30 to	1.22667	4
B* | 145 °C	1240.9	4
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.1689	5
B' | 30 °C	1511.4	5
C'	235.	5
A'* 15 to	1.5652	5
B'* 30 °C	1411.5	5
Ac | 155 to	7.23940	5
Bc | t_c °C	1663.83	5
Cc	262.8	5
Cryos. A°	0.02658	2
consts. B°	0.00296	2
t_e °C	133.02	5

		Ref.
dt/dP °C/mm		
25°C	0.8929	5
BP	0.04903	2
t_e	0.0373	5
30 mm	0.6753	4
ΔHm cal/g	24.285	2
ΔHv cal/g		
25°C	81.24	5
30 mm	80.65	5
BP	70.4	2
t_e	68.80	5
t_e (d,e)	68.82	5
$\Delta Hv/T_e$	19.00	5
d | 30 to	84.17	5
e | 135 °C	0.1154	5
d' | 10 to	83.93	5
e' | 30 °C	0.1076	5
d_c g/ml	0.235	5
v_c ml/g	4.257	5
t_c °C	299.	5
P_c mm	18900.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9663	4
t_e	0.9568	5
t_c	0.253	5
ΔHc kcal/m	1170.67	2
ΔHf	-53.18	2
ΔFf	5.50	2
Viscosity centistokes η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. 300°K	0.33866	2
400	0.45986	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0891	4
n	600 °K	0.0016	4
o		-0.0_653	4
m'	700 to	0.0123	4
n'	1000 °K	0.0014	4
o'		-0.0_649	4
Surface tension dynes/cm. 20°C		21.83	5
γ 30		20.87	5
40		19.94	5
Parachor [P] 20°C			
30			
40			
Sugd.		318.1	5
Exp. L.1.%/wt. u.			
Dispersion		97.1	2
Flash Point °C		12.	5
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared		Yes	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	n-Propylcyclohexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{18}
		Molecular Weight 126.234

		Ref.
F. P. °C	-94.900	2
F. P. 100%		
B. P. °C 760 mm	156.724	2
100	90.979	5
30	62.05	5
10	40.13	5
1	4.024	5
Pressure mm 25°C	4.247	5
t_e	1178.4	5
Density g/ml 20°C	0.79360	2
d_4^t 25	0.78977	2
30	0.78594	4
a	0.8089	4
b	-0.0_3765	4
Ref. Index n_D 20°C	1.43705	2
25	1.43478	2
30	1.43250	4
"C"	0.7307	4
MR (Obs.)	41.677	2
MR (Calc.)	41.562	5
(nD-d/2)	1.04025	2
Dielectric	2.065	5
A 60 to	6.89968	4
B 190 °C	1469.8	4
C	209.0	4
A* 60 to	1.33525	5
B* 185 °C	1376.2	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.3199	5
B' 60 °C	1706.4	5
C'	230.	5
A'* 25 to	1.7506	5
B'* 60 °C	1604.	5
Ac 190 to	7.30759	5
Bc t_c °C	1814.5	5
Cc	253.5	5
Cryos. A* consts. B*		
t_e °C	174.92	5

		Ref.
dt/dP °C/mm		
25°C	3.896	5
BP	0.05200	2
t_e	0.0370	5
30 mm	0.7236	5
ΔHm cal/g		
ΔHv cal/g		
25°C	84.60	5
30 mm	81.50	5
BP	70.15	5
t_e	68.02	5
t_e (d, e)	67.97	5
$\Delta Hv/T_e$	19.16	5
d 60 to	88.94	5
e 175 °C	0.1199	5
d' 20 to	86.69	5
e' 60 °C	0.0837	5
d_c g/ml	0.2623	5
v_c ml/g	3.813	5
t_c °C	346.0	5
P_c mm	19098.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9580	5
t_e	0.9451	5
t_c	0.238	5
ΔHc kcal/m	1320.44	2
ΔHf	-56.98	2
ΔFf	8.22	2
Viscosity centistokes		
η 20 °C	1.268	2
40	0.976	2
60	0.787	2
80	0.66	2
B^v -30 to	563.14	4
A^v 30 °C	2.18246	4
(B^v) 30 to	469.11	4
(A^v) 90 °C	2.49136	4
c_p liq. °K		
c_p vap. 300°K	0.35109	2
c_p 400	0.46818	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0611	4
n	600 °K	0.0015	4
o		-0.0_651	4
m'	700 to	0.0124	4
n'	1000 °K	0.0014	4
o'		-0.0_652	4
Surface tension dynes/cm. 20°C		25.40	5
γ 30		24.43	5
40		23.49	5
Parachor [P] 20°C			
30			
40			
Sugd.		357.1	5
Exp. L.l.%/wt. u.			
Dispersion		97.4	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	Isopropylcyclohexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_9H_{18}	Molecular Weight 126.234

		Ref.
F.P. °C	-89.8	3
F.P. 100%		
B.P. °C		
760 mm	154.50	3
100	89.03	5
30	60.23	5
10	38.28	5
1	1.57	5
Pressure		
mm 25°C	4.694	5
t_e	1160.002	5
Density		
g/ml 20°C	0.80232	3
d_4^t 25	0.79840	3
30	0.79448	4
a	0.81799	4
b	-0.0_379	4
Ref. Index		
n_D 20°C	1.44095	3
25	1.43875	3
30	1.43639	4
"C"	0.7287	4
MR (Obs.)	41.5438	2
MR (Calc.)	41.562	5
(nD-d/2)	1.03979	2
Dielectric		
A | 60 to	6.89690	4
B | 185 °C	1461.86	4
C	209.5	4
A* | 60 to	1.34872	5
B* | 180 °C	1372.46	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.30882	5
B' | 60 °C	1692.52	5
C'	230.	5
A'* 25 to	1.74105	5
B'* 60 °C	1590.64	5
Ac | 185 to	7.30519	5
Bc | t_c °C	1805.47	5
Cc	254.	5
Cryos. A* consts. B*		
t_e °C	171.94	5

		Ref.
dt/dP		
°C/mm		
25°C	3.555	5
BP	0.05179	4
t_e	0.03726	5
30 mm	0.72045	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.89	5
30 mm	80.97	5
BP	69.12	4
t_e	67.03	5
t_e (d, e)	66.93	5
$\Delta Hv/T_e$	19.01	5
d | 60 to	88.54	5
e | 170 °C	0.1257	5
d' | 25 to	85.97	5
e' | 60 °C	0.0829	5
d_c g/ml	0.251	5
v_c^c ml/g	3.98	5
t_c^c °C	343.	5
P_c mm	19116.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.94997	5
t_e	0.93663	5
t_c	0.25	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		26.53	5
γ 30		25.51	5
40		24.51	5
Parachor [P]			
20°C			
30			
40			
Sugd.		357.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

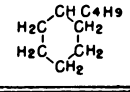
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 Receuil. Trav. Chim., 58, (1939)

No. 13

NAME	n-Butylcyclohexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{10}H_{20}$
		Molecular Weight 140.260



		Ref.
F.P. °C	-74.725	2
F.P. 100%		
B.P. °C		
760 mm	180.947	2
100	112.35	4
30	82.06	4
10	58.96	5
1	20.33	5
Pressure		
mm 25°C	1.3725	5
t_e	1222.2	5
Density		
g/ml 20°C	0.79918	2
d_4^t 25	0.79551	2
30	0.79184	4
a	0.81386	4
b	-0.0_373	4
Ref. Index		
n_D 20°C	1.44075	2
25	1.43855	2
30	1.43647	4
"C"	0.7313	4
MR (Obs.)	46.323	2
MR (Calc.)	46.180	5
(nD-d/2)	1.04116	2
Dielectric		
A | 82 to	6.95572	4
B |240 °C	1572.7	4
C	205.	5
A* | 82 to	1.44343	5
B* |215 °C	1482.6	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.29925	5
B' | 82 °C	1776.1	5
C'	223.	5
A'* 20 to	1.77024	5
B'* 82 °C	1675.3	5
Ac |240 to	7.58996	5
Bc | t_c °C	2187.8	5
Cc	285.	5
Cryos. A°		
consts. B°		
t_e °C	201.53	5

		Ref.
dt/dP		
°C/mm		
25°C	10.96	5
BP	0.05412	2
t_e	0.03734	5
30 mm	0.7585	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.77	5
30 mm	78.58	5
BP	66.48	5
t_e	64.13	5
t_e (d, e)	63.96	5
ΔHv/T_e	18.95	5
d | 82 to	88.62	5
e | 210 °C	0.1224	5
d' | 20 to	86.05	5
e' | 82 °C	0.0910	5
d_c g/ml	0.259	5
v_c ml/g	3.860	5
t_c °C	372.6	5
P_c mm	18301.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9413	5
t_e	0.9253	5
t_c	0.24	5
ΔHc kcal/m	1467.54	2
ΔHf	-62.91	2
ΔFf	9.69	2
Viscosity		
centistokes		
η 10 °C	1.95	2
30	1.406	2
50	1.069	2
70	0.863	2
B^v | 30 to	551.5	4
A^v | 80 °C	2.32906	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap 300°K	0.35513	2
400	0.47055	2
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	25.94	5
30	25.00	5
40	24.09	5
Parachor [P]		
20°C		
30		
40		
Sugd.	396.1	5
Exp. L.1.%/wt. u.		
Dispersion	97.0	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	n-Pentylcyclohexane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{11}H_{22}$
		Molecular Weight 154.286

		Ref.
F.P. °C	-57.5	2
F.P. 100%		
B.P. °C		
760 mm	202.8	2
100	131.1	4
30	99.4	5
10	75.3	5
1	34.9	5
Pressure mm 25°C	0.5062	5
t_e	1276.4	5
Density g/ml 20°C	0.8037	2
d_4^t 25	0.8002	2
30	0.7967	4
a	0.8177	4
b	-0.0370	4
Ref. Index n_D 20°C	1.4437	2
25	1.4416	2
30	1.4396	4
"C"	0.7318	4
MR (Obs.)	50.96	2
MR (Calc.)	50.798	5
(nD-d/2)	1.0418	2
Dielectric		
A | 99 to	6.96030	4
B | 260 °C	1647.3	4
C	201.	5
A* | 99 to	1.47836	5
B* | 236 °C	1555.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.28882	5
B' | 99 °C	1850.6	5
C'	219.	5
A'* 20 to	1.79373	5
B'* 99 °C	1749.6	5
Ac | 260 to	7.62691	5
Bc | t_c °C	2319.2	5
Cc	287.	5
Cryos. A*		
consts. B*		
t_e °C	226.39	5

		Ref.
dt/dP °C/mm		
25°C	27.60	5
BP	0.05656	4
t_e	0.03773	5
30 mm	0.7932	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.97	5
30 mm	75.16	5
BP	63.18	5
t_e	60.65	5
t_e (d, e)	60.45	5
$\Delta Hv/T_e$	18.73	5
d | 99 to	86.68	5
e | 226 °C	0.1159	5
d' | 20 to	84.26	5
e' | 99 °C	0.0916	5
d_c g/ml	0.257	5
v_c ml/g	3.893	5
t_c °C	394.	5
P_c mm	16556.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9365	5
t_e	0.9183	5
t_c	0.239	5
ΔHc kcal/m	1614.47	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 10 °C	2.61	2
30	1.779	2
50	1.311	2
70	1.034	2
B^v | 5 to	714.66	4
A^v | 40 °C	3.89312	4
(B^v) | 40 to	571.69	4
(A^v) | 80 °C	2.34876	4
c_p liq. °K		
c_p vap. 300°K	0.35849	2
400	0.47315	2
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	26.39	5
γ 30	25.48	5
40	24.60	5
Parachor [P] 20°C		
30		
40		
Sugd.	435.1	5
Exp. L. 1. %/wt. u.		
Dispersion	98.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.80\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

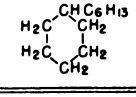
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 15

NAME	n-Hexylcyclohexane 1-Cyclohexylhexane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{12}H_{24}$	Molecular Weight 168.312



		Ref.
F.P. °C	-43.0	2
F.P. 100%		
B.P. °C		
760 mm	224.0	2
100	149.9	4
30	117.07	5
10	92.00	5
1	50.06	5
Pressure		
mm 25°C	0.1720	5
t_e	1331.7	5
Density		
g/ml 20°C	0.8076	2
d_4^{25}	0.8041	2
d_4^{30}	0.8006	4
a	0.8216	4
b	-0.0_3370	4
Ref. Index		
n_D 20°C	1.4462	2
25	1.4441	2
30	1.4430	4
"C"	0.7321	4
MR (Obs.)	55.60	2
MR (Calc.)	55.416	5
(nD-d/2)	1.0424	2
Dielectric		
A | 117 to	7.00361	4
B | 275 °C	1735.7	4
C	197.	5
A* | 117 to	1.54590	5
B* | 260 °C	1642.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.32035	5
B' | 117 °C	1940.4	5
C'	215.	5
A'* 20 to	1.85557	5
B'* 117 °C	1839.2	5
Ac | 275 to	7.66201	5
Bc | t_c °C	2412.9	5
Cc	282.	5
Cryos. A* consts. B*		
t_e °C	250.44	5

		Ref.
dt/dP		
°C/mm		
25°C	74.95	5
BP	0.05835	4
t_e	0.03762	5
30 mm	0.8227	5
ΔHm cal/g		
ΔHv cal/g		
25°C	81.43	5
30 mm	72.86	5
BP	61.07	5
t_e	58.38	5
t_e (d, e)	58.16	5
$\Delta Hv/T_e$	18.76	5
d | 117 to	85.77	5
e | 250 °C	0.1103	5
d' | 20 to	83.76	5
e' | 117 °C	0.0931	5
d_c g/ml	0.255	5
v_c ml/g	3.92	5
t_c °C	412.	5
P_c mm	15296.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9341	5
t_e	0.9141	5
t_c	0.205	5
ΔHc kcal/m	1761.40	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 10 °C	3.40	2
30	2.25	2
50	1.611	2
70	1.240	2
B^v | 5 to	769.79	4
A^v | 40 °C	3.81329	4
(B^v) | 40 to	630.48	4
(A^v) | 80 °C	2.25636	4
c_p liq. °K		
c_p vap 300°K	0.36123	2
c_p 400	0.47471	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0362	4
n | 600 °K		0.0015	4
o		-0.0_648	4
m' | 700 to		0.0258	4
n' | 1000 °K		0.0014	4
o'		-0.0_650	4
Surface tension			
dynes/cm. 20°C		26.78	5
30		25.86	5
40		24.97	5
Parachor [P]			
20°C			
30			
40			
Sugd.		474.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.80\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

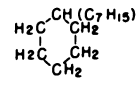
LITERATURE REFERENCES:

No. 16

NAME: n-Heptylcyclohexane

1-Cyclohexylheptane

STRUCTURAL FORMULA



Mole % Pur. | Ref. | Molecular Formula $C_{13}H_{26}$ | Molecular Weight 182.338

		Ref.
F.P. °C	-30.5	2
F.P. 100%		
B.P. °C		
760 mm	244.	2
100	167.	4
30	133.	5
10	107.	5
1	64.	5
Pressure		
mm 25°C	0.06420	5
t_e	1386.5	5
Density		
g/ml 20°C	0.8109	2
d_4^{t} 25	0.8074	2
30	0.8039	4
a	0.8249	4
b	-0.0_370	4
Ref. Index		
n_D 20°C	1.4484	2
25	1.4463	2
30	1.4443	4
"C"	0.7325	4
MR (Obs.)	60.24	2
MR (Calc.)	60.034	5
(nD-d/2)	1.0429	2
Dielectric		
A | 133 to	7.00437	4
B | 325 °C	1802.	4
C	193.	5
A* | 133 to	1.56661	5
B* | 284 °C	1705.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.30954	5
B' | 133 °C	2006.5	5
C'	211.	5
A'* 20 to	1.87344	5
B'* 133 °C	1905.6	5
Ac | 325 to	8.37928	5
Bc | t_c °C	3507.9	5
Cc	398.	5
Cryos. A* consts. B*		
t_e °C	273.54	5

		Ref.
dt/dP		
°C/mm		
25°C	187.78	5
BP	0.06056	4
t_e	0.03783	5
30 mm	0.8539	5
ΔHm cal/g		
ΔHv cal/g		
25°C	80.39	5
30 mm	70.20	5
BP	58.70	5
t_e	55.87	5
t_e (d, e)	55.64	5
$\Delta Hv/T_e$	18.63	5
d | 133 to	83.99	5
e | 274 °C	0.1037	5
d' | 20 to	82.75	5
e' | 133 °C	0.0943	5
d_c g/ml	0.253	5
v_c ml/g	3.95	5
t_c °C	430.	5
P_c mm	13840.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9333	5
t_e	0.9115	5
t_c	0.227	5
ΔHc kcal/m	1908.32	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 10 °C	4.35	2
30	2.79	2
50	1.95	2
70	1.468	2
B^V | 5 to	828.14	4
A^V | 40 °C	3.71427	4
(B^V) | 40 to	683.84	4
(A^V) | 80 °C	2.17419	4
c_p liq. °K		
c_p vap. 300°K	0.36361	2
400	0.47659	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0379	4
n | 600 °K		0.0015	4
o |		-0.0_652	4
m' | 700 to		0.0689	4
n' | 1000 °K		0.0013	4
o' |		-0.0_644	4
Surface tension			
dynes/cm. 20°C		27.11	5
30		26.19	5
40		25.29	5
Parachor [P]			
20°C			
30			
40			
Sugd.		513.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 17

NAME	n-Octylcyclohexane 1-Cyclohexyloctane		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{14}H_{28}$	Molecular Weight 196.364

		Ref.
F.P. °C	-19.7	2
F.P. 100%		
B.P. °C		
760 mm	264.	2
100	184.3	4
30	149.	5
10	122.	5
1	77.	5
Pressure		
mm 25°C	0.02311	5
t_e	1440.7	5
Density		
g/ml 20°C	0.8138	2
d_4^t 25	0.8104	2
30	0.8070	4
a	0.8274	4
b	-0.0368	4
Ref. Index		
n_D 20°C	1.4503	2
25	1.4483	2
30	1.4462	4
"C"	0.7328	4
MR (Obs.)	64.88	2
MR (Calc.)	64.652	5
(nD-d/2)	1.0434	2
Dielectric		
A | 149 to	7.00707	4
B | 340 °C	1869.2	4
C	189.	5
A* | 149 to	1.58770	5
B* | 307 °C	1770.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.30155	5
B' | 149 °C	2073.6	5
C'	207.	5
A'* 20 to	1.89164	5
B'* 149 °C	1973.0	5
Ac | 340 to	8.33827	5
Bc | t_c °C	3542.9	5
Cc	388.	5
Cryos. A*		
consts. B*		
t_e °C	296.70	5

		Ref.
dt/dP		
°C/mm		
25°C	487.90	5
BP	0.06273	4
t_e	0.03804	5
30 mm	0.8849	5
ΔHm cal/g		
ΔHv cal/g		
25°C	79.83	5
30 mm	67.96	5
BP	56.68	5
t_e	53.71	5
t_e (d, e)	53.47	5
$\Delta Hv/T_e$	18.51	5
d | 149 to	82.57	5
e | 297 °C	0.0981	5
d' | 20 to	82.22	5
e' | 149 °C	0.0957	5
d_c g/ml	0.252	5
v_c ml/g	3.972	5
t_c °C	449.	5
P_c mm	12718.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9322	5
t_e	0.9086	5
t_c	0.220	5
ΔHc kcal/m	2055.24	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	2.34	2
70	1.72	2
90	1.31	2
110	1.02	2
B^v | 40 to	741.46	4
A^v | 80 °C	Σ.07510	4
(B^v) | 80 to	756.22	4
(A^v) | 120 °C	Σ.03517	4
c_p liq. °K		
c_p vap. 300°K	0.36560	2
400	0.47768	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0322	4
n	600 °K	0.0015	4
o		-0.0_651	4
m'	700 to	0.0738	4
n'	1000 °K	0.0013	4
o'		-0.0_643	4
Surface tension			
dynes/cm. 20°C		27.41	5
30		26.50	5
40		25.62	5
Parachor [P]			
20°C			
30			
40			
Sugd.		552.1	5
Exp. L.l.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 18

NAME	n-Nonylcyclohexane 1-Cyclohexylnonane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{15}H_{30}$	Molecular Weight 210.390

		Ref.
F.P. °C	-10.2	2
F.P. 100%		
B.P. °C		
760 mm	282.	2
100	200.	5
30	164.	5
10	136.	5
1	89.	5
Pressure		
mm 25°C	0.00874	5
t_e	1486.4	5
Density		
g/ml 20°C	0.8163	2
d_4^t 25	0.8129	2
d_4^{30}	0.8095	4
a	0.8299	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4519	2
25	1.4499	2
30	1.4479	4
"C"	0.7330	4
MR (Obs.)	69.52	2
MR (Calc.)	69.270	5
(nD-d/2)	1.0438	2
Dielectric		
A | 164 to	7.01057	4
B | 353 °C	1928.6	4
C	185.	5
A* | 164 to	1.61199	5
B* | 327 °C	1828.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.29634	5
B' | 164 °C	2132.9	5
C'	203.	5
A'* 20 to	1.91204	5
B'* 164 °C	2033.2	5
Ac | 353 to	8.33828	5
Bc | t_c °C	3621.8	5
Cc	384.	5
Cryos. A°		
consts. B°		
t_e °C	317.45	5

		Ref.
dt/dP		
°C/mm		
25°C	1211.62	5
BP	0.06462	4
t_e	0.03825	5
30 mm	0.9118	5
ΔHm cal/g		
ΔHv cal/g		
25°C	79.35	5
30 mm	65.86	5
BP	54.70	5
t_e	51.61	5
t_e (d, e)	51.36	5
$\Delta Hv/T_e$	18.39	5
d | 164 to	81.26	5
e | 317 °C	0.0942	5
d' | 20 to	81.79	5
e' | 164 °C	0.0974	5
d_c g/ml	0.251	5
v_c ml/g	3.99	5
t_c °C	463.	5
P_c mm	11612.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9299	5
t_e	0.9045	5
t_c	0.212	5
ΔHc kcal/m	2202.17	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	2.76	2
70	2.00	2
90	1.49	2
110	1.15	2
B^v | 40 to	775.79	4
A^v | 80 °C	Σ.04057	4
(B^v) | 80 to	782.81	4
(A^v) | 120 °C	Σ.01788	4
c_p liq. °K		
c_p vap 300 °K	0.36732	2
400	0.47863	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m | 300 to		-0.0242	4
n | 600 °K		0.0015	4
o |		-0.0_648	4
m' | 700 to		0.0644	4
n' | 1000 °K		0.0013	4
o' |		-0.0_645	4
Surface tension			
dynes/cm. 20°C		27.67	5
γ 30		26.76	5
40		25.87	5
Parachor [P]			
20°C			
30			
40			
Sugd.		591.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

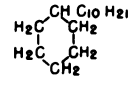
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 19

NAME	n-Decylcyclohexane 1-Cyclohexyldecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{16}H_{32}$
		Molecular Weight 224.416



		Ref.
F. P. °C	-1.726	2
F. P. 100%		
B. P. °C		
760 mm	299.	2
100	215.	4
30	177.	5
10	148.	5
1	101.	5
Pressure		
mm 25°C	0.00354	5
t_e	1533.6	5
Density		
g/ml 20°C	0.81858	2
d_4^t 25	0.81517	2
30	0.81176	4
a	0.8322	4
b	-0.0_3682	4
Ref. Index		
n_D 20°C	1.45338	2
25	1.45141	2
30	1.44938	4
"C"	0.7332	4
MR (Obs.)	74.154	2
MR (Calc.)	73.888	5
(nD-d/2)	1.04409	2
Dielectric		
A 177 to	7.01282	4
B 376 °C	1987.5	4
C	182.	5
A* 177 to	1.63076	5
B* 347 °C	1885.3	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.29035	5
B' 177 °C	2191.8	5
C'	200.	5
A'* 20 to	1.92825	5
B'* 177 °C	2091.9	5
Ac 376 to	7.58052	5
Bc t_c °C	2671.8	5
Cc	271.	5
Cryos. A°		
consts. B°		
t_e °C	337.32	5

		Ref.
dt/dP		
°C/mm		
25°C	2833.0	5
BP	0.06652	4
t_e	0.03843	5
30 mm	0.9389	5
ΔHm cal/g		
ΔHv cal/g		
25°C	78.50	5
30 mm	63.73	5
BP	52.85	5
t_e	49.71	5
t_e (d, e)	49.43	5
$\Delta Hv/T_e$	18.27	5
d 177 to	79.51	5
e 337 °C	0.0892	5
d' 20 to	80.92	5
e' 177 °C	0.0972	5
d_c g/ml	0.240	5
v_c ml/g	4.17	5
t_c °C	477.	5
P_c mm	10200.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9292	5
t_e	0.9029	5
t_c	0.204	5
ΔHc kcal/m	2349.09	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	3.24	2
70	2.30	2
90	1.69	2
110	1.28	2
B^v 40 to	825.4	4
A^v 80 °C	3.95681	4
(B^v) 80 to	839.8	4
(A^v) 120 °C	3.91567	4
c_p liq. °K		
c_p vap 300°K	0.36887	2
400	0.47991	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0236	4
n	600 °K	0.0015	4
o		-0.0_649	4
m'	700 to	0.0849	4
n'	1000 °K	0.0012	4
o'		-0.0_642	4
Surface tension			
dynes/cm. 20°C		27.90	5
30		26.99	5
40		26.09	5
Parachor [P]			
20°C			
30			
40			
Sugd.		630.1	5
Exp. L.1.%/wt. u.			
Dispersion		97.8	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.90\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

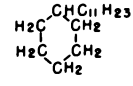
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 20

NAME	n-Undecylcyclohexane 1-Cyclohexylundecane	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula $C_{17}H_{34}$	Molecular Weight 238.442

		Ref.
F.P. °C	5.8	2
F.P. 100%		
B.P. °C		
760 mm	316.	2
100	229.	4
30	191.	5
10	161.	5
1	112.	5
Pressure		
mm 25°C	0.00139	5
t_e	1580.7	5
Density		
g/ml 20°C	0.8206	2
d_4^{25}	0.8172	2
d_4^{30}	0.8138	4
a	0.8342	4
b	-0.0_368	4
Ref. Index		
n_D 20°C	1.4547	2
25	1.4527	2
30	1.4507	4
"C"	0.7334	4
MR (Obs.)	78.80	2
MR (Calc.)	78.506	5
(nD-d/2)	1.0444	2
Dielectric		
A | 191 to	7.01858	4
B | 491 °C	2048.2	4
C	179.	5
A* | 191 to	1.65109	5
B* | 367 °C	1943.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.28845	5
B' | 191 °C	2252.6	5
C'	197.	5
A'* 20 to	1.94742	5
B'* 191 °C	2152.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	357.22	5

		Ref.
dt/dP °C/mm		
25°C	6854.8	5
BP	0.06836	4
t_e	0.03857	5
30 mm	0.9656	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.99	5
30 mm	61.89	5
BP	51.28	5
t_e	48.06	5
t_e (d, e)	47.79	5
$\Delta Hv/T_e$	18.18	5
d | 191 to	78.02	5
e | 357 °C	0.0846	5
d' | 20 to	80.42	5
e' | 191 °C	0.0972	5
d_c g/ml	0.239	5
v_c^c ml/g	4.18	5
t_c^c °C	491.	5
P_c mm	9427.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9288	5
t_e	0.9012	5
t_c	0.197	5
ΔHc kcal/m	2496.01	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	3.77	2
70	2.63	2
90	1.90	2
110	1.41	2
B^v | 40 to	867.3	4
A^v | 80 °C	3.89286	4
(B^v) | 80 to	901.4	4
(A^v) | 120 °C	3.79695	4
c_p liq. °K		
c_p vap. 300°K	0.37019	2
400	0.48062	2
c_v vap.		

			Ref.
f g h	| to | °K		
f' g' h'	| to | °K		
m n o	| 300 to | 600 °K	-0.0198 0.0015 -0.0_649	4 4 4
m' n' o'	| 700 to | 1000 °K	0.0728 0.0013 -0.0_644	4 4 4
Surface tension			
dynes/cm. 20°C		28.12	5
γ 30		27.20	5
40		26.30	5
Parachor [P]			
20°C			
30			
40			
Sugd.		669.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

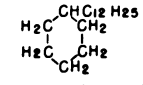
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 21

NAME	n-Dodecylcyclohexane 1-Cyclohexyldodecane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{18}H_{36}$ Molecular Weight 252.468	

		Ref.
F. P. °C	12.5	2
F. P. 100%		
B. P. °C		
760 mm	331.	2
100	242.	5
30	203.	5
10	172.	5
1	122.	5
Pressure		
mm 25°C	0.0_3591	5
t_e	1619.8	5
Density		
g/ml 20°C	0.8223	2
d_4^t 25	0.8190	2
30	0.8157	4
a	0.8355	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4559	2
25	1.4539	2
30	1.4523	4
"C"	0.7337	4
MR (Obs.)	83.44	2
MR (Calc.)	83.124	5
(nD-d/2)	1.0447	2
Dielectric		
A | 203 to	7.01789	4
B | 425 °C	2097.5	4
C	176.	5
A* | 203 to	1.66739	5
B* | 385 °C	1991.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.28135	5
B' | 203 °C	2301.7	5
C'	194.	5
A'* 20 to	1.96111	5
B'* 203 °C	2202.5	5
Ac | 425 to	8.31283	5
Bc | t_c °C	3942.8	5
Cc	399.	5
Cryos. A° consts. B°		
t_e °C	374.75	5

		Ref.
dt/dP		
°C/mm		
25°C	15324.	5
BP	0.07003	4
t_e	0.03877	5
30 mm	0.9891	5
ΔHm cal/g		
ΔHv cal/g		
25°C	77.34	5
30 mm	60.04	5
BP	49.62	5
t_e	46.35	5
t_e (d, e)	46.07	5
$\Delta Hv/T_e$	18.06	5
d | 203 to	76.48	5
e | 375 °C	0.0811	5
d' | 20 to	79.78	5
e' | 203 °C	0.0974	5
d_c g/ml	0.239	5
v_c ml/g	4.19	5
t_c °C	503.	5
P_c mm	8743.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9274	5
t_e	0.8985	5
t_c	0.191	5
ΔHc kcal/m	2642.93	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	4.35	2
70	2.98	2
90	2.12	2
110	1.56	2
B^v | 40 to	911.1	4
A^v | 80 °C	$\bar{3}.81962$	4
(B^v) | 80 to	927.1	4
(A^v) |120 °C	$\bar{3}.77383$	4
c_p liq. °K		
c_p vap.300°K	0.37141	2
400	0.48165	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to		-0.0219	4
n | 600 °K		0.0015	4
o		-0.0_652	4
m' | 700 to		0.1010	4
n' | 1000 °K		0.0012	4
o'		-0.0_640	4
Surface tension			
dynes/cm. 20°C		28.29	5
30		27.40	5
40		26.52	5
Parachor [P]			
20°C			
30			
40			
Sugd.		708.1	5
Exp. L. l. %/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.90\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

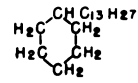
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 22

NAME	n-Tridecylcyclohexane 1-Cyclohexyltridecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{19}H_{38}$ — Molecular Weight 266.494



		Ref.
F.P. °C	18.5	2
F.P. 100%		
B.P. °C 760 mm	346.	2
100	255.	5
30	215.	5
10	184.	5
1	132.	5
Pressure mm 25°C	0.0_3244	5
t_e	1661.3	5
Density g/ml 20°C	0.8239	2
d_4^t 25	0.8206	2
30	0.8173	4
a	0.8371	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4570	2
25	1.4550	2
30	1.4531	4
"C"	0.7340	4
MR (Obs.)	88.08	2
MR (Calc.)	87.742	5
(nD-d/2)	1.0450	2
Dielectric		
A | 215 to	7.01992	4
B | 436 °C	2148.2	4
C	173.	5
A* | 215 to	1.68318	5
B* | 402 °C	2040.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.27735	5
B' | 215 °C	2352.4	5
C'	191.	5
A'* 20 to	1.97641	5
B'* 215 °C	2253.6	5
Ac | 436 to	8.30585	5
Bc | t_c °C	3999.9	5
Cc	395.	5
Cryos. A° consts. B°		
t_e °C	392.39	5

		Ref.
dt/dP °C/mm		
25°C	35356.	5
BP	0.07165	4
t_e	0.03890	5
30 mm	1.0122	5
ΔHm cal/g		
ΔHv cal/g		
25°C	76.98	5
30 mm	58.42	5
BP	48.22	5
t_e	44.89	5
t_e (d, e)	44.62	5
$\Delta Hv/T_e$	17.97	5
d | 215 to	75.07	5
e | 392 °C	0.0776	5
d' | 20 to	79.43	5
e' | 215 °C	0.0979	5
d_c g/ml	0.239	5
v_c ml/g	4.19	5
t_c °C	515.	5
P_c mm	8135.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9271	5
t_e	0.8971	5
t_c	0.185	5
ΔHc kcal/m	2789.86	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	4.99	2
70	3.37	2
90	2.36	2
110	1.71	2
B^v | 40 to	945.5	4
A^v | 80 °C	3.77282	4
(B^v) | 80 to	973.6	4
(A^v) | 120 °C	3.69224	4
c_p liq. °K		
c_p vap. 300°K	0.37247	2
400	0.48219	2
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	300 to	-0.0161	4
n |	600 °K	0.0014	4
o |		-0.0_650	4
m' |	700 to	0.0925	4
n' |	1000 °K	0.0012	4
o' |		-0.0_641	4
Surface tension dynes/cm. 20°C		28.46	5
γ 30		27.56	5
40		26.68	5
Parachor [P] 20°C			
30			
40			
Sugd.		747.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.90\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 23

NAME	n-Tetradecylcyclohexane 1-Cyclohexyltetradecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{20}H_{40}$	Molecular Weight 280.520

		Ref.
F. P. °C	24.0	2
F. P. 100%		
B. P. °C		
760 mm	360.	2
100	267.	5
30	226.	5
10	194.	5
1	141.	5
Pressure		
mm 25°C	0.0_3110	5
t_e	1698.8	5
Density		
g/ml 20°C	0.8254≠	2
d_4^t 25	0.8221	2
30	0.8188	4
a	0.8386	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4579≠	2
25	1.4559	2
30	1.4545	4
"C"	0.7340	4
MR (Obs.)	92.72≠	2
MR (Calc.)	92.360	5
(nD-d/2)	1.0452≠	2
Dielectric		
A 226 to	7.02261	5
B 445 °C	2199.3	5
C	171.	5
A* 226 to	1.69987	5
B* 419 °C	2089.1	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.27430	5
B' 226 °C	2403.5	5
C'	189.	5
A'* 20 to	1.99109	5
B'* 226 °C	2304.7	5
Ac 445 to	8.30924	5
Bc t_c °C	4070.1	5
Cc	393.	5
Cryos. A°		
consts. B°		
t_e °C	408.91	5

		Ref.
dt/dP		
°C/mm		
25°C	74925.8	5
BP	0.07326	4
t_e	0.03909	5
30 mm	1.03530	5
ΔHm cal/g		
ΔHv cal/g		
25°C	76.12	5
30 mm	56.74	5
BP	46.79	5
t_e	43.43	5
t_e (d, e)	43.17	5
$\Delta Hv/T_e$	17.86	5
d 226 to	73.45	5
e 409 °C	0.0741	5
d' 20 to	78.54	5
e' 226 °C	0.0966	5
d_c g/ml	0.238	5
v_c ml/g	4.206	5
t_c °C	525.	5
P_c mm	7509.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9262	5
t_e	0.8952	5
t_c	0.178	5
ΔHc kcal/m	2936.78	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	5.69	2
70	3.78	2
90	2.61	2
110	1.87	2
B^v 40 to	985.1	4
A^v 80 °C	3.70715	4
(B^v) 80 to	1007.7	4
(A^v) 120 °C	3.64228	4
c_p liq. °K		
c_p vap. 300°K	0.37341	2
400	0.48268	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.0112	4
n	600 °K	0.0014	4
o		-0.0_647	4
m'	700 to	0.0844	4
n'	1000 °K	0.0012	4
o'		-0.0_643	4
Surface tension			
dynes/cm. 20°C		28.62	5
30		27.72	5
40		26.84	5
Parachor [P]			
20°C			
30			
40			
Sugd.		786.1	5
Exp. L.l.%/wt. u.			
Dispersion		98.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in †			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.90\,T_c$ ≠ for undercooled liquid † grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

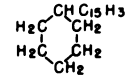
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 24

NAME	n-Pentadecylcyclohexane 1-Cyclohexylpentadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{21}H_{42}$
		Molecular Weight 294.546



		Ref.
F.P. °C	29.0	2
F.P. 100%		
B.P. °C		
760 mm	373.	2
100	278.	5
30	236.	5
10	204.	5
1	150.	5
Pressure		
mm 25°C	0.0_448	5
t_e	1733.5	5
Density		
g/ml 20°C	0.8267≠	2
d_4^t 25	0.8234≠	2
30	0.8201	4
a	0.8399	4
b	-0.0_366	4
Ref. Index		
n_D 20°C	1.4588≠	2
25	1.4568≠	2
30	1.4545	4
"C"	0.7342	4
MR (Obs.)	97.36≠	2
MR (Calc.)	96.978	5
(nD-d/2)	1.0454≠	2
Dielectric		
A | 236 to	7.0248	5
B | 533 °C	2241.9	5
C	168.	5
A* | 236 to	1.71642	5
B* | 434 °C	2130.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.27190	5
B' | 236 °C	2446.1	5
C'	186.	5
A'* 20 to	2.00685	5
B'* 236 °C	2348.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	424.17	5

		Ref.
dt/dP		
°C/mm		
25°C	165462.9	5
BP	0.07460	5
t_e	0.03919	5
30 mm	1.05452	5
ΔHm cal/g		
ΔHv cal/g		
25°C	75.90	5
30 mm	55.32	5
BP	45.52	5
t_e	42.12	5
t_e (d, e)	41.86	5
$\Delta Hv/T_e$	17.79	5
d | 236 to	72.22	5
e | 424 °C	0.0716	5
d' | 20 to	78.33	5
e' | 236 °C	0.0975	5
d_c g/ml	0.228	5
v_c ml/g	4.38	5
t_c °C	533.	5
P_c mm	6700.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9255	5
t_e	0.8934	5
t_c	0.172	5
ΔHc kcal/m	3083.70	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	6.44	2
70	4.22	2
90	2.88	2
110	2.03	2
B^v | 40 to	1018.2	4
A^v | 80 °C	$\bar{3}$.65865	4
(B^v) | 80 to	1056.9	4
(A^v) | 120 °C	$\bar{3}$.54918	4
c_p liq. °K		
c_p vap. 300 °K	0.37430	2
400	0.48346	2
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | 300 to	-0.0133		4
n | 600 °K	0.0014		4
o	-0.0_650		4
m' | 700 to	0.1086		4
n' | 1000 °K	0.0012		4
o' |	-0.0_639		4
Surface tension			
dynes/cm. 20°C	28.76		5
γ 30	27.85		5
40	26.97		5
Parachor [P]			
20°C			
30			
40			
Sugd.	825.1		5
Exp. L. 1.%/wt. u.			
Dispersion	98.≠		2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 25

NAME	n-Hexadecylcyclohexane 1-Cyclohexylhexadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{22}H_{44}$ Molecular Weight 308.572	

		Ref.
F.P. °C	33.6	2
F.P. 100%		
B.P. °C		
760 mm	385.	2
100	288.	5
30	246.	5
10	213.	5
1	158.	5
Pressure		
mm 25°C	0.0_423	5
t_e	1764.7	5
Density		
g/ml 20°C	0.8279≠	2
d_4^t 25	0.8246≠	2
30	0.8213	4
a	0.8411	4
b	-0.0_3366	4
Ref. Index		
n_D 20°C	1.4596≠	2
25	1.4576≠	2
30	1.4557	4
"C"	0.7343	4
MR (Obs.)	102.00≠	2
MR (Calc.)	101.596	5
(nD-d/2)	1.0456≠	2
Dielectric		
A | 246 to	7.02636	5
B | 460 °C	2284.2	5
C	166.	5
A* | 246 to	1.73216	5
B* | 448 °C	2171.6	5
K		
c		
t_k to		
t_x °C		
A' | 20 to	7.26902	5
B' | 246 °C	2488.3	5
C'	184.	5
A'* 20 to	2.02061	5
B'* 246 °C	2390.5	5
Ac | 460 to	8.30856	5
Bc | t_c °C	4171.7	5
Cc	386.	5
Cryos. A°		
consts. B°		
t_e °C	438.33	5

		Ref.
dt/dP		
°C/mm		
25°C	330428.	5
BP	0.07595	4
t_e	0.03935	5
30 mm	1.07382	5
ΔHm cal/g		
ΔHv cal/g		
25°C	75.12	5
30 mm	53.81	5
BP	44.21	5
t_e	40.78	5
t_e (d, e)	40.54	5
$\Delta Hv/T_e$	17.69	5
d | 246 to	70.73	5
e | 438 °C	0.0689	5
d' | 20 to	77.53	5
e' | 246 °C	0.0966	5
d_c g/ml	0.235	5
v_c ml/g	4.25	5
t_c °C	541.	5
P_c mm	6432.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9244	5
t_e	0.8914	5
t_c	0.166	5
ΔHc kcal/m	3230.63	2
ΔHf		
ΔFf		
Viscosity centistokes		
η 50 °C	7.26	2
70	4.69	2
90	3.16	2
110	2.20	2
B^v | 40 to	1052.5	4
A^v | 80 °C	3.60448	4
(B^v) | 80 to	1094.4	4
(A^v) | 120 °C	3.48640	4
c_p liq. °K		
c_p vap. 300°K	0.37508	2
400	0.48384	2
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | 300 to	-0.0107		4
n | 600 °K	0.0014		4
o	-0.0_650		4
m' | 700 to	0.0979		4
n' | 1000 °K	0.0012		4
o'	-0.0_641		4
Surface tension			
dynes/cm. 20°C	28.89		5
30	27.98		5
40	27.09		5
Parachor [P]			
20°C			
30			
40			
Sugd.	864.1		5
Exp. L.l.%/wt. u.			
Dispersion	98.≠		2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.90\,T_c$

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 26

NAME	n-Heptadecylcyclohexane 1-Cyclohexylheptadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{23}H_{46}$ — Molecular Weight 322.598

		Ref.
F.P. °C	37.8	2
F.P. 100%		
B.P. °C		
760 mm	397.	2
100	299.	5
30	255.	5
10	222.	5
1	166.	5
Pressure mm 113°C	0.0425	5
t_e	1770.3	5
Density g/ml 20°C	0.8290≠	2
d_4^t 25	0.8257≠	2
30	0.8224	4
a	0.8422	4
b	-0.0366	4
Ref. Index n_D 20°C	1.4603≠	2
25	1.4583≠	2
30	1.4564	4
"C"	0.7343	4
MR (Obs.)	106.64≠	2
MR (Calc.)	106.214	5
(nD-d/2)	1.0458≠	2
Dielectric		
A 255 to	7.02840	5
B 548 °C	2326.8	5
C	164.	5
A* 255 to	1.76616	5
B* 460 °C	2220.7	5
K		
c		
t_k to		
t_x °C		
A' 113 to	7.63490	5
B' 255 °C	2674.9	5
C'	184.	5
A'* 113 to	2.14124	5
B'* 255 °C	2490.6	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	451.50	5

		Ref.
dt/dP °C/mm		
113°C	336.97	5
BP	0.07729	4
t_e	0.03994	5
30 mm	1.09304	5
ΔHm cal/g		
ΔHv cal/g		
113°C	64.15	5
30 mm	52.44	5
BP	42.55	5
t_e	39.08	5
t_e (d, e)	38.75	5
$\Delta Hv/T_e$	17.40	5
d 255 to	70.23	5
e 450 °C	0.0697	5
d' 113 to	73.18	5
e' 255 °C	0.0825	5
d_c g/ml		
v_c ml/g		
t_c °C	548.	5
P_c mm	5760.	5
PV/RT		
113°C	1.0000	5
30 mm	1.0000	5
BP	0.9135	5
t_e	0.8780	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	29.01	5
30	28.10	5
40	27.20	5
Parachor [P] 20°C		
30		
40		
Sugd.	903.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

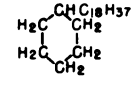
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 27

NAME	n-Octadecylcyclohexane 1-Cyclohexyloctadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{24}H_{48}$
		Molecular Weight 336.624



		Ref.
F.P. °C	41.6	2
F.P. 100%		
B.P. °C		
760 mm	409.	2
100	309.	4
30	265.	5
10	231.	5
1	175.	5
Pressure mm 121°C	0.04398	5
t_e	1802.5	5
Density g/ml 20°C	0.8300≠	2
d_4^t 25	0.8267≠	2
30	0.8234	4
a	0.8432	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4610≠	2
25	1.4590≠	2
30	1.4573	4
"C"	0.7345	4
MR (Obs.)	111.28≠	2
MR (Calc.)	110.832	5
(nD-d/2)	1.0460≠	2
Dielectric		
A, B, C: 270 to 555 °C	7.03010	5
	2365.1	5
	161.	5
A*, B*, K, c: 270 to 475 °C	1.77983	5
	2257.9	5
t_k, t_x: to °C		
A', B', C': 121 to 270 °C	7.62491	5
	2712.5	5
	181.	5
A'* 121 to	2.13806	5
B'* 270 °C	2524.2	5
Ac, Bc, Cc: to t_c °C		
Cryos. A° consts. B°		
t_e °C	465.64	5

		Ref.
dt/dP °C/mm		
121°C	332.06	5
BP	0.07850	4
t_e	0.04000	5
30 mm	1.1103	5
ΔHm cal/g		
ΔHv cal/g		
121°C	62.82	5
30 mm	51.32	5
BP	41.57	5
t_e	38.06	5
t_e (d, e)	37.74	5
$\Delta Hv/T_e$	17.34	5
d: 270 to	69.24	5
e: 465 °C	0.0676	5
d': 121 to	72.48	5
e': 270 °C	0.0799	5
d_c g/ml		
v_c ml/g		
t_c °C	555.	5
P_c mm	5332.	5
PV/RT		
121°C	1.0000	5
30 mm	1.0000	5
BP	0.9132	5
t_e	0.8768	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f, g, h: to °K		
f', g', h': to °K		
m, n, o: to °K		
m', n', o': to °K		
Surface tension dynes/cm. 20°C	29.11	5
γ 30	28.20	5
40	27.31	5
Parachor [P] 20°C		
30		
40		
Sugd.	942.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

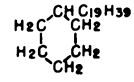
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 28

NAME	n-Nonadecylcyclohexane 1-Cyclohexylnonadecane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{25}H_{50}$
		Molecular Weight 350.650



		Ref.
F.P. °C	45.2	2
F.P. 100%		
B.P. °C		
760 mm	420.	2
100	318.	4
30	272.	5
10	237.	5
1	180.	5
Pressure mm 124°C	0.03907	5
t_e	1881.9	5
Density g/ml 20°C	0.8310≠	2
d_4^t 25	0.8277≠	2
30	0.8244	4
a	0.8442	4
b	-0.0966	4
Ref. Index n_D 20°C	1.4616≠	2
25	1.4596≠	2
30	1.4576	4
"C"	0.7345	4
MR (Obs.)	115.93≠	2
MR (Calc.)	115.450	5
(nD-d/2)	1.0461≠	2
Dielectric		
A 272 to	7.00170	5
B 563 °C	2380.0	5
C	159.	5
A* 272 to	1.72697	5
B* 490 °C	2255.8	5
K		
c		
t_k to		
t_x °C		
A' 124 to	7.59604	5
B' 272 °C	2728.3	5
C'	179.	5
A'* 124 to	2.11638	5
B'* 272 °C	2537.2	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	479.56	5

		Ref.
dt/dP °C/mm		
124°C	374.1	5
BP	0.08029	4
t_e	0.03954	5
30 mm	1.1289	5
ΔHm cal/g		
ΔHv cal/g		
124°C	61.18	5
30 mm	49.70	5
BP	40.22	5
t_e	37.59	5
t_e (d, e)	36.41	5
$\Delta Hv/T_e$	17.51	5
d 272 to	67.10	5
e 480 °C	0.0640	5
d' 124 to	70.80	5
e' 272 °C	0.0776	5
d_c g/ml		
v_c ml/g		
t_c °C	563.	5
P_c mm	4977.	5
PV/RT		
124°C	1.0000	5
30 mm	1.0000	5
BP	0.9098	5
t_e	0.8985	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension dynes/cm. 20°C		29.23	5
γ 30		28.31	5
40		27.41	5
Parachor [P] 20°C			
30			
40			
Sugd.		981.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

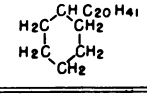
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 29

NAME	n-Eicosylcyclohexane 1-Cyclohexyleicosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{26}H_{52}$ Molecular Weight 364.676	

		Ref.
F.P. °C	48.5	2
F.P. 100%		
B.P. °C		
760 mm	430.	2
100	327.	5
30	281.	5
10	246.	5
1	188.	5
Pressure		
mm 132°C	0.04267	5
t_e	1855.7	5
Density		
g/ml 20°C	0.8318≠	2
d_4^t 25	0.8285≠	2
30	0.8252	4
a	0.8450	4
b	-0.3_66	4
Ref. Index		
n_D 20°C	1.4622≠	2
25	1.4602≠	2
30	1.4582	4
"C"	0.7346	4
MR (Obs.)	120.57≠	2
MR (Calc.)	120.068	5
(nD-d/2)	1.0463≠	2
Dielectric		
A 281 to	7.00312	5
B 568 °C	2419.8	5
C	157.	5
A* 281 to	1.77812	5
B* 500 °C	2311.0	5
K		
c		
t_k to		
t_x °C		
A' 132 to	7.58257	5
B' 281 °C	2766.3	5
C'	177.	5
A'* 132 to	2.12278	5
B'* 281 °C	2575.0	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	490.94	5

		Ref.
dt/dP		
°C/mm		
132°C	351.3	5
BP	0.08137	4
t_e	0.04060	5
30 mm	1.1471	5
ΔHm cal/g		
ΔHv cal/g		
132°C	59.69	5
30 mm	48.61	5
BP	39.21	5
t_e	35.67	5
t_e (d,e)	35.37	5
$\Delta Hv/T_e$	17.02	5
d 281 to	66.33	5
e 490 °C	0.0631	5
d' 132 to	69.51	5
e' 281 °C	0.0744	5
d_c g/ml		
v_c ml/g		
t_c °C	568.	5
P_c mm	4629.	5
PV/RT		
132°C	1.0000	5
30 mm	1.0000	5
BP	0.9111	5
t_e	0.8728	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	29.31	5
30	28.39	5
40	27.49	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1020.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 30

NAME	n-Heneicosylcyclohexane 1-Cyclohexylheneicosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{27}H_{54}$ — Molecular Weight 378.702

		Ref.
F.P. °C	51.5	2
F.P. 100%		
B.P. °C		
760 mm	440.	2
100	335.	5
30	289.	5
10	254.	5
1	195.	5
Pressure		
mm 138°C	0.04265	5
t_e	1880.9	5
Density		
g/ml 20°C	0.8326≠	2
d_4^t 25	0.8294≠	2
30	0.8262	4
a	0.8454	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4627≠	2
25	1.4607≠	2
30	1.4588	4
"C"	0.7346	4
MR (Obs.)	125.21≠	2
MR (Calc.)	124.686	5
(nD-d/2)	1.0464≠	2
Dielectric		
A 289 to	7.00501	5
B 576 °C	2453.9	5
C	155.	5
A* 289 to	1.79203	5
B* 513 °C	2344.5	5
K		
c		
t_x to		
t_x °C		
A' 138 to	7.57669	5
B' 289 °C	2800.3	5
C'	175.	5
A'* 138 to	2.13093	5
B'* 289 °C	2607.8	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	502.77	5

		Ref.
dt/dP		
°C/mm		
138°C	356.2	5
BP	0.08244	4
t_e	0.04071	5
30 mm	1.1625	5
ΔHm cal/g		
ΔHv cal/g		
138°C	58.40	5
30 mm	47.54	5
BP	38.29	5
t_e	34.75	5
t_e (d, e)	34.45	5
$\Delta Hv/T_e$	16.96	5
d 289 to	65.23	5
e 503 °C	0.0612	5
d' 138 to	68.32	5
e' 289 °C	0.0719	5
d_c g/ml		
v_c ml/g		
t_c °C	576.	5
P_c mm	4447.	5
PV/RT		
138°C	1.0000	5
30 mm	1.0000	5
BP	0.9103	5
t_e	0.8712	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		29.40	5
≠ 30		28.50	5
40		27.63	5
Parachor [P]			
20°C			
30			
40			
Sugd.		1059.1	5
Exp. L.1.%/wt. u.			
Dispersion		98.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 31

NAME	n-Docosylcyclohexane 1-Cyclohexyldocosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{28}H_{56}$	Molecular Weight 392.728

		Ref.
F. P. °C	54.4	2
F. P. 100%		
B. P. °C		
760 mm	449.	2
100	343.	5
30	296.	5
10	260.	5
1	200.	5
Pressure mm 143°C	0.04268	5
t_e	1905.4	5
Density g/ml 20°C	0.8334≠	2
d_4^t 25	0.8301≠	2
30	0.8268	4
a	0.8466	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4632≠	2
25	1.4612≠	2
30	1.4592	4
"C"	0.7347	4
MR (Obs.)	129.85≠	2
MR (Calc.)	129.304	5
(nD-d/2)	1.0465≠	2
Dielectric		
A | 296 to	7.00634	5
B | 578 °C	2487.7	5
C	154.	5
A* | 296 to	1.80375	5
B* | 524 °C	2376.8	5
K		
c		
t_k to		
t_x °C		
A' | 143 to	7.57039	5
B' | 296 °C	2834.0	5
C'	174.	5
A'* 143 to	2.13816	5
B'* 296 °C	2640.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	513.60	5

		Ref.
dt/dP °C/mm		
143°C	360.8	5
BP	0.08352	4
t_e	0.04083	5
30 mm	1.1780	5
ΔHm cal/g		
ΔHv cal/g		
143°C	56.92	5
30 mm	46.38	5
BP	37.34	5
t_e	33.79	5
t_e (d, e)	33.53	5
$\Delta Hv/T_e$	16.87	5
d | 296 to	63.84	5
e | 514 °C	0.0590	5
d' | 143 to	66.77	5
e' | 296 °C	0.0689	5
d_c g/ml		
v_c ml/g		
t_c °C	578.	5
P_c mm	4054.	5
PV/RT		
143°C	1.0000	5
30 mm	1.0000	5
BP	0.9102	5
t_e	0.8704	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.49	5
30	28.56	5
40	27.66	5
Parachor [P] 20°C		
30		
40		
Sugd.	1098.1	5
Exp. L. l. %/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 32

NAME	n-Tricosylcyclohexane 1-Cyclohexyltricosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{29}H_{58}$ — Molecular Weight 406.754

		Ref.
F.P. °C	57.0	2
F.P. 100%		
B.P. °C		
760 mm	459.	2
100	352.	5
30	304.	5
10	268.	5
1	207.	5
Pressure mm 149°C	0.04260	5
t_e	1928.9	5
Density g/ml 20°C	0.8341≠	2
d_4^t 25	0.8308≠	2
30	0.8275	4
a	0.8473	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4637≠	2
25	1.4617≠	2
30	1.4598	4
"C"	0.7350	4
MR (Obs.)	134.49≠	2
MR (Calc.)	133.922	4
(nD-d/2)	1.0466≠	2
Dielectric		
A | 304 to	7.00879	5
B | 584 °C	2522.2	5
C	152.	5
A* | 304 to	1.81836	5
B* | 535 °C	2411.1	5
K		
c		
t_k | to		
t_x | °C		
A' | 149 to	7.56556	5
B' | 304 °C	2868.5	5
C'	172.	5
A'* 149 to	2.14637	5
B'* 304 °C	2673.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	525.38	5

		Ref.
dt/dP °C/mm		
149°C	366.2	5
BP	0.08458	4
t_e	0.04096	5
30 mm	1.1932	5
ΔHm cal/g		
ΔHv cal/g		
149°C	55.82	5
30 mm	45.46	5
BP	36.52	5
t_e	32.95	5
t_e (d, e)	32.69	5
$\Delta Hv/T_e$	16.78	5
d | 304 to	62.99	5
e | 525 °C	0.0577	5
d' | 149 to	65.78	5
e' | 304 °C	0.0668	5
d_c g/ml		
v_c ml/g		
t_c °C	584.	5
P_c mm	3819.	5
PV/RT		
149°C	1.0000	5
30 mm	1.0000	5
BP	0.9087	5
t_e	0.8681	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.56	5
30	28.64	5
40	27.73	5
Parachor [P] 20°C		
30		
40		
Sugd.	1137.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

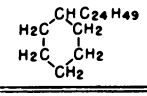
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 33

NAME	n-Tetracosylcyclohexane 1-Cyclohexyltetracosane	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula $C_{30}H_{60}$ Molecular Weight 420.780	

		Ref.
F.P. °C	59.5	2
F.P. 100%		
B.P. °C 760 mm	467.	2
100	359.	5
30	310.	5
10	274.	5
1	213.	5
Pressure mm 153°C	0.03994	5
t_e	1947.6	5
Density g/ml 20°C	0.8347≠	2
d_4^t 25	0.8315≠	2
30	0.8283	4
a	0.8475	4
b	-0.0_364	4
Ref. Index n_D 20°C	1.4641≠	2
25	1.4621≠	2
30	1.4602	4
"C"	0.7349	4
MR (Obs.)	139.13≠	2
MR (Calc.)	138.540	4
(nD-d/2)	1.0467≠	2
Dielectric		
A | 310 to	7.0103	5
B | 590 °C	2547.9	5
C	150.	5
A* | 310 to	1.83227	5
B* | 540 °C	2436.9	5
K		
c		
t_k to		
t_x °C		
A' | 153 to	7.56534	5
B' | 310 °C	2895.4	5
C'	170.	5
A'* 153 to	2.17549	5
B'* 310 °C	2705.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	534.77	5

		Ref.
dt/dP °C/mm 153°C	391.8	5
BP	0.08538	4
t_e	0.04104	5
30 mm	1.2047	5
ΔHm cal/g		
ΔHv cal/g 153°C	54.82	5
30 mm	44.52	5
BP	35.69	5
t_e	32.13	5
t_e (d, e)	31.87	5
$\Delta Hv/T_e$	16.73	5
d | 310 to	62.02	5
e | 535 °C	0.0564	5
d' | 153 to	64.86	5
e' | 310 °C	0.0656	5
d_c g/ml		
v_c ml/g		
t_c °C	590.	5
P_c mm	3692.	5
PV/RT 153°C	1.0000	5
30 mm	1.0000	5
BP	0.9077	5
t_e	0.8664	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.63	5
γ 30	28.73	5
40	27.85	5
Parachor [P] 20°C		
30		
40		
Sugd.	1176.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 34

NAME	n-Pentacosylcyclohexane 1-Cyclohexylpentacosane	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{31}H_{62}$	Molecular Weight 434.806

		Ref.
F.P. °C	61.9	2
F.P. 100%		
B.P. °C		
760 mm	476.	2
100	366.	5
30	317.	5
10	280.	5
1	218.	5
Pressure mm 158°C	0.03996	5
t_e	1971.0	5
Density g/ml 20°C	0.8353≠	2
d_4^t 25	0.8321≠	2
30	0.8289	4
a	0.8481	4
b	-0.0_364	4
Ref. Index n_D 20°C	1.4645≠	2
25	1.4626≠	2
30	1.4607	4
"C"	0.7349	4
MR (Obs.)	143.77≠	2
MR (Calc.)	143.158	4
(nD-d/2)	1.0468≠	2
Dielectric		
A 317 to	7.01201	5
B 594 °C	2582.0	5
C	149.	5
A* 317 to	1.84364	5
B* 556 °C	2469.9	5
K		
c		
t_k to		
t_x °C		
A' 158 to	7.55992	5
B' 317 °C	2929.4	5
C'	169.	5
A'* 158 to	2.18184	5
B'* 317 °C	2737.5	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	545.59	5

		Ref.
dt/dP °C/mm		
158°C	396.8	5
BP	0.08645	4
t_e	0.04117	5
30 mm	1.2201	5
ΔHm cal/g		
ΔHv cal/g		
158°C	53.60	5
30 mm	43.57	5
BP	34.91	5
t_e	31.35	5
t_e (d, e)	31.11	5
$\Delta Hv/T_e$	16.65	5
d 317 to	60.90	5
e 546 °C	0.0546	5
d' 158 to	63.57	5
e' 317 °C	0.0631	5
d_c g/ml		
v_c ml/g		
t_c °C	594.	5
P_c mm	3443.	5
PV/RT		
158°C	1.0000	5
30 mm	1.0000	5
BP	0.9071	5
t_e	0.8652	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	29.69	5
30	28.79	5
40	27.91	5
Parachor [P] 20°C		
30		
40		
Sugd.	1215.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

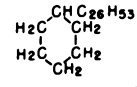
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 35

NAME	n-Hexacosylcyclohexane 1-Cyclohexylhexacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{32}H_{64}$ — Molecular Weight 448.832



		Ref.
F. P. °C	64.0	2
F. P. 100%		
B. P. °C 760 mm	484.	2
100	373.	5
30	324.	5
10	287.	5
1	224.	5
Pressure mm 164°C	0.04252	5
t_e	1990.9	5
Density g/ml 20°C	0.8359≠	2
d_4^t 25	0.8326≠	2
30	0.8293	4
a	0.8491	4
b	-0.0_3366	4
Ref. Index n_D 20°C	1.4649≠	2
25	1.4629≠	2
30	1.4609	4
"C"	0.7350	4
MR (Obs.)	148.41≠	2
MR (Calc.)	147.776	4
(nD-d/2)	1.0469≠	2
Dielectric		
A 324 to	7.01345	5
B 595 °C	2607.7	5
C	147.	5
A* 324 to	1.85585	5
B* 565 °C	2495.3	5
K		
c		
t_k to		
t_x °C		
A' 164 to	7.55267	5
B' 324 °C	2953.9	5
C'	167.	5
A'* 164 to	2.17073	5
B'* 324 °C	2755.8	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	555.05	5

		Ref.
dt/dP °C/mm 164°C	378.9	5
BP	0.08725	4
t_e	0.04123	5
30 mm	1.2316	5
ΔHm cal/g		
ΔHv cal/g 164°C	52.54	5
30 mm	42.74	5
BP	34.18	5
t_e	30.58	5
t_e (d, e)	30.38	5
$\Delta Hv/T_e$	16.57	5
d 324 to	60.07	5
e 555 °C	0.0535	5
d' 164 to	62.59	5
e' 324 °C	0.0613	5
d_c g/ml		
v_c ml/g		
t_c °C	595.	5
P_c mm	3155.	5
PV/RT 164°C	1.0000	5
30 mm	1.0000	5
BP	0.9065	5
t_e	0.8640	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	29.76	5
γ 30	28.83	5
40	27.92	5
Parachor [P] 20°C		
30		
40		
Sugd.	1254.1	5
Exp. L.l.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

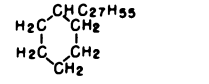
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 36

NAME	n-Heptacosylcyclohexane 1-Cyclohexylheptacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{33}H_{66}$ — Molecular Weight 462.858



		Ref.
F.P. °C	66.1	2
F.P. 100%		
B.P. °C		
760 mm	492.	2
100	380.	5
30	330.	5
10	292.	5
1	229.	5
Pressure mm 168°C	0.04119	5
t_e	2011.8	5
Density g/ml 20°C	0.8365≠	2
d_4^t 25	0.8332≠	2
30	0.8299	4
a	0.8497	4
b	-0.0_3366	4
Ref. Index n_D 20°C	1.4653≠	2
25	1.4633≠	2
30	1.4613	4
"C"	0.1350	4
MR (Obs.)	153.05≠	2
MR (Calc.)	152.394	4
(nD-d/2)	1.0470≠	2
Dielectric		
A | 330 to	7.01513	5
B | 599 °C	2637.7	5
C	146.	5
A* | 330 to	1.86691	5
B* | 575 °C	2524.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 168 to	7.55018	5
B' | 330 °C	2984.4	5
C'	166.	5
A'* 168 to	2.18799	5
B'* 330 °C	2788.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	564.67	5

		Ref.
dt/dP °C/mm		
168°C	394.1	5
BP	0.08818	4
t_e	0.04133	5
30 mm	1.2450	5
ΔHm cal/g		
ΔHv cal/g		
168°C	51.48	5
30 mm	41.86	5
BP	33.46	5
t_e	29.86	5
t_e (d, e)	29.68	5
$\Delta Hv/T_e$	16.50	5
d | 330 to	59.02	5
e | 565 °C	0.0520	5
d' | 168 to	61.46	5
e' | 330 °C	0.0594	5
d_c g/ml		
v_c ml/g		
t_c °C	599.	5
P_c mm	2983.	5
PV/RT		
168°C	1.0000	5
30 mm	1.0000	5
BP	0.9061	5
t_e	0.8630	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.83	5
γ 30	28.90	5
40	27.99	5
Parachor [P] 20°C		
30		
40		
Sugd.	1293.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

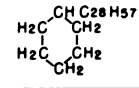
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 37

NAME	n-Octacosylcyclohexane 1-Cyclohexyloctacosane	STRUCTURAL FORMULA
Mole% Pur.	Ref.	Molecular Formula $C_{34}H_{68}$
		Molecular Weight 476.884



		Ref.			Ref.			Ref.
F.P. °C	68.0	2	dt/dP °C/mm			f | to		
F.P. 100%			173°C	386.4	5	g | °K		
B.P. °C			BP	0.08885	4	h		
760 mm	499.	2	t_e	0.04141	5	f' | to		
100	386.	5	30 mm	1.2546	5	g' | °K		
30	336.	5	ΔHm cal/g			h'		
10	298.	5	ΔHv cal/g			m | to		
1	234.	5	173°C	50.55	5	n | °K		
Pressure mm 173°C	0.04247	5	30 mm	41.09	5	o		
t_e	2026.9	5	BP	32.76	5	m' | to		
Density g/ml 20°C	0.8370≠	2	t_e	29.16	5	n' | °K		
d_4^t 25	0.8337≠	2	t_e (d, e)	28.98	5	o'		
30	0.8304	4	ΔHv/T_e	16.43	5	Surface tension dynes/cm. 20°C	29.88	5
a	0.8502	4	d | 336 to	58.28	5	γ 30	28.95	5
b	-0.0_3366	4	e | 573 °C	0.0511	5	40	28.04	5
Ref. Index n_D 20°C	1.4656≠	2	d' | 173 to	60.59	5	Parachor [P] 20°C		
25	1.4636≠	2	e' | 336 °C	0.0580	5	30		
30	1.4616	4	d_c g/ml			40		
"C"	0.7350	4	v_c ml/g			Sugd.	1332.1	5
MR (Obs.)	157.69≠	2	t_c °C	601.	5	Exp. L.1.%/wt. u.		
MR (Calc.)	157.012	4	P_c mm	2799.	5	Dispersion	98.≠	2
(nD-d/2)	1.0471≠	2	PV/RT 173°C	1.0000	5	Flash Point °C		
Dielectric			30 mm	1.0000	5	Fire Point		
A | 336 to	7.01611	5	BP	0.9048	5	M. Spec.		
B | 601 °C	2659.0	5	t_e	0.8611	5	Ultra V.		
C	144.	5	t_c			X-Ray Dif.		
A* | 336 to	1.87979	5	ΔHc kcal/m			Infrared		
B* | 583 °C	2546.2	5	ΔHf			Solubility in +		
K			ΔFf			Acetone		
c			Viscosity centistokes			Carbon tet.		
t_k | to			η °C			Benzene		
t_x | °C						Ether		
A' | 173 to	7.54532	5	B^v | to			n-Heptane		
B' | 336 °C	3005.1	5	A^v | °C			Ethanol		
C'	164.	5	(B^v) | to			Water		
A'* 173 to	2.18668	5	(A^v) | °C			Water in		
B'* 336 °C	2805.4	5	c_p liq. °K					
Ac | to			c_p vap. °K					
Bc | t_c °C			c_v vap.					
Cc								
Cryos. A°								
consts. B°								
t_e °C	572.85	5						

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 38

NAME	n-Nonacosylcyclohexane 1-Cyclohexylnonacosane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{35}H_{70}$ — Molecular Weight 490.910

		Ref.
F.P. °C	69.9	2
F.P. 100%		
B.P. °C 760 mm	507.	2
100	393.	5
30	342.	5
10	304.	5
1	239.	5
Pressure mm 177°C	0.04116	5
t_e	2046.7	5
Density g/ml 20°C	0.8374≠	2
d_4^t 25	0.8342≠	2
30	0.8310	4
a	0.8502	4
b	-0.0_364	4
Ref. Index n_D 20°C	1.4659≠	2
25	1.4640≠	2
30	1.4620	4
"C"	0.7350	4
MR (Obs.)	162.33≠	2
MR (Calc.)	161.630	4
(nD-d/2)	1.0472≠	2
Dielectric		
A | 342 to	7.01788	5
B | 608 °C	2689.1	5
C	143.	5
A* | 342 to	1.89083	5
B* | 592 °C	2575.6	5
K		
c		
t_k | to		
t_x | °C		
A' | 177 to	7.54310	5
B' | 342 °C	3035.7	5
C'	163.	5
A'* 177 to	2.20299	5
B'* 342 °C	2837.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	582.45	5

		Ref.
dt/dP °C/mm		
177°C	401.8	5
BP	0.08978	4
t_e	0.04153	5
30 mm	1.2680	5
ΔHm cal/g		
ΔHv cal/g		
177°C	49.61	5
30 mm	40.32	5
BP	32.12	5
t_e	28.54	5
t_e (d, e)	28.36	5
$\Delta Hv/T_e$	16.37	5
d | 342 to	57.36	5
e | 592 °C	0.0498	5
d' | 177 to	59.58	5
e' | 342 °C	0.0563	5
d_c g/ml		
v_c ml/g		
t_c °C	608.	5
P_c mm	2737.	5
PV/RT		
177°C	1.0000	5
30 mm	1.0000	5
BP	0.9041	5
t_e	0.8597	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.92	5
30	29.02	5
40	28.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	1371.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 39

NAME	n-Triacontylcyclohexane 1-Cyclohexyltriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{36}H_{72}$	Molecular Weight 504.936

		Ref.
F.P. °C	71.6	2
F.P. 100%		
B.P. °C 760 mm	514.	2
100	399.	5
30	348.	5
10	309.	5
1	244.	5
Pressure mm 182°C	0.04237	5
t_e	2063.6	5
Density g/ml 20°C	0.8379≠	2
d_4^t 25	0.8346≠	2
30	0.8313	4
a	0.8511	4
b	-0.0_366	4
Ref. Index n_D 20°C	1.4662≠	2
25	1.4643≠	2
30	1.4622	4
"C"	0.7350	4
MR (Obs.)	166.97≠	2
MR (Calc.)	166.248	4
(nD-d/2)	1.0473≠	2
Dielectric		
A | 348 to	7.01928	5
B | 617 °C	2710.7	5
C	141.	5
A* | 348 to	1.90227	5
B* | 600 °C	2597.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 182 to	7.53892	5
B' | 348 °C	3056.8	5
C'	161.	5
A'* 182 to	2.20219	5
B'* 348 °C	2855.5	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	590.70	5

		Ref.
dt/dP °C/mm		
182°C	394.5	5
BP	0.09044	4
t_e	0.04157	5
30 mm	1.2776	5
ΔHm cal/g		
ΔHv cal/g		
182°C	48.79	5
30 mm	39.64	5
BP	31.51	5
t_e	27.89	5
t_e (d, e)	27.75	5
$\Delta Hv/T_e$	16.30	5
d | 348 to	56.69	5
e | 591 °C	0.0490	5
d' | 182 to	58.82	5
e' | 348 °C	0.0551	5
d_c g/ml		
v_c ml/g		
t_c °C	617.	5
P_c mm	2774.	5
PV/RT		
182°C	1.0000	5
30 mm	1.0000	5
BP	0.9034	5
t_e	0.8586	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	29.98	5
30	29.05	5
40	28.13	5
Parachor [P] 20°C		
30		
40		
Sugd.	1410.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in †		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

† grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 40

NAME	n-Hentriacontylcyclohexane 1-Cyclohexylhentriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{37}H_{74}$ — Molecular Weight 518.962

		Ref.
F.P. °C	73.3	2
F.P. 100%		
B.P. °C		
760 mm	520.	2
100	404.	5
30	353.	5
10	314.	5
1	248.	5
Pressure		
mm 186°C	0.04363	5
t_e	2078.8	5
Density		
g/ml 20°C	0.8383≠	2
d_4^{25}	0.8351≠	2
30	0.8319	4
a	0.8511	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4665≠	2
25	1.4645≠	2
30	1.426	4
"C"	0.7351	4
MR (Obs.)	171.61≠	2
MR (Calc.)	170.866	4
(nD-d/2)	1.0473≠	2
Dielectric		
A | 353 to	7.02020	5
B | 622 °C	2732.0	5
C	140.	5
A* | 353 to	1.91253	5
B* | 608 °C	2618.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 186 to	7.53433	5
B' | 353 °C	3077.5	5
C'	160.	5
A'* 186 to	2.20037	5
B'* 353 °C	2872.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	597.90	5

		Ref.
dt/dP		
°C/mm		
186°C	387.2	5
BP	0.09111	4
t_e	0.04164	5
30 mm	1.2872	5
ΔHm cal/g		
ΔHv cal/g		
186°C	47.79	5
30 mm	38.87	5
BP	30.88	5
t_e	27.30	5
t_e (d, e)	27.16	5
ΔHv/T_e	16.26	5
d | 353 to	55.73	5
e | 598 °C	0.4779	5
d' | 186 to	57.72	5
e' | 353 °C	0.0534	5
d_c g/ml		
v_c ml/g		
t_c °C	622.	5
P_c mm	2722.	5
PV/RT		
186°C	1.0000	5
30 mm	1.0000	5
BP	0.9030	5
t_e	0.8577	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| to __ °K		
f' g' h'	| to __ °K		
m n o	| to __ °K		
m' n' o'	| to __ °K		
Surface tension			
dynes/cm. 20°C		30.02	5
γ 30		29.12	5
40		28.23	5
Parachor [P]			
20°C			
30			
40			
Sugd.	1449.1		5
Exp. L.1.%/wt. u.			
Dispersion		98.≠	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

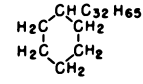
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 41

NAME	n-Dotriacontylcyclohexane 1-Cyclohexyldotriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{38}H_{76}$
		Molecular Weight 532.988



		Ref.
F.P. °C	74.8	2
F.P. 100%		
B.P. °C		
760 mm	527.	2
100	410.	5
30	358.	5
10	319.	5
1	253.	5
Pressure		
mm 189°C	0.04110	5
t_e	2097.2	5
Density		
g/ml 20°C	0.8388≠	2
d_4^t 25	0.8355≠	2
30	0.8322	4
a	0.8520	4
b	-0.0_3366	4
Ref. Index		
n_D 20°C	1.4668≠	2
25	1.4648≠	2
30	1.4628	4
"C"	0.7351	4
MR (Obs.)	176.25≠	2
MR (Calc.)	175.484	4
(nD-d/2)	1.0474≠	2
Dielectric		
A 358 to	7.02150	5
B 621 °C	2757.7	5
C	139.	5
A* 358 to	1.92198	5
B* 616 °C	2642.9	5
K		
c		
t_k to		
t_x °C		
A' 189 to	7.53416	5
B' 358 °C	3104.3	5
C'	159.	5
A'* 189 to	2.22516	5
B'* 358 °C	2903.8	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	606.35	5

		Ref.
dt/dP		
°C/mm		
189°C	412.2	5
BP	0.09191	4
t_e	0.04172	5
30 mm	1.2987	5
ΔHm cal/g		
ΔHv cal/g		
189°C	47.01	5
30 mm	38.17	5
BP	30.30	5
t_e	26.68	5
t_e (d, e)	26.59	5
$\Delta Hv/T_e$	16.17	5
d 358 to	54.91	5
e 606 °C	0.0467	5
d' 189 to	56.90	5
e' 358 °C	0.0523	5
d_c g/ml		
v_c ml/g		
t_c °C	621.	5
P_c mm	2471.	5
PV/RT		
189°C	1.0000	5
30 mm	1.0000	5
BP	0.9027	5
t_e	0.8570	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	30.08	5
30	29.15	5
40	28.23	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1488.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 42

NAME	n-Tritriacontylcyclohexane 1-Cyclohexyltritriacontane	STRUCTURAL FORMULA

Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{78}$	Molecular Weight 547.014

		Ref.
F.P. °C	76.3	2
F.P. 100%		
B.P. °C		
760 mm	533.	2
100	415.	5
30	363.	5
10	323.	5
1	257.	5
Pressure		
mm 193°C	0.04228	5
t_e	2107.9	5
Density		
g/ml 20°C	0.8391≠	2
d_4^t 25	0.8359≠	2
30	0.8327	4
a	0.8519	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4670≠	2
25	1.4651≠	2
30	1.4631	4
"C"	0.7352	4
MR (Obs.)	180.89≠	2
MR (Calc.)	180.102	4
(nD-d/2)	1.0475≠	2
Dielectric		
A 363 to	7.02283	5
B 626 °C	2779.3	5
C	138.	5
A* 363 to	1.93473	5
B* 623 °C	2665.3	5
K		
c		
t_k to		
t_x °C		
A' 193 to	7.53018	5
B' 363 °C	3125.3	5
C'	158.	5
A'* 193 to	2.22396	5
B'* 363 °C	2921.5	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A* consts. B*		
t_e °C	613.37	5

		Ref.
dt/dP		
°C/mm		
193°C	404.9	5
BP	0.09257	4
t_e	0.04185	5
30 mm	1.3082	5
ΔHm cal/g		
ΔHv cal/g		
193°C	46.12	5
30 mm	37.48	5
BP	29.69	5
t_e	26.11	5
t_e (d, e)	26.00	5
$\Delta Hv/T_e$	16.11	5
d 363 to	54.15	5
e 613 °C	0.0459	5
d' 193 to	55.93	5
e' 363 °C	0.0508	5
d_c g/ml		
v_c ml/g		
t_c °C	626.	5
P_c mm	2427.	5
PV/RT		
193°C	1.0000	5
30 mm	1.0000	5
BP	0.9009	5
t_e	0.8546	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	30.11	5
γ 30	29.20	5
40	28.32	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1527.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

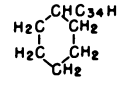
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 43

NAME	n-Tetratriacontylcyclohexane 1-Cyclohexyltetratriacontane	STRUCTURAL FORMULA



Mole % Pur.	Ref.	Molecular Formula $C_{40}H_{80}$	Molecular Weight 561.040

		Ref.
F.P. °C	77.7	2
F.P. 100%		
B.P. °C		
760 mm	540.	2
100	421.	5
30	369.	5
10	329.	5
1	262.	5
Pressure		
mm 198°C	0.04347	5
t_e	2124.9	5
Density		
g/ml 20°C	0.8395≠	2
d_4^t 25	0.8363≠	2
30	0.8331	4
a	0.8523	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4673≠	2
25	1.4653≠	2
30	1.4634	4
"C"	0.7354	4
MR (Obs.)	185.53≠	2
MR (Calc.)	184.720	4
(nD-d/2)	1.0475≠	2
Dielectric		
A | 369 to	7.02415	5
B | 628 °C	2800.9	5
C	136.	5
A* | 369 to	1.94482	5
B* | 632 °C	2686.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 198 to	7.52630	5
B' | 369 °C	3146.4	5
C'	156.	5
A'* 198 to	2.22222	5
B'* 369 °C	2939.3	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	621.65	5

		Ref.
dt/dP		
°C/mm		
198°C	397.9	5
BP	0.09323	4
t_e	0.04189	5
30 mm	1.3178	5
ΔHm cal/g		
ΔHv cal/g		
198°C	45.46	5
30 mm	36.94	5
BP	29.21	5
t_e	25.61	5
t_e (d, e)	25.52	5
$\Delta Hv/T_e$	16.06	5
d | 369 to	53.62	5
e | 622 °C	0.0452	5
d' | 198 to	55.32	5
e' | 369 °C	0.0498	5
d_c g/ml		
v_c ml/g		
t_c °C	628.	5
P_c mm	2281.	5
PV/RT		
198°C	1.0000	5
30 mm	1.0000	5
BP	0.9002	5
t_e	0.8535	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.16	5
30	29.25	5
40	28.36	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1566.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 44

NAME	n-Pentatriacontylcyclohexane 1-Cyclohexylpentatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{41}H_{82}$ — Molecular Weight 575.066

		Ref.
F.P. °C	79.1	2
F.P. 100%		
B.P. °C		
760 mm	546.	2
100	427.	5
30	374.	5
10	333.	5
1	266.	5
Pressure		
mm 202°C	0.04468	5
t_e	2144.2	5
Density		
g/ml 20°C	0.8399≠	2
d_4^t 25	0.8366≠	2
30	0.8333	4
a	0.8531	4
b	-0.0_3366	4
Ref. Index		
n_D 20°C	1.4675≠	2
25	1.4656≠	2
30	1.4637	4
"C"	0.7353	4
MR (Obs.)	190.17≠	2
MR (Calc.)	189.338	4
(nD-d/2)	1.0476≠	2
Dielectric		
A | 374 to	7.02545	5
B | 627 °C	2822.5	5
C	135.	5
A* | 374 to	1.95188	5
B* | 639 °C	2706.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 202 to	7.52250	5
B' | 374 °C	3167.5	5
C'	155.	5
A'* 202 to	2.22064	5
B'* 374 °C	2956.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	629.04	5

		Ref.
dt/dP		
°C/mm		
202°C	391.1	5
BP	0.09389	4
t_e	0.04189	5
30 mm	1.3273	5
ΔHm cal/g		
ΔHv cal/g		
202°C	44.65	5
30 mm	36.32	5
BP	28.72	5
t_e	25.09	5
t_e (d, e)	25.06	5
$\Delta Hv/T_e$	15.99	5
d | 374 to	52.80	5
e | 629 °C	0.0441	5
d' | 202 to	54.43	5
e' | 374 °C	0.0484	5
d_c g/ml		
v_c ml/g		
t_c °C	627.	5
P_c mm	2096.	5
PV/RT		
202°C	1.0000	5
30 mm	1.0000	5
BP	0.9011	5
t_e	0.8542	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	30.20	5
γ 30	29.26	5
40	28.35	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1605.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

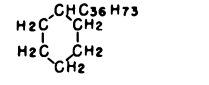
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XIX. CYCLOHEXANES

No. 45

NAME	n-Hexatriacontylcyclohexane 1-Cyclohexylhexatriacontane	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_{42}H_{84}$
		Molecular Weight 589.092



		Ref.
F.P. °C	80.4	2
F.P. 100%		
B.P. °C		
760 mm	551.	2
100	431.	5
30	378.	5
10	337.	5
1	269.	5
Pressure		
mm 205°C	0.04463	5
t_e	2154.0	5
Density		
g/ml 20°C	0.8402≠	2
d_4^t 25	0.8370≠	2
30	0.8338	4
a	0.8530	4
b	-0.0_364	4
Ref. Index		
n_D 20°C	1.4678≠	2
25	1.4658≠	2
30	1.4644	4
"C"	0.7356	4
MR (Obs.)	194.81≠	2
MR (Calc.)	193.956	4
(nD-d/2)	1.0476≠	2
Dielectric		
A | 378 to	7.02635	5
B | 631 °C	2839.7	5
C	134.	5
A* | 378 to	1.96288	5
B* | 645 °C	2724.5	5
K		
c		
t_k to		
t_x °C		
A' | 205 to	7.52055	5
B' | 378 °C	3184.7	5
C'	154.	5
A'* 205 to	2.22836	5
B'* 378 °C	2973.6	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	634.92	5

		Ref.
dt/dP		
°C/mm		
205°C	393.8	5
BP	0.09442	4
t_e	0.04198	5
30 mm	1.3350	5
ΔHm cal/g		
ΔHv cal/g		
205°C	43.89	5
30 mm	35.69	5
BP	28.18	5
t_e	24.59	5
t_e (d, e)	24.54	5
$\Delta Hv/T_e$	15.95	5
d | 378 to	52.06	5
e | 635 °C	0.0433	5
d' | 205 to	53.61	5
e' | 378 °C	0.0474	5
d_c g/ml		
v_c ml/g		
t_c °C	631.	5
P_c mm	2062.	5
PV/RT		
205°C	1.0000	5
30 mm	1.0000	5
BP	0.8999	5
t_e	0.8525	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.24	5
γ 30	29.32	5
40	28.43	5
Parachor [P]		
20°C		
30		
40		
Sugd.	1644.1	5
Exp. L.1.%/wt. u.		
Dispersion	98.≠	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

≠ for undercooled liquid

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 46

NAME	γ-Hexachlorocyclohexane γ-Hexane	STRUCTURAL FORMULA
Mole % Pur. 99.84	Ref. 1	Molecular Formula $C_6H_6Cl_6$ — Molecular Weight 290.850

		Ref.
F.P. °C	112.50	1
F.P. 100%		
B.P. °C		
760 mm	323.4	4
100	240.5	4
30	204.0	4
10	176.2	5
1	130.	5
Pressure mm 113°C	0.3601	5
t_e	1561.0	5
Density g/ml 20°C		
d_4^t 25 30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	56.908	5
MR (Calc.) (nD-d/2)		
Dielectric		
A | 205 to	6.92309	4
B | 450 °C	1873.3	4
C	140.	5
A* | 205 to	1.69095	5
B* | 380 °C	1797.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 113 to	7.23920	5
B' | 205 °C	2097.4	5
C'	160.	5
A'* 113 to	1.54557	5
B'* 205 °C	1997.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A° consts. B°		
t_e °C	362.26	5

		Ref.
dt/dP °C/mm		
113°C	42.855	5
BP	0.06551	4
t_e	0.03746	5
30 mm	0.9143	4
ΔHm cal/g	66.60	4
ΔHv cal/g		
113°C	66.0	5
30 mm	56.71	5
BP	44.75	5
t_e	41.65	5
t_e (d, e)	40.85	5
$\Delta Hv/T_e$	19.06	5
d | 205 to	77.14	5
e | 350 °C	0.1002	5
d' | 113 to	77.54	5
e' | 205 °C	0.1021	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
113°C	1.0000	5
30 mm	1.0000	5
BP	0.9100	5
t_e	0.8829	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm. 20°C			
γ 30			
40			
Parachor [P] 20°C			
30			
40			
Sugd.	463.3		5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation, crystallization

LITERATURE REFERENCES:

No. 47

NAME	Bromocyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 1	Molecular Formula $C_6H_{11}Br$	Molecular Weight 163.064

		Ref.
F.P. °C	-56.51	1
F.P. 100%		
B.P. °C		
760 mm	166.17	1
100	98.33	4
30	68.33	4
10	45.51	5
1	7.3	5
Pressure		
mm 25°C	3.161	5
t_e	1198.0	5
Density		
g/ml 20°C	1.33585	1
d_4^t 25	1.32976	1
30	1.32253	4
a	1.35939	4
b	-0.00123	4
Ref. Index		
n_D 20°C	1.49570	1
25	1.49333	1
30	1.48165	1
"C"	0.4885	4
MR (Obs.)	35.646	4
MR (Calc.)	35.473	5
(nD-d/2)	0.82278	4
Dielectric	7.845	1
A | 68 to	6.97980	4
B | 260 °C	1572.19	4
C	217.38	4
A* | 68 to	1.51871	5
B* | 205 °C	1473.57	5
K		
c		
t_k | to		
t_x | °C		
A' | 0 to	7.34139	5
B' | 68 °C	1778.81	5
C'	235.	5
A'* 0 to	1.87190	5
B'* 68 °C	1671.58	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*	0.02092	1
consts. B*		
t_e °C	185.58	5

		Ref.
dt/dP		
°C/mm		
25°C	5.2211	5
BP	0.05347	4
t_e	0.03743	5
30 mm	0.7516	4
ΔHm cal/g	12.75	4
ΔHv cal/g		
25°C	65.66	5
30 mm	63.03	5
BP	55.11	5
t_e	53.67	5
t_e (d, e)	53.54	5
ΔHv/T_e	19.07	5
d | 68 to	68.56	5
e | 190 °C	0.0809	5
d' | 15 to	67.18	5
e' | 68 °C	0.0607	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9520	5
t_e	0.9385	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	1.7008	1
40	1.2272	1
60	0.9337	1
80	0.7404	1
B^v | 30 to	606.87	4
A^v | 90 °C	2.15127	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	34.02	1
30	32.88	1
40	31.81	1
Parachor [P]		
20°C	294.8	4
30	295.25	4
40	295.6	4
Sugd.	291.0	5
Exp. L.l.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether		
n-Heptane		
Ethanol	∞	
Water		
Water in	0.036	1

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 48

NAME	(2-Bromoethyl)cyclohexane β-Bromoethylcyclohexane	STRUCTURAL FORMULA
Mole % Pur. 99.99	Ref. 1	Molecular Formula $C_8H_{15}Br$	Molecular Weight 191.116

		Ref.
F.P. °C	-57.28	1
F.P. 100%		
B.P. °C		
760 mm	212.13	1
100	138.83	4
30	106.33	4
10	81.313	5
1	39.60	5
Pressure		
mm 25°C	0.3711	5
t_e	1322.0	5
Density		
g/ml 20°C	1.23574	1
d_4^t 25	1.23049	1
30	1.22724	4
a	1.25274	4
b	-0.03385	4
Ref. Index		
n_D 20°C	1.48986	1
25	1.48777	1
30	1.47697	1
"C"	0.5223	4
MR (Obs.)	44.703	4
MR (Calc.)	44.709	5
(nD-d/2)	0.87200	4
Dielectric		
A | 105 to	7.02343	4
B | 300 °C	1731.83	4
C	205.92	4
A* | 105 to	1.60197	5
B* | 260 °C	1629.23	5
K		
c		
t_k | to		
t_x | °C		
A' | 10 to	7.22369	5
B' | 105 °C	1875.28	5
C'	220.	5
A'* 10 to	1.81532	5
B'* 105 °C	1772.32	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01412	1
consts. B°		
t_e °C	237.88	5

		Ref.
dt/dP		
°C/mm		
25°C	37.459	5
BP	0.05767	4
t_e	0.03736	5
30 mm	0.8150	4
ΔHm cal/g		
ΔHv cal/g		
25°C	66.51	5
30 mm	61.26	5
BP	52.95	5
t_e	51.12	5
t_e (d, e)	50.93	5
$\Delta Hv/T_e$	19.12	5
d | 105 to	69.61	5
e | 240 °C	0.0785	5
d' | 10 to	68.12	5
e' | 105 °C	0.0645	5
d_c g/ml		
v_c ml/g		
t_c °C	437.0	5
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9475	5
t_e	0.9297	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.2721	1
40	1.5878	1
60	1.1852	1
80	0.9292	1
B^v | 30 to	643.52	4
A^v | 90 °C	2.14614	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h |			
f' | to			
g' | °K			
h' |			
m | to			
n | °K			
o |			
m' | to			
n' | °K			
o' |			
Surface tension			
dynes/cm. 20°C		33.96	1
γ 30		32.90	1
40		31.88	1
Parachor [P]			
20°C		373.3	4
30		373.0	4
40		372.6	4
Sugd.		369.0	5
Exp. L. l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

TABLE XX. CYCLOHEXENES

No. 1

NAME	Cyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_6H_{10}	Molecular Weight 82.140

		Ref.
F.P. °C	-103.512	2
F.P. 100%		
B.P. °C		
760 mm	82.979	2
100	27.62	4
30	3.29	4
10	-15.14	5
1	-45.49	5
Pressure		
mm 25°C	88.83	5
t_e	970.61	5
Density		
g/ml 20°C	0.81096	2
d_4^t 25	0.80609	2
30	0.80141	2
a	0.8304	4
b	-0.0_396	4
Ref. Index		
n_D 20°C	1.44654	2
25	1.44377	2
30	1.44100	2
"C"	0.7295	4
MR (Obs.)	27.038	2
MR (Calc.)	27.241	5
(nD-d/2)	1.04106	2
Dielectric	2.220	3
A | 3 to	6.88617	2
B |146 °C	1229.973	2
C	224.104	2
A* | 3 to	1.20240	5
B* |101 °C	1147.7	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac |146 to	7.31379	5
Bc | t_c °C	1566.7	5
Cc	272.	5
Cryos. A°		
consts. B°		
t_e °C	91.34	5

		Ref.
dt/dP		
°C/mm		
25°C	0.2466	5
BP	0.04381	2
t_e	0.03620	5
30 mm	0.6086	5
ΔHm cal/g	9.582	3'
ΔHv cal/g		
25°C	96.83	5
30 mm	101.30	5
BP	88.47	5
t_e	87.13	5
t_e (d, e)	87.12	5
$\Delta Hv/T_e$	19.63	5
d | 3 to	101.83	5
e | 91 °C	0.1610	5
d' | to		
e' | °C		
d_c g/ml	0.288	5
v_c ml/g	3.473	5
t_c °C	286.	5
P_c mm	31784.	5
PV/RT		
25°C	0.9866	5
30 mm	1.0000	5
BP	0.9635	5
t_e	0.9570	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap 300°K	0.30777	2
400	0.42172	2
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	300 to	-0.1232	4
n	600 °K	0.0017	4
o		-0.0_674	4
m'	700 to	0.0336	4
n'	1000 °K	0.0012	4
o'		-0.0_644	4
Surface tension			
dynes/cm. 20°C		26.54	3'
ϑ 30		25.22	3'
40		23.98	3'
Parachor [P]			
20°C		229.9	4
30		229.7	4
40		229.5	4
Sugd.		229.1	5
Exp. L.l.%/wt.			
u.			
Dispersion		117.1	2
Flash Point °C			
Fire Point			
M. Spec.		Yes	1
Ultra V.			
X-Ray Dif.			
Infrared		293.	1
Solubility in +			
Acetone		∞	
Carbon tet.		∞	
Benzene		∞	
Ether		∞	
n-Heptane		∞	
Ethanol		∞	
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

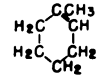
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 NBS 514; 3' Timmermans

No. 2

NAME	1-Methylcyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166



		Ref.
F.P. °C	-121.	2
F.P. 100%		
B.P. °C		
760 mm	110.0	2
100	50.66	4
30	24.6	4
10	4.88	5
1	-27.57	5
Pressure mm 25°C	30.61	5
t_e	1046.2	5
Density g/ml 20°C	0.8102	2
d_4^t t 25	0.8058	2
30	0.8014	4
a	0.8278	4
b	-0.0_387	4
Ref. Index n_D 20°C	1.4503	2
25	1.4478	2
30	1.4459	4
"C"	0.7360	4
MR (Obs.)	31.91	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0452	2
Dielectric		
A | 25 to	6.86861	5
B |165 °C	1308.0	5
C	218.	5
A* | 25 to	1.22876	5
B* |131 °C	1222.1	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac |165 to	7.28846	5
Bc | t_c °C	1649.7	5
Cc	265.	5
Cryos. A° consts. B°		
t_e °C	121.83	5

		Ref.
dt/dP °C/mm		
25°C	0.6405	5
BP	0.0470	2
t_e	0.03665	5
30 mm	0.6514	5
ΔHm cal/g		
ΔHv cal/g		
25°C	93.83	5
30 mm	93.78	5
BP	81.27	5
t_e	79.57	5
t_e (d, e)	79.54	5
$\Delta Hv/T_e$	19.37	5
d | 25 to	97.38	5
e | 130 °C	0.1465	5
d' | to		
e' | °C		
d_c g/ml	0.272	5
v_c ml/g	3.679	5
t_c °C	311.	5
P_c mm	26771.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9600	5
t_e	0.9519	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | _ _ °K			
h |			
f' | | to			
g' | _ _ °K			
h' |			
m | | to			
n | _ _ °K			
o |			
m' | | to			
n' | _ _ °K			
o' |			
Surface tension			
dynes/cm. 20°C		26.01	5
γ 30		24.89	5
40		23.80	5
Parachor [P]			
20°C			
30			
40			
Sugd.		268.1	5
Exp. L.1.%/wt. u.			
Dispersion		120.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

TABLE XX. CYCLOHEXENES

No. 3

NAME	3-Methylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}	Molecular Weight 96.166

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	104.0	2
100	45.55	4
30	19.88	4
10	0.46	5
1	-31.50	5
Pressure		
mm 25°C	38.92	5
t_e	1029.9	5
Density		
g/ml 20°C	0.8010	2
d_4^t 25	0.7966	2
30	0.7922	4
a	0.8186	4
b	-0.0_387	4
Ref. Index		
n_D 20°C	1.4444	2
25	1.4419	2
30	1.4392	4
"C"	0.7353	4
MR (Obs.)	31.92	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0439	2
Dielectric		
A 20 to	6.86718	5
B 158 °C	1287.6	5
C	219.	5
A* 20 to	1.23234	5
B* 125 °C	1202.6	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac 158 to	7.28693	5
Bc t_c °C	1622.9	5
Cc	265.	5
Cryos. A*		
consts. B*		
t_e °C	115.06	5

		Ref.
dt/dP		
°C/mm		
25°C	0.5160	5
BP	0.04630	2
t_e	0.03655	5
30 mm	0.6416	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.50	5
30 mm	92.22	5
BP	80.01	5
t_e	78.43	5
t_e (d, e)	78.40	5
$\Delta Hv/T_e$	19.43	5
d 20 to	95.11	5
e 115 °C	0.1451	5
d' to		
e' °C		
d_c g/ml	0.272	5
v_c ml/g	3.682	5
t_c °C	301.	5
P_c mm	26290.	5
PV/RT		
25°C	1.0003	5
30 mm	1.0000	5
BP	0.9619	5
t_e	0.9534	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		24.85	5
30		23.76	5
40		22.70	5
Parachor [P]			
20°C			
30			
40			
Sugd.		268.1	5
Exp. L.l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 4

NAME	4-Methylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_7H_{12}
		Molecular Weight 96.166

		Ref.
F.P. °C	-115.5	2
F.P. 100%		
B.P. °C		
760 mm	102.74	2
100	44.53	4
30	18.98	4
10	-0.37	5
1	-32.20	5
Pressure		
mm 25°C	40.76	5
t_e	1026.4	5
Density		
g/ml 20°C	0.7991	2
d_4^t 25	0.7947	2
30	0.7902	4
a	0.8168	4
b	-0.0_3388	4
Ref. Index		
n_D 20°C	1.4414	2
25	1.4389	2
30	1.4362	4
"C"	0.7324	4
MR (Obs.)	31.80	2
MR (Calc.)	31.859	5
(nD-d/2)	1.0418	2
Dielectric		
A | 19 to	6.86881	5
B | 156 °C	1283.1	5
C	219.	5
A* | 19 to	1.23537	5
B* | 124 °C	1198.4	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | 156 to	7.28813	5
Bc | t_c °C	1616.5	5
Cc	265.	5
Cryos. A*		
consts. B*		
t_e °C	113.62	5

		Ref.
dt/dP		
°C/mm		
25°C	0.4944	5
BP	0.0461	2
t_e	0.03649	5
30 mm	0.6390	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.15	5
30 mm	92.03	5
BP	79.83	5
t_e	78.27	5
t_e (d, e)	78.25	5
$\Delta Hv/T_e$	19.46	5
d | 19 to	94.79	5
e | 114 °C	0.1456	5
d' | to		
e' | °C		
d_c g/ml	0.272	5
v_c ml/g	3.675	5
t_c °C	299.	5
P_c mm	26254.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9620	5
t_e	0.9537	5
t_c	0.260	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	24.61	5
γ 30	23.53	5
40	22.47	5
Parachor [P]		
20°C		
30		
40		
Sugd.	268.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 5

NAME	1-Ethylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	136.	2
100	72.94	4
30	45.25	4
10	24.16	5
1	-11.03	5
Pressure		
mm 25°C	10.48	5
t_e	1116.5	5
Density		
g/ml 20°C	0.823	2
d_4^t 25	0.819	2
30	0.815	4
a	0.8390	4
b	-0.0380	4
Ref. Index		
n_D 20°C	1.4575	2
25	1.4552	2
30	1.4528	4
"C"	0.7355	4
MR (Obs.)	36.5	2
MR (Calc.)	36.477	5
(nD-d/2)	1.046	2
Dielectric		
A 45 to	6.87507	4
B 186 °C	1394.0	4
C	213.	5
A* 45 to	1.27409	5
B* 161 °C	1304.9	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.25131	5
B' 45 °C	1595.1	5
C'	231.	5
A'* 25 to	1.63487	5
B'* 45 °C	1495.5	5
Ac 186 to	7.29002	5
Bc t_c °C	1744.7	5
Cc	260.	5
Cryos. A* consts. B*		
t_e °C	151.24	5

		Ref.
dt/dP		
°C/mm		
25°C	1.7022	5
BP	0.04993	4
t_e	0.03702	5
30 mm	0.6926	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.87	5
30 mm	88.02	5
BP	75.79	5
t_e	73.81	5
t_e (d, e)	73.74	5
$\Delta Hv/T_e$	19.16	5
d 45 to	94.11	5
e 151 °C	0.1347	5
d' 25 to	92.15	5
e' 45 °C	0.0913	5
d_c g/ml	0.268	5
v_c ml/g	3.738	5
t_c °C	339.	5
P_c mm	23910.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9569	5
t_e	0.9455	5
t_c	0.258	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C		27.67	5
30		26.61	5
40		25.57	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.1	5
Exp. L.1.%/wt. u.			
Dispersion		117.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 6

NAME	3-Ethylcyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	134.	2
100	71.03	4
30	43.38	4
10	22.34	5
1	-12.77	5
Pressure		
mm 25°C	11.60	5
t_e	1111.0	5
Density		
g/ml 20°C	0.814	2
d_4^t 25	0.810	2
30	0.806	4
a	0.8300	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.451	2
25	1.449	2
30	1.446	4
"C"	0.7337	4
MR (Obs.)	36.5	2
MR (Calc.)	36.477	5
(nD-d/2)	1.044	2
Dielectric		
A | 43 to	6.86759	4
B | 183 °C	1387.4	4
C	214.	5
A* | 43 to	1.26777	5
B* | 159 °C	1298.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.24458	5
B' | 43 °C	1588.2	5
C'	232.	5
A'* 25 to	1.62837	5
B'* 43 °C	1488.3	5
Ac | 183 to	7.28346	5
Bc | t_c °C	1736.9	5
Cc	261.	5
Cryos. A* consts. B*		
t_e °C	149.02	5

		Ref.
dt/dP		
°C/mm		
25°C	1.5563	5
BP	0.04988	4
t_e	0.03713	5
30 mm	0.6912	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.78	5
30 mm	87.16	5
BP	75.13	5
t_e	73.20	5
t_e (d, e)	73.14	5
$\Delta Hv/T_e$	19.10	5
d | 43 to	92.92	5
e | 149 °C	0.1328	5
d' | 25 to	90.99	5
e' | 43 °C	0.0883	5
d_c g/ml	0.263	5
v_c ml/g	3.809	5
t_c °C	335.	5
P_c mm	23315.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9458	5
t_c	0.258	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	26.48	5
γ 30	25.45	5
40	24.44	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.1	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 7

NAME	4-Ethylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	133.	2
100	70.32	4
30	42.78	4
10	21.82	5
1	-13.16	5
Pressure		
mm 25°C	11.95	5
t_e	1106.7	5
Density		
g/ml 20°C	0.810	2
d_4^t 25	0.806	2
30	0.802	4
a	0.8260	4
b	-0.0_380	4
Ref. Index		
n_D 20°C	1.449	2
25	1.447	2
30	1.444	4
"C"	0.7342	4
MR (Obs.)	36.5	2
MR (Calc.)	36.477	5
(nD-d/2)	1.044	2
Dielectric		
A | 43 to	6.87619	4
B | 180 °C	1386.4	4
C	214.	5
A* | 43 to	1.27931	5
B* | 158 °C	1297.9	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25465	5
B' | 43 °C	1587.6	5
C'	232.	5
A'* 25 to	1.63900	5
B'* 43 °C	1487.8	5
Ac | 180 to	7.29156	5
Bc | t_c °C	1733.8	5
Cc	261.	5
Cryos. A* consts. B*		
t_e °C	147.78	5

		Ref.
dt/dP		
°C/mm		
25°C	1.51221	5
BP	0.04963	4
t_e	0.03705	5
30 mm	0.6885	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.75	5
30 mm	87.17	5
BP	75.06	5
t_e	73.14	5
t_e (d, e)	73.08	5
$\Delta Hv/T_e$	19.14	5
d | 43 to	92.92	5
e | 148 °C	0.1343	5
d' | 25 to	90.96	5
e' | 43 °C	0.0884	5
d_c g/ml	0.264	5
v_c ml/g	3.792	5
t_c °C	332.	5
P_c mm	23306.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9561	5
t_e	0.9449	5
t_c	0.258	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		25.96	5
γ 30		24.95	5
40		23.96	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.1	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

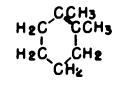
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 8

NAME	1,2-Dimethylcyclohexene	STRUCTURAL FORMULA
		

Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	137.	2
100	73.76	4
30	45.98	4
10	24.83	5
1	-10.46	5
Pressure		
mm 25°C	10.10	5
t_e	1118.05	5
Density		
g/ml 20°C	0.8250	2
d_4^t 25	0.8208	2
30	0.8166	4
a	0.8418	4
b	-0.0384	4
Ref. Index		
n_D 20°C	1.4588	2
25	1.4564	2
30	1.4540	4
"C"	0.7357	4
MR (Obs.)	36.50	2
MR (Calc.)	36.477	5
(nD-d/2)	1.0463	2
Dielectric		
A | 45 to	6.87452	4
B | 186 °C	1397.8	4
C	213.	5
A* | 45 to	1.27411	5
B* | 162 °C	1308.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.24966	5
B' | 45 °C	1598.9	5
C'	231.	5
A'* 25 to	1.63262	5
B'* 45 °C	1499.1	5
Ac | 186 to	7.28962	5
Bc | t_c °C	1749.3	5
Cc	260.	5
Cryos. A* consts. B*		
t_e °C	152.34	5

		Ref.
dt/dP		
°C/mm		
25°C	1.7633	5
BP	0.05008	4
t_e	0.03709	5
30 mm	0.6946	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.08	5
30 mm	88.16	5
BP	75.85	5
t_e	73.85	5
t_e (d, e)	73.78	5
$\Delta Hv/T_e$	19.12	5
d | 45 to	94.38	5
e | 152 °C	0.1353	5
d' | 25 to	92.36	5
e' | 45 °C	0.0912	5
d_c g/ml	0.265	5
v_c^c ml/g	3.768	5
t_c °C	340.	5
P_c mm	23762.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9559	5
t_e	0.9443	5
t_c	0.258	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h |		
f' | to		
g' | °K		
h' |		
m | to		
n | °K		
o |		
m' | to		
n' | °K		
o' |		
Surface tension		
dynes/cm. 20°C	27.94	5
γ 30	26.82	5
40	25.72	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.1	5
Exp. L.1.%/wt. u.		
Dispersion	123.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

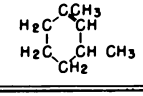
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 9

NAME	1,3-Dimethylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{14} Molecular Weight 110.192	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C 760 mm	137.	2
100	73.76	4
30	45.99	4
10	24.84	5
1	-10.45	5
Pressure mm 25°C	10.09	5
t_e	1118.2	5
Density g/ml 20°C	0.802	2
d_4^t 25	0.798	2
30	0.794	4
a	0.8180	4
b	-0.0_3380	4
Ref. Index n_D 20°C	1.445	2
25	1.443	2
30	1.440	4
"C"	0.7354	4
MR (Obs.)	36.6	2
MR (Calc.)	36.477	5
(nD-d/2)	1.044	2
Dielectric		
A | 45 to	6.87509	4
B | 185 °C	1398.0	4
C	213.	5
A* | 45 to	1.27450	5
B* | 162 °C	1309.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25026	5
B' | 45 °C	1599.1	5
C'	231.	5
A'* 25 to	1.63321	5
B'* 45 °C	1499.3	5
Ac | 185 to	7.28951	5
Bc | t_c °C	1746.8	5
Cc	260.	5
Cryos. A* consts. B*		
t_e °C	152.34	5

		Ref.
dt/dP °C/mm		
25°C	1.7642	5
BP	0.05007	5
t_e	0.03708	5
30 mm	0.6946	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.09	5
30 mm	88.17	5
BP	75.86	5
t_e	73.85	5
t_e (d, e)	73.78	5
$\Delta Hv/T_e$	19.12	5
d | 45 to	94.40	5
e | 152 °C	0.1353	5
d' | 25 to	92.37	5
e' | 45 °C	0.0912	5
d_c g/ml	0.262	5
v_c ml/g	3.821	5
t_c °C	337.	5
P_c mm	23046.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9560	5
t_e	0.9445	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension dynes/cm. 20°C	24.95	5
γ 30	23.97	5
40	23.00	5
Parachor [P] 20°C		
30		
40		
Sugd.	307.1	5
Exp. L.1.%/wt. u.		
Dispersion	120.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 10

NAME	1,4-Dimethylcyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C	-59.	2
F.P. 100%		
B.P. °C		
760 mm	128.	2
100	66.04	4
30	38.82	4
10	18.10	5
1	-16.50	5
Pressure mm 25°C	14.70	5
t_e	1093.5	5
Density g/ml 20°C	0.802	2
d_4^t 25	0.798	2
30	0.794	4
a	0.8180	4
b	-0.0380	4
Ref. Index n_D 20°C	1.446	2
25	1.444	2
30	1.441	4
"C"	0.7369	4
MR (Obs.)	36.6	2
MR (Calc.)	36.477	5
(nD-d/2)	1.045	2
Dielectric		
A | 39 to	6.87585	4
B | 174 °C	1370.3	4
C	215.	5
A* | 39 to	1.28236	5
B* | 152 °C	1282.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25871	5
B' | 39 °C	1571.5	5
C'	233.	5
A'* 25 to	1.64691	5
B'* 39 °C	1472.4	5
Ac | 174 to	7.29137	5
Bc | t_c °C	1712.9	5
Cc	261.	5
Cryos. A° consts. B°		
t_e °C	142.13	5

		Ref.
dt/dP °C/mm		
25°C	1.25098	5
BP	0.04906	4
t_e	0.03696	5
30 mm	0.6806	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.17	5
30 mm	85.99	5
BP	74.14	5
t_e	72.32	5
t_e (d,e)	72.26	5
$\Delta Hv/T_e$	19.19	5
d | 39 to	91.14	5
e | 155 °C	0.1328	5
d' | 25 to	89.30	5
e' | 39 °C	0.0855	5
d_c g/ml	0.266	5
v_c ml/g	3.766	5
t_c °C	323.	5
P_c mm	22934.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9463	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension dynes/cm.	20°C	24.95	5
γ	30	23.96	5
	40	23.00	5
Parachor [P]	20°C		
	30		
	40		
	Sugd.	307.1	5
Exp. L.1.%/wt. u.			
Dispersion		119.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 11

NAME	1,5-Dimethylcyclohexene 2,4-Dimethylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	128.	2
100	66.04	4
30	38.82	4
10	18.10	5
1	-16.50	5
Pressure		
mm 25°C	14.70	5
t_e	1093.5	5
Density		
g/ml 20°C	0.8051	2
d_4^t 25	0.8009	2
30	0.7967	4
a	0.8219	4
b	-0.0384	4
Ref. Index		
n_D 20°C	1.448	2
25	1.446	2
30	1.443	4
"C"	0.7371	4
MR (Obs.)	36.6	2
MR (Calc.)	36.477	5
(nD-d/2)	1.045	2
Dielectric		
A | 39 to	6.87585	4
B | 174 °C	1370.3	4
C	215.	5
A* | 39 to	1.28235	5
B* | 152 °C	1282.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25871	5
B' | 39 °C	1571.5	5
C'	233.	5
A'* 25 to	1.64691	5
B'* 39 °C	1472.4	5
Ac | 174 to	7.29133	5
Bc | t_c °C	1712.8	5
Cc	261.	5
Cryos. A* consts. B*		
t_e °C	142.13	5

		Ref.
dt/dP °C/mm		
25°C	1.2510	5
BP	0.04906	4
t_e	0.03696	5
30 mm	0.6806	5
ΔHm cal/g		
ΔHv cal/g		
25°C	87.17	5
30 mm	85.99	5
BP	74.14	5
t_e	72.31	5
t_e (d, e)	72.26	5
ΔHv/T_e	19.19	5
d | 39 to	91.14	5
e | 155 °C	0.1328	5
d' | 25 to	89.30	5
e' | 39 °C	0.0855	5
d_c g/ml	0.265	5
v_c ml/g	3.774	5
t_c °C	323.	5
P_c mm	22887.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9570	5
t_e	0.9463	5
t_c	0.256	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension			
dynes/cm. 20°C		25.34	5
30		24.29	5
40		23.27	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.1	5
Exp. L.1.%/wt. u.			
Dispersion		119.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 12

NAME	1, 6-Dimethylcyclohexene 2, 3-Dimethylcyclohexene	STRUCTURAL FORMULA
Mole % Pur.	Ref. Molecular Formula C_8H_{14} Molecular Weight 110.192	

		Ref.
F.P. °C		
F.P. 100%		
B.P. °C		
760 mm	133.	2
100	70.32	4
30	42.78	4
10	21.82	5
1	-13.16	5
Pressure		
mm 25°C	11.95	5
t_e	1107.2	5
Density		
g/ml 20°C	0.815	2
d_4^t 25	0.811	2
30	0.807	4
a	0.8310	4
b	-0.0_3380	4
Ref. Index		
n_D 20°C	1.454	2
25	1.452	2
30	1.449	4
"C"	0.7373	4
MR (Obs.)	36.6	2
MR (Calc.)	36.477	5
(nD-d/2)	1.046	2
Dielectric		
A | 43 to	6.87619	4
B |180 °C	1386.4	4
C	214.	5
A* | 43 to	1.27870	5
B* |158 °C	1297.8	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.25465	5
B' | 43 °C	1587.6	5
C'	232.	5
A'* 25 to	1.63900	5
B'* 43 °C	1487.8	5
Ac |182 to	7.29175	5
Bc | t_c °C	1734.6	5
Cc	261.	5
Cryos. A* consts. B*		
t_e °C	147.80	5

		Ref.
dt/dP		
°C/mm		
25°C	1.5122	5
BP	0.04963	4
t_e	0.03704	5
30 mm	0.6885	5
ΔHm cal/g		
ΔHv cal/g		
25°C	88.75	5
30 mm	87.17	5
BP	75.09	5
t_c	73.17	5
t_e (d, e)	73.11	5
$\Delta Hv/T_e$	19.15	5
d | 43 to	92.90	5
e | 155 °C	0.1339	5
d' | 25 to	90.96	5
e' | 43 °C	0.0884	5
d_c g/ml	0.269	5
v_c ml/g	3.721	5
t_c °C	333.	5
P_c mm	23511.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9564	5
t_e	0.9452	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^V | to		
A^V | °C		
(B^V) | to		
(A^V) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h |		
f' | | to		
g' | | °K		
h' |		
m | | to		
n | | °K		
o |		
m' | | to		
n' | | °K		
o' |		
Surface tension		
dynes/cm. 20°C	26.61	5
γ 30	25.57	5
40	24.57	5
Parachor [P]		
20°C		
30		
40		
Sugd.	307.1	5
Exp. L.1.%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

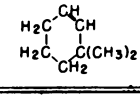
SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 13

NAME	3,3-Dimethylcyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192



		Ref.			Ref.			Ref.
F.P. °C			dt/dP °C/mm			f | | to		
F.P. 100%			25°C	0.8936	5	g | _ _ _ °K		
B.P. °C			BP	0.04804	5	h		
760 mm	119.	2	t_e	0.03689	5	f' | | to		
100	58.36	5	30 mm	0.6655	5	g' | _ _ _ °K		
30	31.73	5	ΔHm cal/g			h'		
10	11.47	5	ΔHv cal/g			m | | to		
1	-22.35	5	25°C	84.53	5	n | _ _ _ °K		
Pressure			30 mm	83.98	5	o		
mm 25°C	21.23	5	BP	72.35	5	m' | | to		
t_e	1067.3	5	t_e	70.68	5	n' | _ _ _ °K		
Density			t_e (d,e)	70.63	5	o'		
g/ml 20°C	0.804	2	ΔHv/T_e	19.23	5			
d_4^t 25	0.800	2	d | 32 to	88.21	5	Surface tension		
30	0.796	4	e | 140 °C	0.1333	5	dynes/cm. 20°C	25.20	5
a	0.8200	4	d' | 25 to	86.57	5	σ 30	24.20	5
b	-0.03 79	4	e' | 32 °C	0.0815	5	40	23.23	5
Ref. Index			d_c g/ml	0.269	5	Parachor [P]		
n_D 20°C	1.445	2	v_c ml/g	3.720	5	20°C		
25	1.443	2	t_c °C	310.	5	30		
30	1.440	4	P_c mm	22801.	5	40		
"C"	0.7335	4	PV/RT			Sugd.	307.1	5
MR (Obs.)	36.5	2	25°C	1.0000	5	Exp. L.1.%/wt.		
MR (Calc.)	36.477	5	30 mm	1.0000	5	u.		
(nD-d/2)	1.043	2	BP	0.9570	5	Dispersion		
Dielectric			t_e	0.9470	5	Flash Point °C		
A | 32 to	6.86558	4	t_c	0.257	5	Fire Point		
B | 164 °C	1334.9	4	ΔHc kcal/m			M. Spec.		
C	216.	5	ΔHf			Ultra V.		
A* | 32 to	1.28233	5	ΔFf			X-Ray Dif.		
B* | 142 °C	1249.1	5				Infrared		
K			Viscosity centistokes			Solubility in +		
c			η °C			Acetone		
t_k | to						Carbon tet.		
t_x | °C						Benzene		
A' | 25 to	7.25710	5				Ether		
B' | 32 °C	1535.9	5	B^v | to			n-Heptane		
C'	234.	5	A^v | °C			Ethanol		
A'* 25 to	1.64711	5	(B^v) | to			Water		
B'* 32 °C	1436.8	5	(A^v) | °C			Water in		
Ac | 164 to	7.28069	5	c_p liq. °K					
Bc | t_c °C	1669.3	5	c_p vap. °K					
Cc	261.	5	c_v vap.					
Cryos. A° consts. B°								
t_e °C	131.87	5						

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

No. 14

NAME	4,4-Dimethylcyclohexene		STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula C_8H_{14}	Molecular Weight 110.192

		Ref.
F.P. °C	-80.5	2
F.P. 100%		
B.P. °C		
760 mm	116.98	2
100	56.61	4
30	30.09	4
10	9.91	5
1	-23.80	5
Pressure mm 25°C	23.11	5
t_e	1061.6	5
Density		
g/ml 20°C	0.7996	2
d_4^{25}	0.7956	2
d_4^{30}	0.7916	4
a	0.8156	4
b	-0.0$_3$79	4
Ref. Index		
n_D 20°C	1.4420	2
25	1.4396	2
30	1.4373	4
"C"	0.7329	4
MR (Obs.)	36.46	2
MR (Calc.)	36.477	5
(nD-d/2)	1.0422	2
Dielectric		
A | 30 to	6.87266	4
B | 161 °C	1333.2	4
C	217.	5
A* | 30 to	1.29067	5
B* | 140 °C	1247.4	5
K		
c		
t_k | to		
t_x | °C		
A' | 15 to	7.26571	5
B' | 30 °C	1534.5	5
C'	235.	5
A'* 15 to	1.65563	5
B'* 30 °C	1435.0	5
Ac | 161 to	7.28876	5
Bc | t_c °C	1666.8	5
Cc	262.	5
Cryos. A* consts. B*		
t_e °C	129.58	5

		Ref.
dt/dP		
°C/mm		
25°C	0.8280	5
BP	0.04781	4
t_e	0.03686	5
30 mm	0.6630	5
ΔHm cal/g		
ΔHv cal/g		
25°C	83.80	5
30 mm	83.41	5
BP	71.96	5
t_e	70.34	5
t_e (d, e)	70.30	5
$\Delta Hv/T_e$	19.24	5
d | 30 to	87.37	5
e | 140 °C	0.1317	5
d' | 15 to	85.76	5
e' | 30 °C	0.0780	5
d_c g/ml	0.269	5
v_c ml/g	3.719	5
t_c °C	306.	5
P_c mm	22652.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9571	5
t_e	0.9473	5
t_c	0.257	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		24.65	5
γ 30		23.67	5
40		22.71	5
Parachor [P]			
20°C			
30			
40			
Sugd.		307.1	5
Exp. L. 1. %/wt. u.			
Dispersion		115.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

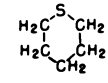
PURIFICATION: API

LITERATURE REFERENCES:

TABLE XXI. THIACYCLOHEXANES

No. 1

NAME	Thiacyclohexane		STRUCTURAL FORMULA
Mole % Pur. 99.9	Ref. 3'	Molecular Formula $C_5H_{10}S$	Molecular Weight 102.196



		Ref.
F.P. °C	19.09	3'
F.P. 100%		
B.P. °C		
760 mm	141.75	3
100	78.28	3
30	50.34	3
10	29.08	5
1	-6.3	5
Pressure		
mm 25°C	7.9256	5
t_e	1140.5	5
Density		
g/ml 20°C	0.9856	2
d_4^{25}	0.9810	2
30	0.9764	4
a	1.0040	4
b	-0.0_3392	4
Ref. Index		
n_D 20°C	1.5067	2
25	1.5041	2
30	1.5016	4
"C"	0.6759	4
MR (Obs.)	30.84	4
MR (Calc.)	30.780	5
(nD-d/2)	1.0139	4
Dielectric		
A 50 to	6.90518	3
B 210 °C	1422.470	3
C	211.718	3
A* 50 to	1.25671	5
B* 175 °C	1329.9	5
K		
c		
t_k to		
t_x °C		
A' 0 to	7.18029	5
B' 50 °C	1570.3	5
C'	225.	5
A'* 0 to	1.53543	5
B'* 50 °C	1474.1	5
Ac 210 to	7.32621	5
Bc t_c °C	1805.6	5
Cc	266.	5
Cryos. A*	0.004	2
consts. B*		
t_e °C	157.94	5

		Ref.
dt/dP		
°C/mm		
25°C	2.1809	5
BP	0.05019	5
t_e	0.03658	5
30 mm	0.6989	5
ΔHm cal/g	5.73	3'
ΔHv cal/g		
25°C	100.03	5
30 mm	97.08	5
BP	84.14	3'
t_e	81.93	5
t_e (d, e)	81.85	5
$\Delta Hv/T_e$	19.42	5
d 75 to	104.20	5
e 160 °C	0.1415	5
d' 10 to	102.94	5
e' 75 °C	0.1164	5
d_c g/ml	0.332	5
v_c ml/g	3.011	5
t_c °C	379.	5
P_c mm	33708.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9620	5
t_e	0.9508	5
t_c	0.255	5
ΔHc kcal/m	-930.26	3'
ΔHf	25.18	3'
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. 300 °K	0.38361	3'
350	0.42181	3'
c_p vap. 400 °K	0.35029	3'
500	0.43916	3'
c_v vap.		

			Ref.
f	290 to	0.1712	4
g	350 °K	0.0_366	4
h		0.0_616	4
f'	to		
g'	°K		
h'			
m	390 to	-0.1362	4
n	500 °K	0.0015	4
o		-0.0_665	4
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		34.94	5
γ 30		33.65	5
40		32.39	5
Parachor [P]			
20°C			
30			
40			
S = 51. Sugd.		252.1	5
Exp. L.1.%/wt. u.			
Dispersion		114.	2
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al;

3' J.A.C.S. 76, 2661 (1954) McCullough et al.

No. 2

NAME	2-Methylthiacyclohexane Tetrahydro-2-methyl-1-thiapyran	STRUCTURAL FORMULA
Mole % Pur. 99.2	Ref. 3	Molecular Formula $C_6H_{12}S$
	Molecular Weight 116.216	

		Ref.
F.P. °C	-58.14	2
F.P. 100%		
B.P. °C		
760 mm	153.04	3
100	87.24	3
30	58.35	3
10	36.37	5
1	-0.2694	5
Pressure		
mm 25°C	5.2566	5
t_e	1172.0	5
Density		
g/ml 20°C	0.9428	2
d_4^t 25	0.9381	2
30	0.9334	4
a	0.9616	4
b	-0.0_3938	4
Ref. Index		
n_D 20°C	1.4905	2
25	1.4881	2
30	1.4853	4
"C"	0.6854	4
MR (Obs.)	35.67	2
MR (Calc.)	35.398	5
(nD-d/2)	1.0191	2
Dielectric		
A | 58 to	6.86962	3
B |213 °C	1450.987	3
C	210.727	3
A* | 58 to	1.26718	5
B* |181 °C	1356.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.21579	5
B' |58 °C	1643.3	5
C'	228.	5
A'* 25 to	1.61631	5
B'* 58 °C	1543.2	5
Ac |213 to	7.28726	5
Bc | t_c °C	1826.3	5
Cc	262.	5
Cryos. A° consts. B°		
t_e °C	171.04	5

		Ref.
dt/dP		
°C/mm		
25°C	3.2182	5
BP	0.0521	2
t_e	0.03722	5
30 mm	0.7223	5
ΔHm cal/g		
ΔHv cal/g		
25°C	89.88	5
30 mm	86.74	5
BP	75.03	5
t_e	72.87	5
t_e (d, e)	72.80	5
$\Delta Hv/T_e$	19.06	5
d | 58 to	93.95	5
e | 171 °C	0.1236	5
d' | 25 to	92.23	5
e' | 58 °C	0.0942	5
d_c g/ml	0.316	5
v_c ml/g	3.168	5
t_c °C	375.	5
P_c mm	26344.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9606	5
t_e	0.9482	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	| | to | | °K		
f' g' h'	| | to | | °K		
m n o	| | to | | °K		
m' n' o'	| | to | | °K		
Surface tension			
dynes/cm. 20°C		29.92	5
γ 30		28.74	5
40		27.60	5
Parachor [P]			
20°C			
30			
40			
Sugd.		288.3	5
Exp. L.1.%/wt. u.			
Dispersion		114.	2
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

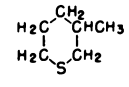
PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al.

TABLE XXi. THIACYCLOHEXANES

No. 3

NAME	3-Methylthiacyclohexane Tetrahydro-3-methyl-1-thiapyran	STRUCTURAL FORMULA
Mole % Pur. 99.8	Ref. 3	Molecular Formula $C_6H_{12}S$
		Molecular Weight 116.216



		Ref.
F.P. °C	-60.17	2
F.P. 100%		
B.P. °C		
760 mm	158.04	2
100	91.66	2
30	62.37	2
10	40.03	5
1	2.69	5
Pressure		
mm 25°C	4.2904	5
t_e	1183.7	5
Density		
g/ml 20°C	0.9473	2
d_4^t 25	0.9430	2
30	0.9387	4
a	0.9645	4
b	-0.0_3386	4
Ref. Index		
n_D 20°C	1.4922	2
25	1.4899	2
30	1.4875	4
"C"	0.6828	4
MR (Obs.)	35.61	2
MR (Calc.)	35.398	5
(nD-d/2)	1.0186	2
Dielectric		
A 62 to	6.95022	3
B 220 °C	1517.984	3
C	214.985	3
A* 62 to	1.34142	5
B* 186 °C	1420.0	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.28598	5
B' 62 °C	1710.0	5
C'	232.	5
A'* 25 to	1.67792	5
B'* 62 °C	1606.1	5
Ac 220 to	7.37528	5
Bc t_c °C	1910.3	5
Cc	268.	5
Cryos. A°		
consts. B°		
t_e °C	176.55	5

		Ref.
dt/dP		
°C/mm		
25°C	3.9100	5
BP	0.0524	2
t_e	0.03705	5
30 mm	0.7336	5
ΔHm cal/g		
ΔHv cal/g		
25°C	90.64	5
30 mm	87.49	5
BP	76.26	5
t_e	74.12	5
t_e (d, e)	74.09	5
$\Delta Hv/T_e$	19.15	5
d 62 to	94.81	5
e 176 °C	0.1174	5
d' 25 to	92.74	5
e' 62 °C	0.0843	5
d_c g/ml	0.311	5
v_c ml/g	3.212	5
t_c °C	384.	5
P_c mm	27997.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9587	5
t_e	0.9459	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	30.49	5
30	29.40	5
40	28.33	5
Parachor [P]		
20°C		
30		
40		
Sugd.	288.3	5
Exp. L.1.%/wt. u.		
Dispersion	113.	2
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952), P. T. White et al.

No. 4

NAME	4-Methylthiacyclohexane Tetrahydro-4-methyl-1-thiapyran	STRUCTURAL FORMULA
Mole % Pur. 99.8	Ref. 3	Molecular Formula $C_6H_{12}S$ — Molecular Weight 116.216

		Ref.
F.P. °C	-28.1	2
F.P. 100%		
B.P. °C		
760 mm	158.64	2
100	92.07	2
30	62.82	2
10	40.56	5
1	3.43	5
Pressure mm 25°C	4.1375	5
t_e	1186.4	5
Density g/ml 20°C	0.9471	2
d_4^t 25	0.9427	2
30	0.9383	4
a	0.9647	4
b	-0.0388	4
Ref. Index n_D 20°C	1.4923	2
25	1.4899	2
30	1.4874	4
"C"	0.6846	4
MR (Obs.)	35.62	2
MR (Calc.)	35.398	5
(nD-d/2)	1.0188	2
Dielectric		
A | 62 to	6.87976	3
B | 220 °C	1474.821	3
C	210.162	3
A* | 62 to	1.27377	5
B* | 187 °C	1379.3	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.23280	5
B' | 62 °C	1673.9	5
C'	228.	5
A'* 25 to	1.62988	5
B'* 62 °C	1573.0	5
Ac | 220 to	7.29810	5
Bc | t_c °C	1857.2	5
Cc	263.	5
Cryos. A*		
consts. B*		
t_e °C	177.38	5

		Ref.
dt/dP		
°C/mm		
25°C	4.0139	5
BP	0.05270	5
t_e	0.03728	5
30 mm	0.7315	5
ΔHm cal/g		
ΔHv cal/g		
25°C	91.55	5
30 mm	87.98	5
BP	76.06	5
t_e	73.80	5
t_e (d, e)	73.73	5
$\Delta Hv/T_e$	19.04	5
d | 62 to	95.80	5
e | 177 °C	0.1244	5
d' | 25 to	93.91	5
e' | 62 °C	0.0944	5
d_c g/ml	0.315	5
v_c ml/g	3.179	5
t_c °C	385.	5
P_c mm	27013.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9593	5
t_e	0.9463	5
t_c	0.252	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | | to		
g | | °K		
h		
f' | | to		
g' | | °K		
h'		
m | | to		
n | | °K		
o		
m' | | to		
n' | | °K		
o'		
Surface tension		
dynes/cm. 20°C	30.47	5
30	29.35	5
40	28.26	5
Parachor [P]		
20°C		
30		
40		
Sugd.	288.3	5
Exp. L.1.%/wt. u.		
Dispersion	113.	2
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone	∞	
Carbon tet.	∞	
Benzene	∞	
Ether	∞	
n-Heptane	∞	
Ethanol	∞	
Water		
Water in		

$T_R = 0.75\,T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 Ind. Eng. Chem. 44, 1430 (1952) P. T. White, et al.

No. 1

NAME	m-Nitrobenzotrifluoride α,α,α-Trifluoro-m-nitrotoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_4F_3NO_2$ — Molecular Weight 191.110

		Ref.
F.P. °C	-132.	3
F.P. 100%		
B.P. °C		
760 mm	202.75	3
100	135.10	4
30	104.82	4
10	81.6	4
1	42.	5
Pressure mm 25°C	0.2835	5
t_e	1277.	5
Density g/ml 20°C		
d_4^{t} 25		
30		
a		
b		
Ref. Index		
n_D 20°C	1.4719	3
25	1.4697	4
30	1.4675	3
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric	30.17	3
A | 105 to	7.18025	3
B | 320 °C	1710.60	2
C	195.12	3
A* | 105 to	1.79365	5
B* | 235 °C	1621.98	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.53955	5
B' | 105 °C	1932.93	5
C'	214.02	5
A'* 25 to	2.13992	5
B'* 105 °C	1834.57	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	224.76	5

		Ref.
dt/dP °C/mm		
25°C	45.28	5
BP	0.0529	4
t_e	0.0350	5
30 mm	0.7614	4
ΔHm cal/g		
ΔHv cal/g		
25°C	72.03	5
30 mm	65.05	4
BP	55.03	4
t_e	52.94	5
t_e (d, e)	52.78	5
$\Delta Hv/T_e$	20.23	5
d | 105 to	75.78	5
e | 225 °C	0.1024	5
d' | 25 to	74.22	5
e' | 105 °C	0.0874	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9389	4
t_e	0.9180	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f	to	
g	°K	
h		
f'	to	
g'	°K	
h'		
m	to	
n	°K	
o		
m'	to	
n'	°K	
o'		
Surface tension dynes/cm. 20°C		
σ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	307.3	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

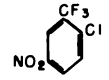
SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1997 (1953) Kardon and Saylor

No. 2

NAME	2-Chloro-5-Nitrobenzotrifluoride 2-Chloro-α,α,α-trifluoro-5-nitrotoluene	STRUCTURAL FORMULA
Mole % Pur.	Ref.	Molecular Formula $C_7H_3ClF_3NO_2$ Molecular Weight 225.559



		Ref.
F.P. °C	21.7	3
F.P. 100%		
B.P. °C		
760 mm	231.88	3
100	160.70	4
30	128.89	4
10	104.40	5
1	63.05	5
Pressure mm 25°C	0.0588	5
t_e	1343.2	5
Density g/ml 20°C		
d_4^t 25		
30	1.5043	3
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	41.522	5
MR (Calc.) (nD-d/2)		
Dielectric		
A 128 to	7.15409	3
B 310 °C	1779.91	3
C	184.64	3
A* 128 to	1.83498	5
B* 270 °C	1694.27	5
K		
c		
t_k to		
t_x °C		
A' 10 to	7.60270	5
B' 128 °C	2075.9	5
C'	210.0	5
A'* 20 to	2.26106	5
B'* 128 °C	1975.7	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	257.47	5

		Ref.
dt/dP °C/mm		
25°C	196.5	5
BP	0.05570	4
t_e	0.03550	5
30 mm	0.7995	4
ΔHm cal/g		
ΔHv cal/g		
25°C	67.81	5
30 mm	59.28	5
BP	49.38	5
t_e	47.32	5
t_e (d, e)	46.42	5
$\Delta Hv/T_e$	20.11	5
d 128 to	71.67	5
e 250 °C	0.0961	5
d' 20 to	69.86	5
e' 128 °C	0.0821	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9300	5
t_e	0.9097	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C	27.86	5
γ 30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	344.5	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

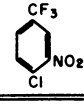
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1997 (1953) Kardon and Saylor

No. 3

NAME	4-Chloro-3-nitrobenzotrifluoride 4-Chloro-α, α, α-trifluoro-3-nitrotoluene	STRUCTURAL FORMULA 
Mole % Pur.	Ref.	Molecular Formula $C_7H_3F_3ClNO_2$ Molecular Weight 225.559

		Ref.
F.P. °C	-2.54	3
F.P. 100%		
B.P. °C		
760 mm	222.58	3
100	153.15	4
30	122.13	4
10	98.30	4
1	58.2	5
Pressure		
mm 25°C	0.0808	5
t_e	1334.3	5
Density		
g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index		
n_D 20°C	1.4895	3
25	1.4874	4
30	1.4852	3
"C"		
MR (Obs.)		
MR (Calc.)		
(nD-d/2)		
Dielectric	12.8	3
A 122 to	7.15778	3
B 360 °C	1738.71	3
C	183.95	3
A* 122 to	1.82994	5
B* 260 °C	1650.18	5
K		
c		
t_k to		
t_x °C		
A' 20 to	7.51566	5
B' 122 °C	1964.69	5
C'	203.23	5
A'* 20 to	2.19002	5
B'* 122 °C	1871.30	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	247.22	5

		Ref.
dt/dP		
°C/mm		
25°C	142.51	4
BP	0.0543	4
t_e	0.0348	5
30 mm	0.7800	4
ΔHm cal/g		
ΔHv cal/g		
25°C	68.04	5
30 mm	58.84	5
BP	49.31	5
t_e	46.89	5
t_e (d, e)	46.97	5
$\Delta Hv/T_e$	21.33	5
d 125 to	70.43	5
e 255 °C	0.0949	5
d' 20 to	70.40	5
e' 125 °C	0.0947	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9400	4
t_e	0.9215	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η °C		
B^v		
A^v to °C		
(B^v)		
(A^v) to °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C			
γ 30			
40			
Parachor [P]			
20°C			
30			
40			
Sugd.		344.5	5
Exp. L.l. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 75, 1997 (1953) Kardon and Saylor

No. 4

NAME	Phenylhydrazine		STRUCTURAL FORMULA
Mole % Pur. 99.63	Ref. 1	Molecular Formula $C_6H_8N_2$	Molecular Weight 108.140

		Ref.
F.P. °C	19.60	1
F.P. 100%	19.79	1
B.P. °C		
760 mm	243.09	1
100	172.11	1
30	139.9	5
10	115.0	5
1	72.8	5
Pressure		
mm 25°C	0.0278	5
t_e	1358.1	5
Density		
g/ml 20°C	1.09859	1
d_4^t 25	1.09445	1
30	1.08056	1
a	1.11515	4
b	-0.0_3828	4
Ref. Index		
n_D 20°C	1.60837	1
25	1.60604	1
30	1.59455	1
"C"	0.7900	4
MR (Obs.)	34.054	4
MR (Calc.)	33.447	5
(nD-d/2)	1.05908	4
Dielectric	7.106	1
A | 140 to	7.41124	4
B | 335 °C	1975.68	4
C	193.	5
A* | 140 to	1.77454	5
B* | 280 °C	1889.2	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.78509	5
B' | 140 °C	2232.5	5
C'	214.	5
A'* 25 to	2.11369	5
B'* 140 °C	2128.3	5
Ac | 335 to	7.8233	5
Bc | t_c °C	2434.5	5
Cc	251.	5
Cryos. A*	0.01972	1
consts. B*		
t_e °C	268.79	5

		Ref.
dt/dP °C/mm		
25°C	400.3	5
BP	0.05500	5
t_e	0.0345	5
30 mm	0.8122	5
ΔHm cal/g	31.04	4
ΔHv cal/g		
25°C	147.08	5
30 mm	128.7	5
BP	107.68	5
t_e	103.15	5
t_e (d, e)	102.44	5
$\Delta Hv/T_e$	20.58	5
d | 140 to	157.26	5
e | 260 °C	0.2040	5
d' | 25 to	151.08	5
e' | 140 °C	0.1598	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9218	5
t_e	0.9007	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	13.393	1
40	6.2138	1
60	dec.	1
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °K		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | | to			
g | | °K			
h |			
f' | | to			
g' | | °K			
h' |			
m | | to			
n | | °K			
o |			
m' | | to			
n' | | °K			
o' |			
Surface tension			
dynes/cm. 20°C		53.57	5
γ 30		51.97	5
40		50.41	5
Parachor [P]			
20°C			
30			
40			
N = 12.5	Sugd.	266.3	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.75\ T_c$

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow

LITERATURE REFERENCES:

No. 5

NAME	p-Phenetidine	STRUCTURAL FORMULA
Mole % Pur. 99.88	Ref. 1	Molecular Formula $C_8H_{11}NO$ — Molecular Weight 137.176

		Ref.
F.P. °C	4.65	1
F.P. 100%		
B.P. °C		
760 mm	248.59	1
100	178.92	1
30	147.76	4
10	123.8	5
1	83.1	5
Pressure		
mm 25°C	0.0092	5
t_e	1377.2	5
Density		
g/ml 20°C	1.06117	1
d_4^{25}	1.05680	1
d_4^{30}	1.05243	4
a	1.07865	4
b	-0.0_3874	4
Ref. Index		
n_D 20°C	1.56101	1
25	1.55856	1
30	1.54660	1
"C"	0.6905	4
MR (Obs.)	41.860	4
MR (Calc.)	41.496	5
(nD-d/2)	1.03043	4
Dielectric	7.431	1
A | 148 to	7.16534	4
B | 300 °C	1750.62	4
C	160.0	4
A* | 148 to	1.64219	5
B* | 285 °C	1676.51	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.87653	5
B' | 148 °C	2216.5	5
C'	198.6	5
A'* 20 to	2.32186	5
B'* 148 °C	2122.0	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A*	0.01773	1
consts. B*		
t_e °C	274.79	5

		Ref.
dt/dP		
°C/mm		
25°C	1064.8	5
BP	0.05449	5
t_e	0.03405	5
30 mm	0.7832	4
ΔHm cal/g	19.80	4
ΔHv cal/g		
25°C	131.35	5
30 mm	109.25	5
BP	88.09	5
t_e	83.79	5
t_e (d, e)	82.35	5
$\Delta Hv/T_e$	20.97	5
d | 148 to	140.24	5
e | 260 °C	0.2098	5
d' | 20 to	135.85	5
e' | 148 °C	0.1800	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9259	5
t_e	0.9033	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	13.532	1
40	5.4381	1
60	2.9766	1
80	1.9206	1
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	40.2	1
30	39.25	1
40	38.25	1
Parachor [P]		
20°C	325.5	4
30	326.2	4
40	326.5	4
O=20 N=12.5 Sugd.	334.7	5
Exp. L.l. %/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow Dist. Chromat.

LITERATURE REFERENCES:

No. 6

NAME	N-Butylacetanilide		STRUCTURAL FORMULA
			
Mole % Pur. 99.74	Ref. 1	Molecular Formula $C_{12}H_{17}NO$	Molecular Weight 191.264

		Ref.
F.P. °C	24.47	1
F.P. 100%	24.54	1
B.P. °C		
760 mm	281.07	1
100	203.40	1
30	168.4	4
10	141.4	5
1	95.7	1
Pressure mm 25°C	0.00491	5
t_e	1439.	5
Density g/ml 20°C	0.99115	1
d_4^t 25	0.98707	1
30	0.98313	4
a	1.00745	4
b	-0.0_3802	4
Ref. Index n_D 20°C	1.51457	1
25	1.51246	1
30	1.50772	1
"C"		
MR (Obs.)	58.150	4
MR (Calc.)	58.336	5
(nD-d/2)	1.01900	4
Dielectric	11.66	1
A | 170 to	7.32668	1
B | 380 °C	2085.31	1
C	188.08	1
A* | 168 to	1.9292	5
B* | 320 °C	2000.0	5
K		
c		
t_k | to		
t_x | °C		
A' | 60 to	7.6952	5
B' | 170 °C	2356.3	5
C'	210.5	5
A'* 60 to	2.2568	5
B'* 170 °C	2250.0	5
Ac | 380 to	9.2820	5
Bc | t_c °C	4975.	5
Cc	504.3	5
Cryos. A° consts. B°	0.02275	1
t_e °C	312.16	5

		Ref.
dt/dP °C/mm		
25°C	2082.0	5
BP	0.06029	4
t_e	0.0362	5
30 mm	0.8822	4
ΔHm cal/g	22.07	4
ΔHv cal/g		
25°C	90.35	5
30 mm	76.55	5
BP	62.83	5
t_e	59.66	5
t_e (d, e)	59.04	5
ΔHv/T_e	19.49	5
d | 160 to	97.07	5
e | 300 °C	0.1218	5
d' | 25 to	92.76	5
e' | 160 °C	0.0962	5
d_c g/ml	0.311	5
v_c ml/g	3.21	5
t_c °C	494.	5
P_c mm	19880.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9073	5
t_e	0.8836	5
t_c	0.255	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	16.2754	1
40	6.6868	1
60	3.6049	1
80	2.2885	1
B^v | to		
A^v | °C		
(B^v) | 55 to	1124.8	4
(A^v) | 90 °C	3.18632	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm. 20°C		35.96	1
γ 30		34.96	1
40		33.88	1
Parachor [P] 20°C		472.6	4
30		473.1	4
40		473.2	4
Sugd.		468.4	5
Exp. L.1.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.85\ T_c$

+ grams/100 grams solvent

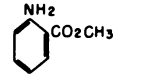
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow

LITERATURE REFERENCES:

No. 7

NAME	Methyl anthranilate o-Amino methylbenzoate	STRUCTURAL FORMULA 
Mole % Pur. 99.90	Ref. 1	Molecular Formula $C_8H_9NO_2$ — Molecular Weight 151.160

		Ref.
F.P. °C	24.42	1
F.P. 100%		
B.P. °C		
760 mm	259.82	1
100	184.19	1
30	150.23	4
10	124.20	5
1	80.0	5
Pressure		
mm 25°C	0.0169	5
t_e	1427.0	5
Density		
g/ml 20°C	1.16725	1
d_4^t 25	1.16283	1
30	1.15841	4
a	1.18493	4
b	-0.0_3884	4
Ref. Index		
n_D 20°C	1.58327	1
25	1.58096	1
30	1.57856	4
"C"	0.6509	4
MR (Obs.)	43.30	4
MR (Calc.)	43.510≠	5
(nD-d/2)	0.99965	4
Dielectric	3.721	1
A | 150 to	7.24299	4
B | 260 °C	1963.72	4
C	190.35	4
A* | 150 to	1.71345	5
B* | 320 °C	1865.73	5
K		
c		
t_k | to		
t_x | °C		
A' | 20 to	7.57558	5
B' | 150 °C	2196.85	5
C'	210.0	5
A'* 20 to	2.04652	5
B'* 150 °C	2093.53	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01619	1
consts. B°		
t_e °C	299.95	5

		Ref.
dt/dP		
°C/mm		
25°C	646.0	5
BP	0.05897	4
t_e	0.03575	5
30 mm	0.8551	4
ΔHm cal/g	18.73	4
ΔHv cal/g		
25°C	107.08	5
30 mm	91.90	5
BP	79.11	5
t_e	72.69	5
t_e (d, e)	74.45	5
$\Delta Hv/T_e$	19.18	5
d | 150 to	109.45	5
e | 270 °C	0.1167	5
d' | 25 to	110.11	5
e' | 150 °C	0.1212	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9325	5
t_e	0.8949	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	7.1420	1
40	4.5046	1
60	2.6784	1
80	1.7855	1
B^v | 15 to	1533.4	4
A^v | 45 °C	5.76095	4
(B^v) | 55 to	1036.3	4
(A^v) | 85 °C	3.31773	4
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f | to		
g | °K		
h		
f' | to		
g' | °K		
h'		
m | to		
n | °K		
o		
m' | to		
n' | °K		
o'		
Surface tension		
dynes/cm. 20°C	44.12	1
γ 30	43.02	1
40	41.92	1
Parachor [P]		
20°C	333.76	4
30	334.18	4
40	334.6	4
Sugd.	340.1	5
Exp. L.		
%/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water	0.285	1
Water in	1.128	1

≠ Taking C = O as double bond and conjugated

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 8

NAME	Ethyl anthranilate o-Amino ethyl Benzoate	STRUCTURAL FORMULA
Mole % Pur. 99.77	Ref.	Molecular Formula $C_9H_{11}NO_2$
		Molecular Weight 165.186

		Ref.
F.P. °C	14.30	1
F.P. 100%	14.37	1
B.P. °C		
760 mm	268.84	1
100	192.8	4
30	159.0	5
10	133.2	5
1	90.1	5
Pressure		
mm 25°C	0.0049	5
t_e	1392.	5
Density		
g/ml 20°C	1.11788	1
d_4^t 25	1.11348	1
30	1.10908	4
a	1.13548	4
b	-0.0388	4
Ref. Index		
n_D 20°C	1.56503	1
25	1.56234	1
30	1.55780	1
"C"	0.6958	4
MR (Obs.)	48.098	4
MR (Calc.)	46.126	5
(nD-d/2)	1.00609	4
Dielectric	4.140	1
A | 160 to	6.92119	1
B | 320 °C	1734.75	1
C	159.67	1
A* | 160 to	1.50060	5
B* | 310 °C	1668.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.26417	5
B' | 160 °C	1960.2	5
C'	179.7	5
A'* 25 to	1.80529	5
B'* 160 °C	1876.8	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.03218	1
consts. B°		
t_e °C	299.6	5

		Ref.
dt/dP		
°C/mm		
25°C	1895.3	5
BP	0.0607	4
t_e	0.0379	5
30 mm	0.8473	5
ΔHm cal/g	31.97	4
ΔHv cal/g		
25°C	115.18	5
30 mm	88.39	5
BP	70.00	5
t_e	64.74	5
t_e (d, e)	64.86	5
$\Delta Hv/T_e$	18.67	5
d | 160 to	115.01	5
e | 300 °C	0.1674	5
d' | 25 to	120.18	5
e' | 160 °C	0.1999	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9181	5
t_e	0.8736	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	9.4307	1
40	4.5646	1
60	2.7268	1
100	1.8452	1
B^v | 30 to	1087.83	4
A^v | 90 °C	3.18613	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		39.62	1
γ 30		38.75	1
40		37.75	1
Parachor [P]			
20°C		370.9	4
30		371.6	4
40		372.1	4
Sugd.		379.5	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

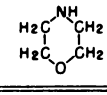
SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 9

NAME	Morpholine Tetrahydro-p-isoxazine	STRUCTURAL FORMULA
Mole % Pur. 99.71	Ref. 1	Molecular Formula C_4H_9NO — Molecular Weight 87.120



		Ref.
F.P. °C	-4.75	1
F.P. 100%		
B.P. °C		
760 mm	128.29	1
100	70.54	1
30	44.73	4
10	24.86	4
1	-37.0	5
Pressure		
mm 25°C	10.08	5
t_e	1082.6	5
Density		
g/ml 20°C	1.00047	1
d_4^t 25	0.99573	1
30	0.99084	4
a	1.01970	4
b	-0.00096	4
Ref. Index		
n_D 20°C	1.45480	1
25	1.45265	1
50	1.44158	1
"C"	0.5711	4
MR (Obs.)	23.617	4
MR (Calc.)	23.685	5
(nD-d/2)	0.95457	4
Dielectric	7.176	1
A 44 to	7.16030	4
B 170 °C	1447.70	4
C	210.0	4
A* 44 to	1.48270	5
B* 160 °C	1366.046	5
K		
c		
t_k to		
t_x °C		
A' 0 to	7.71813	5
B' 44 °C	1745.8	5
C'	235.0	5
A'* 15 to	1.99494	5
B'* 44 °C	1643.4	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*	0.02421	1
consts. B*		
t_e °C	140.887	5

		Ref.
dt/dP		
°C/mm		
25°C	1.3945	5
BP	0.04517	4
t_e	0.03412	5
30 mm	0.6489	4
ΔHm cal/g	39.77	4
ΔHv cal/g		
25°C	120.61	5
30 mm	118.44	5
BP	101.64	5
t_e	99.51	5
t_e (d, e)	99.22	5
$\Delta Hv/T_e$	20.935	5
d 44 to	127.40	5
e 135 °C	0.2010	5
d' 15 to	123.36	5
e' 44 °C	0.1100	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9500	5
t_e	0.9397	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	2.2900	1
40	1.5216	1
60	1.1010	1
80	0.8430	1
B^v 30 to	709.3	4
A^v 90 °C	3.91761	4
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f g h	to °K		
f' g' h'	to °K		
m n o	to °K		
m' n' o'	to °K		
Surface tension			
dynes/cm. 20°C		37.84	1
γ 30		36.50	1
40		35.14	1
Parachor [P]			
20°C		216.0	4
30		216.1	4
N = 14.4	40	216.2	4
O = 20	Sugd.	213.8	5
Exp. L.l.%/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 10

NAME	Furan Furfurane	STRUCTURAL FORMULA
Mole % Pur. 99.98	Ref. 3	Molecular Formula C_4H_4O
		Molecular Weight 68.072

		Ref.
F. P. °C	-85.65	3
F. P. 100%		
B. P. °C		
760 mm	31.360	3
100	-14.085	4
30	-35.14	4
10	-50.20	4
1	-75.6	5
Pressure		
mm 25°C	599.9	4
t_e	821.4	5
Density		
g/ml 10°C	0.95144	3
d_4^t 15	0.94467	3
20	0.93781	3
a	0.97864	4
b	-0.00130	4
Ref. Index		
n_D 20°C	1.42140	3
25		
30		
"C"	0.5973	4
MR (Obs.)	18.422	4
MR (Calc.)	19.181	5
(nD-d/2)	0.94568	4
Dielectric		
A -35 to	6.97523	3
B 90 °C	1060.851	3
C	227.740	3
A* -35 to	1.33663	5
B* 40 °C	1006.9	5
K		
c		
t_k to		
t_x °C		
A' to		
B' °C		
C'		
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°		
consts. B°		
t_e °C	33.51	5

			Ref.
dt/dP °C/mm			
25°C		0.04359	5
BP		0.04131	4
t_e		0.03402	5
30 mm		0.5080	4
ΔHm cal/g		13.35	3
ΔHv cal/g			
25°C		96.38	3
30 mm		108.52	5
BP		95.105	3
t_e		94.29	5
t_e (d, e)		94.63	5
$\Delta Hv/T_e$		20.93	5
d -35 to		101.43	5
e 35 °C		0.2017	5
d' to			
e' °C			
d_c g/ml			
v_c ml/g			
t_c °C			
P_c mm			
PV/RT			
25°C		0.9697	4
30 mm		1.0000	5
BP		0.9655	4
t_e		0.9630	5
t_c			
ΔHc kcal/m			
ΔHf		14.90	3
ΔFf			
Viscosity centistokes			
η °C			
B^v to			
A^v °C			
(B^v) to			
(A^v) °C			
c_p liq. 1.0 °K		0.3861	3
21.6		0.4000	3
c_p vap. °K			
c_v vap.			

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension		
dynes/cm. 20°C	22.34	5
γ 30		
40		
Parachor [P]		
20°C		
30		
40		
Sugd.	162.5	5
Exp. L. 1. %/wt.		
u.		
Dispersion		
Flash Point °C		
Fire Point		
M Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		3
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 74, 4662, (1952) G. B. Guthrie et al.

No. 11

NAME	Cyclooctatetraene		STRUCTURAL FORMULA
Mole % Pur. 99.9	Ref. 3	Molecular Formula C_8H_8	Molecular Weight 104.144

		Ref.
F.P. °C	-4.68	3
F.P. 100%		
B.P. °C 760 mm	140.557	4
100	78.163	3
30	50.42	4
10	29.1	4
1	-6.3	5
Pressure mm 25°C	7.87	5
t_e	1124.0	5
Density g/ml 20°C		
d_4^t 25		
30		
a		
b		
Ref. Index n_D 20°C		
25		
30		
"C"		
MR (Obs.)	40.156	5
MR (Calc.) (nD-d/2)		
Dielectric		
A (50 to	7.06926	3
B 210 °C)	1504.036	3
C	218.534	3
A* (50 to	1.44012	5
B* 170 °C)	1412.1	5
K		
c		
t_k to		
t_x °C		
A' (0 to	7.30765	5
B' 50 °C)	1635.0	5
C'	230.	5
A'* 0 to	1.66300	5
B'* 50 °C	1534.8	5
Ac to		
Bc t_c °C		
Cc		
Cryos. A*		
consts. B*		
t_e °C	155.730	5

		Ref.
dt/dP °C/mm		
25°C	2.195	5
BP	0.04900	5
t_e	0.03598	5
30 mm	0.6962	4
ΔHm cal/g	25.87	3
ΔHv cal/g		
25°C	98.24	5
30 mm	95.67	5
BP	83.60	5
t_e	81.74	5
t_e (d, e)	81.57	5
$\Delta Hv/T_e$	19.85	5
d (50 to	102.42	5
e 160 °C)	0.1339	5
d' (0 to	100.77	5
e' 50 °C)	0.1011	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9530	5
t_e	0.9418	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v to		
A^v °C		
(B^v) to		
(A^v) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

		Ref.
f to		
g °K		
h		
f' to		
g' °K		
h'		
m to		
n °K		
o		
m' to		
n' °K		
o'		
Surface tension dynes/cm. 20°C		
30		
40		
Parachor [P] 20°C		
30		
40		
Sugd.	268.0	5
Exp. L.1.%/wt. u.		
Dispersion		
Flash Point °C		
Fire Point		
M. Spec.		
Ultra V.		
X-Ray Dif.		
Infrared		
Solubility in +		
Acetone		
Carbon tet.		
Benzene		
Ether		
n-Heptane		
Ethanol		
Water		
Water in		

+ grams/100 grams solvent

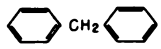
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 71, 1634, (1949), D. W. Scott et al.

No. 12

NAME	Diphenylmethane	STRUCTURAL FORMULA
		

Mole % Pur. 99.64	Ref. 1	Molecular Formula $C_{13}H_{12}$	Molecular Weight 168.226

		Ref.
F.P. °C	25.21	1
F.P. 100%	25.35	1
B.P. °C		
760 mm	264.25	1
100	186.73	1
30	152.08	5
10	125.5	5
1	80.6	5
Pressure		
mm 25°C	0.0170	5
t_e	1416.	5
Density		
g/ml 20°C	1.00592	1
d_4^t 25	1.00192	1
30	0.99792	4
a	1.02192	5
b	-0.0_380	5
Ref. Index		
n_D 20°C	1.57527	1
25	1.57074	1
30	1.56390	1
"C"	0.7456	4
MR (Obs.)	55.284	4
MR (Calc.)	55.032	5
(nD-d/2)	1.07409	4
Dielectric	2.541	1
A | 150 to	7.16125	4
B | 310 °C	1944.42	4
C	190.	5
A* | 150 to	1.69830	5
B* | 305 °C	1853.7	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.51935	5
B' | 150 °C	2197.1	5
C'	211.6	5
A'* 25 to	2.03468	5
B'* 150 °C	2092.8	5
Ac | 310 to	7.60249	5
Bc | t_c °C	2410.9	5
Cc	246.8	5
Cryos. A*	0.02472	1
consts. B*		
t_e °C	294.88	5

		Ref.
dt/dP		
°C/mm		
25°C	649.6	5
BP	0.06064	5
t_e	0.03708	5
30 mm	0.8712	5
ΔHm cal/g	25.98	4
ΔHv cal/g		
25°C	94.97	5
30 mm	81.74	5
BP	67.78	5
t_e	64.42	5
t_e (d, e)	63.97	5
$\Delta Hv/T_e$	19.08	5
d | 150 to	100.67	5
e | 295 °C	0.1245	5
d' | 25 to	97.57	5
e' | 150 °C	0.1041	5
d_c g/ml		
v_c ml/g		
t_c °C	494.4	5
P_c mm	22367.	5
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9203	5
t_e	0.8961	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	3.1807	1
40	2.1351	1
60	1.5499	1
80	1.1896	1
B^v | 30 to	702.51	4
A^v | 90 °C	2.08643	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f |	to		
g |	°K		
h |			
f' |	to		
g' |	°K		
h' |			
m |	to		
n |	°K		
o |			
m' |	to		
n' |	°K		
o' |			
Surface tension			
dynes/cm. 20°C		38.06	1
γ 30		36.98	1
40		35.99	1
Parachor [P]			
20°C		415.4	4
30		415.7	4
40		416.2	4
Sugd.		419.0	5
Exp. L.1.%/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.76\,T_c$

+ grams/100 grams solvent

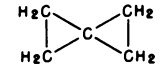
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Dow

LITERATURE REFERENCES:

No. 13

NAME	Spiropentane			STRUCTURAL FORMULA
Mole % Pur. 99.87	Ref. 3	Molecular Formula C_5H_8	Molecular Weight 68.114	

		Ref.			Ref.			Ref.
F.P. °C	-107.06	3	dt/dP °C/mm			f | to		
F.P. 100%			25°C	0.05709	4	g | °K		
B.P. °C			BP	0.03819	4	h		
760 mm	38.977	3	t_e	0.03529	5	f' | to		
100	-9.41	4	30 mm	0.5333	4	g' | °K		
30	-30.72	4	ΔHm cal/g	22.61	3	h'		
10	-46.9	5				m | to		
1	-73.4	5	ΔHv cal/g			n | °K		
Pressure			25°C	96.485	3	o		
mm 25°C	457.7	4	30 mm	106.63	4	m' | to		
t_e	842.0	5	BP	93.86	3	n' | °K		
Density			t_e	93.32	5	o'		
g/ml 20°C	0.755	3'	t_e (d, e)	93.31	5	Surface tension		
d_4^t 25 30			ΔHv/T_e	20.14	5	dynes/cm. 20°C		
a	0.7744	5	d | -30 to	100.967	4	γ 30		
b	-0.0009	5	e | 50 °C	0.1824	4	40		
Ref. Index			d' | to			Parachor [P]		
n_D 20°C	1.41200	3	e' | °C			20°C		
25			d_c g/ml	0.220	5	30		
30			v_c ml/g	4.54	5	40		
"C"			t_c °C	193.6	5	Sugd.		
MR (Obs.)	22.43	4	P_c mm	25000.	5	Exp. L. l. %/wt.		
MR (Calc.)	22.32	5	PV/RT			u.		
(nD-d/2)	1.0345	4	25°C	0.9732	4	Dispersion		
Dielectric	2.016	5	30 mm	1.0054	4	Flash Point °C		
A | -30 to	6.91794	3	BP	0.9625	4	Fire Point		
B | 100 °C	1090.589	3	t_e	0.9602	5	M. Spec.		
C	231.165	3	t_c	0.265	5	Ultra V.		
A* | -30 to	1.20119	4	ΔHc kcal/m			X-Ray Dif.		
B* | 60 °C	1015.87	4	ΔHf			Infrared		
K			ΔFf			Solubility in +		
c			Viscosity centistokes			Acetone	∞	
t_k | to			η °C			Carbon tet.	∞	
t_x | °C						Benzene	∞	
A' | to						Ether	∞	
B' | °C			B^v | to			n-Heptane	∞	
C'			A^v | °C			Ethanol	∞	
A'* to			(B^v) | to			Water		
B'* °C			(A^v) | °C			Water in		
Ac | 100 to	8.06920	5	c_p liq. °K					
Bc | t_c °C	1975.29	5	c_p vap. °K					
Cc	344.44	5	c_v vap.					
Cryos. A° consts. B°								
t_e °C	41.983	5						

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Lit.

PURIFICATION: Lit.

LITERATURE REFERENCES: 3 J.A.C.S. 72, 4664 (1950) Scott, Finke, Hubbard, McCullough, Gross, Williamson, Washington, and Huffman; 3' J.A.C.S. 66, 314 (1944) Murray and Stevenson.

No. 14

NAME	Thiacyclobutane Trimethylene sulfide	STRUCTURAL FORMULA
Mole % Pur. 99.95	Ref. 3	Molecular Formula C_3H_6S — Molecular Weight 74.124

		Ref.
F. P. °C	-73.25	3
F. P. 100%		
B. P. °C 760 mm	94.969	3
100	38.875	3
30	14.013	4
10	-14.90	4
1	-36.20	5
Pressure mm 25°C	52.61	4
t_e	1007.3	5
Density g/ml 20°C	1.02000	3
d_4^t 25	1.01472	3
30	1.00957	3
a	1.04097	4
b	-0.00105	4
Ref. Index n_D 20°C	1.51020	3
25	1.50738	3
30	1.50448	3
"C"	0.6572	4
MR (Obs.)	21.743	4
MR (Calc.)	21.824	5
(nD-d/2)	1.00020	4
Dielectric		
A | -15 to	7.01667	3
B | 210 °C	1321.331	3
C	224.513	3
A* | -15 to	1.26847	5
B* | 115 °C	1234.26	5
K		
c		
t_k | to		
t_x | °C		
A' | to		
B' | °C		
C'		
A'* to		
B'* °C		
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.023	3
consts. B°		
t_e °C	104.707	5

		Ref.
dt/dP °C/mm		
25°C	0.3889	4
BP	0.04414	4
t_e	0.03536	5
30 mm	0.6233	4
ΔHm cal/g		
ΔHv cal/g		
25°C	115.48	3'
30 mm	118.26	5
BP	104.28	5
t_e	102.61	5
t_e (d, e)	102.60	5
ΔHv/T_e	20.12	5
d | 10 to	120.68	5
e | 115 °C	0.1727	5
d' | to		
e' | °C		
d_c g/ml		
v_c ml/g		
t_c °C	302.0	5
P_c mm		
PV/RT		
25°C	0.9999	5
30 mm	1.0000	5
BP	0.9650	5
t_e	0.9580	5
t_c		
ΔHc kcal/m		
ΔHf	25.87	3'
ΔFf	16.43	3'
Viscosity centistokes		
η 20 °C	0.640	3
25	0.609	3
30	0.578	3
B^v | 10 to	393.37	4
A^v | 50 °C	2.46454	4
(B^v) | to		
(A^v) | °C		
c_p liq. 298 °K	0.365	3
308	0.3707	3
c_p vap. 328 °K	0.279	3'
c_v vap.		

			Ref.
f | to			
g | °K			
h			
f' | to			
g' | °K			
h'			
m | to			
n | °K			
o			
m' | to			
n' | °K			
o'			
Surface tension dynes/cm.	20°C	36.3	3
γ	30	35.6	3
	40	35.0	3
Parachor [P]	20°C	178.41	4
	30	178.47	4
	40	178.62	4
	Sugd.	176.8	5
Exp. L. l. %/wt. u. Dispersion			
Flash Point °C Fire Point			
M Spec. Ultra V. X-Ray Dif. Infrared			
Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES: 3 API Res. Proj. 48; 3' ACS 75, 2795 (1953)

No. 15

NAME	Diphenyloxide Phenyl ether	STRUCTURAL FORMULA
Mole % Pur. 99.86	Ref. 1	Molecular Formula $C_{12}H_{10}O$	Molecular Weight 170.200

		Ref.
F. P. °C	26.79	1
F. P. 100%	26.84	1
B. P. °C		
760 mm	257.93	1
100	181.3	1
30	147.13	4
10	121.	5
1	77.	5
Pressure		
mm 25°C	0.0213	5
t_e	1402.6	5
Density		
g/ml 20°C	1.07480≠	1
d_4^t 25	1.07043≠	1
30	1.06608	4
a	1.09228	4
b	-0.0_3874	4
Ref. Index		
n_D 25°C	1.57870	1
45	1.56919	1
50	1.56681	1
"C"	0.7046	4
MR (Obs.)	52.818	4
MR (Calc.)	52.057	5
(nD-d/2)	1.04359	4
Dielectric	3.658	1
A | 145 to	7.09894	1
B | 325 °C	1871.92	1
C	185.84	1
A* | 145 to	1.6455	5
B* | 300 °C	1783.4	5
K		
c		
t_k to		
t_x °C		
A' | 25 to	7.4531≠	5
B' | 147 °C	2115.2	5
C'	206.8	5
A'* 25 to	1.9826≠	5
B'* 147 °C	2015.	5
Ac | 325 to	7.6329	5
Bc | t_c °C	2462.1	5
Cc	260.9	5
Cryos. A*	0.02177	1
consts. B*		
t_e °C	287.82	4

		Ref.
dt/dP		
°C/mm		
25°C	517.70	5
BP	0.06012	4
t_e	0.03711	5
30 mm	0.8574	4
ΔHm cal/g	22.90	4
ΔHv cal/g		
25°C	94.10	5
30 mm	80.19	5
BP	66.16	5
t_e	62.86	5
t_e (d, e)	62.37	5
$\Delta Hv/T_e$	19.07	5
d | 145 to	98.83	5
e | 290 °C	0.1267	5
d' | 25 to	96.94	5
e' | 145 °C	0.1138	5
d_c g/ml	0.312	5
v_c ml/g	3.203	5
t_c °C	492.5	5
P_c mm	23380.	5
PV/RT		
25°C.	1.0000	5
30 mm	1.0000	5
BP	0.9223	5
t_e	0.8985	5
t_c	0.245	5
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity		
centistokes		
η 20 °C	3.9663	1
40	2.4594	1
60	1.7065	1
80	1.2716	1
B^v | 35 to	792.3	4
A^v | 85 °C	3.86114	4
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		40.05	1
30		38.82	1
40		37.73	1
Parachor [P]			
20°C		398.4	4
30		398.5	4
40		399.0	4
Sugd.		398.0	5
Exp. L.	l. %/wt.		
	u.		
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

$T_R = 0.78\ T_c$

≠ Supercooled

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 16

NAME	p-Bromo diphenyl oxide p-Bromophenyl phenyl ether	STRUCTURAL FORMULA
Mole % Pur. 99.60	Ref. 1	Molecular Formula $C_{12}H_9BrO$ — Molecular Weight 249.108

		Ref.
F.P. °C	18.72	1
F.P. 100%		
B.P. °C		
760 mm	310.14	1
100	226.78	4
30	190.65	4
10	163.	5
1	118.	5
Pressure		
mm 25°C	0.0_3217	5
t_e	1594.5	5
Density		
g/ml 20°C	1.42078	1
d_4^t 25	1.41555	1
30	1.41030	4
a	1.44170	4
b	-0.00105	4
Ref. Index		
n_D 20°C	1.60839	1
25	1.60619	1
50	1.60135	1
"C"		
MR (Obs.)	60.658	4
MR (Calc.)	59.822	5
(nD-d/2)	0.89800	4
Dielectric		
A 190 to	6.68143	1
B 400 °C	1683.84	1
C	132.90	1
A* 190 to	1.3397	5
B* 360 °C	1594.3	5
K		
c		
t_k to		
t_x °C		
A' 25 to	7.0093	5
B' 190 °C	1902.7	5
C'	153.3	5
A'* to		
B'* °C		
Ac to		
Bc t_c °C		
Cc		
Cryos. A°	0.02210	1
consts. B°		
t_e °C	351.13	5

		Ref.
dt/dP		
°C/mm		
25°C	33388.	5
BP	0.0666	5
t_e	0.03789	5
30 mm	0.9000	4
ΔHm cal/g	15.00	4
ΔHv cal/g		
25°C	95.16	5
30 mm	63.57	5
BP	50.4	5
t_e	46.75	5
t_e (d, e)	45.89	5
$\Delta Hv/T_e$	18.65	5
d 190 to	84.58	5
e 330 °C	0.1102	5
d' to		
e' °C		
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9446	5
t_e	0.9179	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η 20 °C	5.7395	1
40	3.2605	1
60	2.1438	1
80	1.5426	1
B^V to		
A^V °C		
(B^V) to		
(A^V) °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f to			
g °K			
h			
f' to			
g' °K			
h'			
m to			
n °K			
o			
m' to			
n' °K			
o'			
Surface tension			
dynes/cm. 20°C	42.69		1
γ 30	41.49		1
40	40.47		1
Parachor [P]			
20°C	448.1		4
30	448.6		4
40	448.4		4
O = 18 Sugd.	448.8		5
Exp. L. 1. %/wt. u.			
Dispersion			
Flash Point °C			
Fire Point			
M Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

No. 17

NAME	o-Chlorobenzaldehyde	STRUCTURAL FORMULA
Mole % Pur. 99.61	Ref. 1	Molecular Formula C_7H_5ClO
		Molecular Weight 141.567

		Ref.
F. P. °C	12.19	1
F. P. 100%	12.39	1
B. P. °C		
760 mm	211.89	1
100	140.40	4
30	108.63	5
10	84.31	5
1	43.53	5
Pressure		
mm 25°C	0.2718	5
t_e	1307.6	5
Density		
g/ml 20°C	1.24829	1
d^t_4 25	1.24320	1
30	1.23811	4
a	1.26865	4
b	-0.00102	4
Ref. Index		
n_D 20°C	1.56620	1
25	1.56384	1
30	1.56161	4
"C"	0.59201	4
MR (Obs.)	37.005	4
MR (Calc.)	37.073	5
(nD-d/2)	0.94206	4
Dielectric		
A | 109 to	7.06216	1
B | 290 °C	1718.10	1
C	199.	1
A* | 109 to	1.52895	5
B* | 246 °C	1623.5	5
K		
c		
t_k | to		
t_x | °C		
A' | 25 to	7.38896	5
B' | 109 °C	1925.0	5
C'	217.	1
A'* 25 to	1.85246	5
B'* 109 °C	1823.9	5
Ac | to		
Bc | t_c °C		
Cc		
Cryos. A°	0.01986≠	1
consts. B°		
t_e °C	236.44	5

		Ref.
dt/dP		
°C/mm		
25°C	48.61	5
BP	0.05615	4
t_e	0.03665	5
30 mm	0.7974	5
ΔHm cal/g	22.67	4
ΔHv cal/g		
25°C	94.47	5
30 mm	85.55	5
BP	72.53	5
t_e	69.72	5
t_e (d, e)	69.43	5
ΔHv/T_e	19.37	5
d | 109 to	99.25	5
e | 236 °C	0.1261	5
d' | 25 to	97.14	5
e' | 109 °C	0.1067	5
d_c g/ml		
v_c ml/g		
t_c °C		
P_c mm		
PV/RT		
25°C	1.0000	5
30 mm	1.0000	5
BP	0.9405	5
t_e	0.9222	5
t_c		
ΔHc kcal/m		
ΔHf		
ΔFf		
Viscosity centistokes		
η °C		
B^v | to		
A^v | °C		
(B^v) | to		
(A^v) | °C		
c_p liq. °K		
c_p vap. °K		
c_v vap.		

			Ref.
f	to		
g	°K		
h			
f'	to		
g'	°K		
h'			
m	to		
n	°K		
o			
m'	to		
n'	°K		
o'			
Surface tension			
dynes/cm. 20°C		31.70	5
30		30.68	5
40		29.68	5
Parachor [P]			
20°C			
30			
40			
Sugd.		269.1	5
Exp. L. 1. %/wt.			
u.			
Dispersion			
Flash Point °C			
Fire Point			
M. Spec.			
Ultra V.			
X-Ray Dif.			
Infrared			
Solubility in +			
Acetone			
Carbon tet.			
Benzene			
Ether			
n-Heptane			
Ethanol			
Water			
Water in			

≠ purity 99.39 mole %

+ grams/100 grams solvent

REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula

SOURCE: Dow

PURIFICATION: Distillation

LITERATURE REFERENCES:

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