

PHYSICAL PROPERTIES OF CHEMICAL COMPOUNDS—II

A systematic tabular presentation of accurate data on the physical properties of 476 organic straight-chain 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.

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.fw001



Number 22 of the Advances in Chemistry Series
Edited by the staff of ACS Applied Publications

Published March 1959 by
AMERICAN CHEMICAL SOCIETY
1155 Sixteenth Street, N.W.
Washington, D. C.

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Introduction

This is a continuation of Mr. Dreisbach's compilation of physical properties of organic compounds. Data on 511 cyclic compounds were published in 1955 as Number 15 of the *ADVANCES IN CHEMISTRY SERIES* under the title of "Physical Properties of Chemical Compounds." The present volume includes 476 acyclic compounds.

As in the earlier volume, this compilation contains many data not hitherto published. It also includes parameters which can be used for interpolating and extrapolating the determined data for practically all of the compounds listed.

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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.

P₂₅: Pressures at 25°C., in mm.

P_t: Pressure corresponding to temperature *t*, in mm.

d²⁰, 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 (obsd.): Molal refraction (obsd.) = $(n_D^2 - 1)/(n_D^2 + 2) \times M/d = \text{MR at } 20^\circ\text{C.}$
(*M* = mol. wt.)

MR (calcd.): Molal refraction calculated from atomic refractive indices. See page 8.

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

D: Dielectric constant determined 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

$\log d_v(\text{g./ml.}) = A^* - B^*/(t + C)$ to the temperature t_k .

$\log d_v(\text{g./ml.}) = A^* - B^*/(t + C) + K/(1.1 T_c - 273.2 - t) + c$

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 $t_x = (1.1 T_c - 273.2)^\circ\text{C}$.

*A** and *B** where the latent heat at the atmospheric boiling point is available.

$V_g - V_L = (31381.7 \times \Delta H_v \times dt/dp)/T$

Where the latent heat is not available use

$M(\Delta H_v)/T_B = 21.0$ and from this $\Delta H_v = (T_B \times 21.0)/M$

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 *V_g* 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 V_g at 25°C. = $RT/MP = 62,361 \times (25 + 273.2)/MP$.

Then $d_v = 1/Vg$. 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_b , °C.: Temperature at which a mole of the vapor occupies 22.414 liters and the vapor is in equilibrium with the liquid, in °C.

$$t_b = \frac{B^*}{(A^* - \log dv_b)} - C$$

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. Also $dt/dp = (t + C)^2/2.3 PB$

ΔH_m : Latent heat of fusion in cal./g.

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

$t_b(d, e)$: The latent heat of vaporization at temperature t_b , as given by the equation $\Delta H_v = d - et_b$, indicates the accuracy of this equation at temperature t_b .

$\Delta H_v/T_b$: Molal latent heat of vaporization at t_b , divided by T_b . (Equal to the molar entropy of vaporization at t_b .)

$d, e; d', e'$: These are parameters of the latent heat of vaporization equation. $\Delta H_v(\text{cal./g.}) = d - et$. 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 temperature t_b . Above and below this the latent heat is not linear with temperature except for short intervals.

d_c : Critical density, g./ml.

v_c : Critical volume, ml./g.

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

P_c 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 $\pm 3\%$. 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 $R = 62361$.

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

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

ΔF_f : 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

$$\log \eta = A'' + B''/T$$

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

B.P., °C., 30 mm.; dt/dp ; ΔH_v ; 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 capacity equation for the liquid for the temperature ranges designated, °K.

$$c_p(\text{liquid}) = f + gT + hT^2$$

m, n, o, m', n', o' : Parameters of the heat capacity equation for the vapor for the temperature ranges designated, °K.

$$c_p(\text{vapor}) = m + nT + oT^2$$

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:

$$(y_3 - y_2)/(y_2 - y_1) \cdot (t_2 - t_1)/(t_3 - t_2) = 1 - (t_3 - t_1)/(t_3 + C)$$

$$B = (y_3 - y_1)/(t_3 - t_1) \cdot (t_1 + C)(t_3 + C)$$

$$\text{and } A = y_1 + B/(t_1 + C)$$

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 ., $M\Delta H_{v_2}$ is given by

$$M\Delta H_{v_2} = 2.3026 RB' [(t_2 + 273.2)/(t_2 + C')]^2$$

where $t_2 = 25^\circ\text{C}$. To solve for A' , B' , C' let

$$g_2 = M\Delta H_{v_2}/2.3026 R(t_2 + 273.2)^2 = M\Delta H_{v_2}/406883 \text{ if } t_2 = 25^\circ\text{C}.$$

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:

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

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

$$\text{Also } B' = B[(t_1 + C')/(t_1 + C)]^2$$

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

In the case of the alkenes and alkynes the A' , B' , C' and A^* , B^* were not calculated by the above method, since the data for these compounds is much less reliable than in the case of the alkanes.

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 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.

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

and $Bc = (y_c - y_1)/(t_c - t_1) \times (t_1 + Cc)(t_c + Cc)(t_c + C_c)$; $Ac = B/t_c + C_c + y_c$ where $t_1^\circ\text{C} = T_R$ 0.75, $t_c^\circ\text{C} =$ critical temperature

$$y_1 = \log P \text{ at } t_1, y_c = \log P_c$$

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° 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. Alkanes | 4. Haloalkenes |
| 2. Haloalkanes | 5. Diolefins |
| 3. Alkenes | 6. Alkynes |

Atomic Refractive Indices Used for Computing Molecular Refractive Index

All values are for the sodium line.

Carbon singly bound and alone	2.592	NO as nitrites	5.91
Carbon singly bound	2.418	NO as nitrosoamine	5.37
Carbon double bond	1.733	NO ₂ as alkyl nitrite	7.44
Carbon triple bond	2.398	NO ₂ as alkyl nitrate	7.59
Carbon conjugated	1.27	NO ₂ as nitroparaffin	6.72
Hydrogen	1.100	NO ₂ as nitro aromatic	7.30
Oxygen—hydroxyl	1.525	NO ₂ as nitramine	7.51
Oxygen—ethereal	1.643	Fluorine	0.95*
Oxygen—ketonic	2.211	Chlorine	5.967
Oxygen—as ester	1.64	Bromine	8.865
Sulfur—as SH	7.69	Iodine	13.900
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		

* 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

NAME	Methane				STRUCTURAL FORMULA				
					CH ₄				
Mole % Pur.	Ref.	Molecular Formula	CH ₄	Molecular Weight	16.042				
		Ref.			Ref.				Ref.
F.P. °C	-182.48	2	dt/dP			f		to	
F.P. 100%			°C/mm			g		°K	
B.P. °C			-140 °C	0.00537	5	h			
760 mm	-161.49	2	BP	0.0160	2	f'		to	
100	-181.45	2	t _e	0.3567	5	g'		°K	
30	-190.	4	30 mm	0.2141	4	h'			
10	-195.51 ^f	2	ΔHm cal/g	14.025	2	m	300 to	0.1259	4
1	-207.0	5	ΔHv cal/g			n	600 °K	0.0015	4
Pressure			-140 °C	115.67	3	o		0.0666	4
mm -140 °C	3289.7	5	30 mm	133.34	5	m'	700 to	0.1408	4
t _e	272.1	5	BP	121.87	2	n'	1000 °K	0.0013	4
Density			t _e (d, e)	125.30	5	o'		-0.0634	4
g/ml-160 °C	0.4222	3	ΔHv/T _e	19.99	5	Surface tension			
d ₄ ¹⁵	0.4075	3	d -190 to	56.90	5	dynes/cm.-180 °C			
d ₄ ¹⁴⁰	0.3916	3	e -160 °C	0.4023	5	18.0			
a	-160 °C	3	d'			-170 15.8			
b	-0.00126	4	e'			-160 13.7 _#			
Ref. Index			t _e			Parachor [P]			
n _D			d _c g/ml	0.162	2	20 °C			
25			v _c ml/g	6.17	2	30			
30			t _c °C	-82.5	2	40			
"C"			P _c mm	34808.	2	Sugd. 73.2			
MR (Obs.)			PV/RT			Exp. L. l. %/wt.			
MR (Calc.)	6.818	5	-140 °C	0.9208	4	u.			
(n _D -d/2)			30 mm	1.0000	5	Dispersion			
Dielectric			BP	0.9628	4	Flash Point °C			
A -180 to	6.61184	2	t _e	0.9726	5	Fire Point			
B - °C	389.93	2	t _c	0.290	2	M. Spec.			
C	266.00	2	ΔHc kcal/m	191.76	2	Ultra V.			
A* -165 to	0.74077	4	ΔHf			X-Ray Dif.			
B* -130 °C	362.78	4	ΔFf			Infrared			
K	7.79	4	Viscosity			Solubility in ⁺			
c	-0.15125	4	centistokes			Acetone			
t _k -130 to			η	0.418	2	Carbon tet.			
t _x -100 °C	-63.0	5	-180 °C	0.364	2	Benzene			
A' to			-175	0.325	2	Ether			
B' °C			-170	0.295	2	n-Heptane			
C' °C			-165			Ethanol			
A'*	to		B ^v -180 to	101.76	4	Water			
B'*	°C		A ^v -160 °C	Z.52937	4	Water in			
A _c to			(B ^v) to						
B _c °C			(A ^v) °C						
C _c °C			c liq. 300 °K	0.53310	2				
Cryos. A°	0.0138	2	p 400	0.60691	2				
consta. B°	0.0057	2	c _p vap. °K						
t _e °C	-172.65	4	c _v vap.						
‡ solid		# at saturation pressure		+ grams/100 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									

NAME		Ethane			STRUCTURAL FORMULA		
					CH ₃ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₂ H ₆	Molecular Weight	30.068		
F. P. °C	-183.27 ^f					f	to
F. P. 100%						g	°K
B. P. °C						h	
760 mm	-88.63	2		dt/dP °C/mm	0.00213	5	
100	-119.33	2		25°C	0.0244	2	
30	-132.74	4		BP	0.0351	5	
10	-142.88	5		t _e		5	f'
1	-159.51	5		30 mm	0.3350	5	to
							°K
							h'
Pressure mm 25°C	29290.	5		ΔHm cal/g	22.728	2	
t _e	480.9	5					m
Density g/ml-60°C	0.509	3		ΔHv cal/g			to
d ₄ ^t 20	0.363	3		25°C	76.86	5	°K
d ₄ ^t 30	0.30	3		30 mm	129.71	5	n
				BP	116.97	2	o
				t _e	119.45	5	
				t _e (d, e)	119.33	5	m'
				ΔHv/T _e	20.36	5	to
							°K
a	0.364	4		d -132 to	91.37	5	Surface tension
b	-0.0363	4		e -90 °C	0.2888	5	dynes/cm...110°C
				d' to			19.57
				e' °C			17.93
							-90
							16.31
Ref. Index n _D 25				d c g/ml	0.203	2	Parachor [P]
30				v c ml/g	4.92	2	20°C
"C"				t c °C	32.27	2	30
MR (Obs.)				P c mm	36632.	2	40
MR (Calc.) (n _D -d/2)							Sugd. 112.2
Dielectric				PV/RT			5
A -132 to	6.80266	2		25°C	1.0000	5	Exp. L. l. %/wt.
B -44 °C	656.40	2		30 mm	1.0000	5	u.
C	256.00	2		BP	0.9622	5	Dispersion
A* -132 to	0.98156	5		t _e	0.9735	5	Flash Point °C
B* -90 °C	613.9	5		t _c	0.288	2	Fire Point
K							M Spec.
t _x to				ΔHc kcal/m	341.26	2	Ultra V.
t _x °C				ΔHf			X-Ray Dif.
A' to				ΔFf			Infrared
B' °C				Viscosity centistokes			Solubility in +
C' °C				η			Acetone
A**				-120 °C	0.438	2	Carbon tet.
B**				-110	0.387	2	Benzene
				-100	0.348	2	Ether
				-90	0.314	2	n-Heptane
							Ethanol
Ac -44 to	7.67290	5		B ^v -130 to	135.71	4	Water
Bc t _c °C	1096.9	5		A ^v -80 °C	7.75615	4	Water in
Cc	320.54	5		(B ^v) to			
				(A ^v) °C			
Cryos. A° const. B°	0.04256	2		c _p liq. °K			
t _e °C	0.0095	2		c _p vap. 300°K	0.41225	2	
	-96.7	5		400	0.52148	2	
				c _v vap.			
T _R = 0.75 T _c				# at saturation pressure		+ grams/100 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							

NAME		Propane			STRUCTURAL FORMULA			
					$\text{CH}_3\text{-CH}_2\text{-CH}_3$			
Mole % Pur.	Ref.	Molecular Formula C_3H_8	Molecular Weight 44.094					
F. P. °C	-187.69	2	dt/dP °C/mm		f		to	
F. P. 100%			25°C	0.00561	g		°K	
B. P. °C			BP	0.0298	h			
760 mm	-42.07	2	t_e	0.0355	f'		to	
100	-79.63	2	30 mm	0.4109	g'		°K	
30	-96.07	4	ΔHm cal/g	19.10	h'			
10	-108.5	4	ΔHv cal/g		m	300 to	0.0169	4
1	-129.	5	25°C	81.76	n	600 °K	0.0014	4
Pressure mm 25°C	7095.	4	30 mm	114.70	o		-0.0643	4
t_e	608.5	4	BP	101.76				
Density g/ml 20°C	0.5005 [‡]	2	t_e	102.98	m'	700 to	0.0960	4
t_{25}	0.4928 [‡]	2	t_e (d, e)	102.94	n'	1000 °K	0.0012	4
d_4^{30}	0.4861	4	ΔHv/T _e	20.07	o'		-0.0640	4
a	0.5375	4	d -100 to	91.68		Surface tension		
b	-0.0399	4	e -45 °C	0.2396		dynes/cm. -70°C	19.2	2
Ref. Index			d'			-60	17.85	2
n_D 20°C	1.2898	5	e'			-50	16.49	2
25			d c g/ml	0.220		Parachor [P]		
30			v c ml/g	4.358		20°C		
"C"	0.766	5	t c °C	96.8		30		
MR (Obs.)			P c mm	31928.		40		
MR (Calc.) (nD-d/2)	16.054	5	PV/RT			Sugd.	151.2	5
Dielectric	1.66	5	25°C	0.8461		Exp. L. 1. %/wt.		
A -130 to	6.82973	2	30 mm	1.0000		u.		
B -5°C	813.200	2	BP	0.9612		Dispersion		
C	248.00	2	t_e	0.9669		Flash Point °C		
A* -100 to	1.05579	5	t_c	0.278		Fire Point		
B* -40°C	756.21	5	ΔHc kcal/m	488.53		M. Spec.		
K	17.62	4	ΔHf	-28.643		Ultra V.		
c	-0.13012	4	ΔFf			X-Ray Dif.		
t_k -40 to			Viscosity centistokes			Infrared	Yes	2
t_x 65°C	134.0	5	η -80°C	0.524		Solubility in ⁺		
A' to			-70	0.470		Acetone		
B' °C			-60	0.425		Carbon tet.		
C'			-50	0.387		Benzene		
A'*	to		B ^v -85 to	190.47		Ether		
B'*	°C		A ^v -30°C	7.73347		n-Heptane		
Ac 5 to	7.33829	4	(B ^v) -140 to	184.09		Ethanol		
Bc t_c °C	1090.0	4	(A ^v) -85°C	7.76598		Water		
Cc	287.8	4	c _{liq.} °K			Water in		
Cryos. A°	0.05802	2	c _p vap 300°K	0.40051		Viscosity centistokes		
const. B°	0.0073	2	400	0.51118		η -130°C	1.126	2
t_e °C	-46.98	5	c _v vap.			-90	0.590	2
						-40	0.355	2
TR = 0.75 T _c		‡ at saturation pressure		+ grams/100 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		n-Butane		STRUCTURAL FORMULA	
				CH ₃ CH ₂ CH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₄ H ₁₀	Molecular Weight	58.120
F. P. °C	-138.350	2	dt/dP °C/mm		
F. P. 100%			25°C	0.01768	4
B. P. °C			BP	0.03465	2
760 mm	-0.50	2	t _e	0.03597	5
100	-44.17	2	30 mm	0.4778	4
30	-63.30	4	ΔHm cal/g	19.167	2
10	-77.76	4	ΔHv cal/g		
1	-101.5	5	25°C	86.63	2
Pressure mm 25°C	1823.	4	30 mm	105.08	5
t _e	724.6	5	BP	92.09	2
Density g/ml 20°C	0.5788 [‡]	2	t _e	92.35	5
d _t 25	0.5730	2	t _e (d, e)	92.35	5
d ₄ 30	0.5671	4	ΔHv/T _e	19.77	5
a	0.6039	4	d -60 to	91.99	5
b	-0.0399	4	e 0 °C	0.2069	5
Ref. Index n _D 20°C	1.3326 [‡]	2	d' 0 to	91.98	4
25	1.3292 [‡]	2	e' 30 °C	0.2228	4
30	1.3252	5	d _c g/ml	0.228	2
"C"	0.7730	4	v _c ml/g	4.387	2
MR (Obs.)	20.63 [‡]	2	t _c °C	152.01	2
MR (Calc.)	20.772	2	P mm	28477.	2
(nD-d/2)	1.0432 [‡]	5	PV/RT 25°C	0.9286	4
Dielectric	1.776	5	30 mm	1.0000	5
A -60 to	6.83029	2	BP	0.9582	4
B 45 °C	945.9	2	t _e	0.9595	5
C	240.0	2	t _c	0.274	2
A* -60 to	1.11497	5	ΔHc kcal/m	635.05	2
B* 30 °C	881.81	5	ΔHf	-35.29	2
K			Viscosity centistokes		
c			η		
t _k - to			-40 °C	0.491	2
t _x - to			-30	0.446	2
A' to			-20	0.407	2
B' - to			-10	0.375	2
C' - to			B ^v -40 to	234.16	4
A'*			A ^v 10 °C	Σ.68698	4
B'*			(B ^v) -100 to	227.42	4
Ac 45 to	7.39949	4	(A ^v) -40 °C	Σ.71750	4
Bc t _c -	1299.	4	c _p liq. °K		
Cc t _c -	289.1	4	c _p vap. 300°K	0.40261	2
Cryos. A°	0.03085	2	c _p vap. 400	0.50929	2
const. B°	0.0048	2	c _v vap.		
t _e °C	-1.75	5			
‡ at saturation pressure 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 NFPA 325					

No. 5

NAME		2-Methylpropane		STRUCTURAL FORMULA	
		Isobutane		$\text{CH}_3\text{CH}(\text{CH}_3)_2$	
Mole % Pur.	Ref.	Molecular Formula C_4H_{10}	Molecular Weight 58.120		
F.P. °C	-159.600	2			Ref.
F.P. 100%					
B.P. °C					
760 mm	-11.730	2	dt/dP °C/mm	0.0132	5
100	-54.07	2	25°C BP	0.0337	2
30	-72.52	4	t_e	0.0361	5
10	-86.4	4	30 mm	0.4600	4
1	-109.2	5	ΔH_m cal/g	18.668	2
Pressure mm 25°C	2611.	4	ΔH_v cal/g		
t_e	697.	5	25°C	78.63	2
			30 mm	99.79	5
			BP	87.56	2
Density g/ml 20°C	0.5572 [‡]	2	t_e	87.99	5
t 25	0.5510 [‡]	2	t_e (d, e)	88.00	5
d ₄ 30	0.5450	4	$\Delta H_v/T_e$	19.72	5
a	0.5846	4	d -75 to	85.20	5
b	-0.0398	4	e -10 °C	0.2011	5
Ref. Index			d' -10 to	84.71	4
n _D 20°C	1.3169	5	e' 25 °C	0.2431	4
25			d _c g/ml	0.221	2
30			v _c ml/g	4.525	2
"C"	0.7675	5	t _c °C	134.98	2
MR (Obs.)			P _c mm	27360.	2
MR (Calc.) (n _D -d/2)	20.772	5	PV/RT		
Dielectric	1.734	5	25°C	0.9083	5
A -75 to	6.74808	2	30 mm	1.0000	5
B 30 °C	882.80	2	BP	0.9648	4
C	240.00	2	t_e	0.9668	5
A* -75 to	1.04221	5	t_c	0.283	2
B* 0 °C	820.37	5	ΔH_c kcal/m	633.05	2
K			ΔH_f	-37.87	2
c			ΔF_f		
t _k to			Viscosity centistokes		
t _x °C			η -50 °C	0.619	2
A' to			-40	0.549	2
B' °C			-30	0.491	2
C'			-20	0.443	2
A'* to			B ^v -90 to	265.10	4
B'* °C			A ^v -55 °C	2.6035	4
Ac 30 to	7.42067	4	(B ^v) -55 to	273.73	4
Bc t _c °C	1288.1	4	(A ^v) 0 °C	2.5653	4
Cc	296.7	4	c _p liq. °K		
Cryos. A°	0.04234	2	c _p vap. 300°K	0.40003	2
consts. B°	0.0057	2	400	0.51222	2
t _e °C	-13.90	5	c _v vap.		
‡ at saturation pressure		$T_R = 0.75 T_c$		+ 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:					

NAME		n-Pentane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₃ CH ₃	
Mole % Pur.	Ref. Z	Molecular Formula	C ₅ H ₁₂	Molecular Weight	72.146
99.86					
F. P. °C	-129.721	2			
F. P. 100%					
B. P. °C			dt/dP °C/mm		f to
760 mm	36.074	2	25°C	0:05257	g °K
100	-12.59	2	BP	0.03856	h
30	-33.93	4	t _e	0.03631	f' to
10	-50.1	4	30 mm	0.5334	g' °K
1	-76.63	5			h'
Pressure mm 25°C	512.5	4	ΔHm cal/g	27.805	2
t _e	825.9	5			
Density g/ml 20°C	0.62624	2	ΔHv cal/g		m 300 to
d ₄ ^t 25	0.62139	2	25°C	87.54	n 600 °K
d ₄ ^t 30	0.61649	4	30 mm	98.53	o
		2	BP	85.38	
		4	t _e	84.92	m' 700 to
		2	t _e (d, e)	84.92	n' 1000 °K
		4	ΔHv/T _e	19.65	o'
a	0.64604	4	d -35 to	92.16	5
b	-0.03904	4	e 40 °C	0.1879	5
Ref. Index n _D 20°C	1.35748	2	d' °C		
25	1.35472	2	e' °C		
30	1.35194	4	d _v g/ml	0.232	2
"C"	0.7664	4	v _c ml/g	4.311	2
MR (Obs.)	25.266	2	t _c °C	196.62	2
MR (Calc.)	25.29	5	P _c mm	25316.	2
(nD-d/2)	1.04436	2	PV/RT		
Dielectric	1.843	5	25°C	0.9662	5
A -35 to	6.85221	2	30 mm	1.0000	5
B 80 °C	1064.63	2	BP	0.9547	4
C	232.0	2	t _e	0.9523	5
A* -35 to	1.18695	5	t _c	0.268	2
B* 60 °C	995.37	5	ΔHc kcal/m	782.04	2
K	24.0	4	ΔHf	-41.36	2
c	-0.16075	4	ΔFf	-2.25	2
t _k 60 to	185.	4	Viscosity centistokes		
t _x 160 °C	243.6	5	η		
A' to			0 °C	0.432	2
B' °C			10	0.401	2
C' °C			20	0.375	2
A'' to			30	0.351	2
B'' °C			B ^v -10 to	251.11	4
			A ^v 40 °C	Z.71711	4
			(B ^v) -70 to	261.39	4
			(A ^v) -10 °C	Z.67863	4
Ac 80 to	7.37001	5	c _p liq. °K		
Bc t _c °C	1411.3	5			
Cc t _c °C	279.1	5	c _p vap. 300°K	0.40016	2
Cryos. A°	0.04906	2	400	0.50633	2
const. B°	0.0042	2	c _v vap.		
t _e °C	38.54	5			
TR = 0.75 T _c † at saturation pressure † grams/100 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 NFPA 325					

NAME		2-Methylbutane		Isopentane		STRUCTURAL FORMULA					
						$\text{CH}_3\text{CHCH}_2\text{CH}_3$ CH_3					
Mole % Pur.	99.99	Ref.	Molecular Formula	C_5H_{12}	Molecular Weight	72.146					
		Ref.					Ref.				
F.P. °C	-159.900	2			dt/dP °C/mm		f	to			
F.P. 100%					25°C	0.0412	g	°K			
B.P. °C					BP	0.03815	h				
760 mm	27.852	2			t _e	0.0369	f'	to			
100	-20.14	2			30 mm	0.5232	g'	°K			
30	-41.10	4			ΔHm cal/g	17.063	h'				
10	-56.9	4									
1	-82.8	5			ΔHv cal/g		m	300 to	0.0043	4	
Pressure mm 25°C					25°C	81.47	n	600 °K	0.0015	4	
t _e	688.1	4			30 mm	94.54	o		-0.0651	4	
	793.8	5			BP	80.97					
Density g/ml 20°C	0.61967	2			t _e	80.73	m'	700 to	0.1052	4	
d _t 25	0.61462	2			t _e (d, e)	80.72	n'	1000 °K	0.0012	4	
d ₄ 30	0.60951	4			ΔHv/T _e	19.27	o'		-0.0639	4	
a	0.64050	4			d -40 to	86.45	Surface tension dynes/cm. 20°C				
b	-0.0392	4			e 30 °C	0.1968	30				
Ref. Index n _D 20°C	1.35373	2			d' to		40				
25	1.35088	2			e' °C		15.00				
30	1.34762	4					13.93#				
"C"	0.7661	4					12.73				
MR (Obs.)	25.292	2			v _c g/ml	0.234	Parachor [P]				
MR (Calc.)	25.290	5			v _c ml/g	4.269	20°C				
(n _D -d/2)	1.04390	2			t _c °C	187.8	30				
Dielectric	1.843 ^f	3			P _c mm	25004.	40				
A -45 to	6.78967	2					Sugd. 229.2				
B 75 °C	1020.012	2			PV/RT		Exp. L. l. %/wt.				
C	233.097	2			25°C	0.9478	u.				
A* -45 to	1.15247	5			30 mm	1.0000	Dispersion				
B* 40 °C	955.73	5			BP	0.9452	Flash Point °C				
K					t _e	0.9438	Fire Point				
c					t _c	0.269	-60.				
t _k to					ΔHc kcal/m	780.12	M. Spec.				
t _x °C					ΔHf	-42.85	Ultra V.				
A' to					ΔFf	-3.59	X-Ray Dif.				
B' °C					Viscosity centistokes		Infrared				
C' °C					η -10 °C	0.479	Yes				
A** to					0	0.434	Solubility in +				
B** °C					10	0.396	Acetone				
					20	0.364	Carbon tet.				
					B ^v -10 to	305.9	Benzene				
					A ^v 30 °C	Z.51761	Ether				
					(B ^v) -40 to	326.2	n-Heptane				
					(A ^v) -10 °C	Z.55042	Ethanol				
Ac _l 75 to	7.25632	5			c _p liq. °K		Water				
Bc _l t _c °C	1325.2	5					Water in				
Cc _l t _c °C	275.8	5					Viscosity centistokes				
Cryos. A°	0.04829	2					η -50°C				
consts. B°	0.0058	2					-20				
t _e °C	29.12	5					30				
							0.790				
							0.535				
							0.337				
T _R = 0.75 T _c		# 20°C		# at saturation pressure		+ grams/100 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. 8

NAME		2, 2-Dimethylpropane		STRUCTURAL FORMULA	
		Neopentane		$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CCH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_5H_{12}	Molecular Weight	72.146
F.P. °C	-16.550	Ref.	2	dt/dP °C/mm	
F.P. 100%				25°C	0.0244 4
B.P. °C				BP	0.03652 4
760 mm	9.503		2	t_e	0.0370 5
100	-36.32		2	30 mm	0.4973 4
30	-56.27		4	ΔH_m cal/g	10.786 2
10	-71.3		4	ΔH_v cal/g	
1	-95.9		5	25°C	72.15 2
Pressure mm 25°C	1285.2		4	30 mm	86.88 5
t_e	750.8		5	BP	75.37 2
Density g/ml 20°C	0.5910 ^f		2	t_e	75.43 5
d ₄ 25	0.5851 ^f		2	t_e (d, e)	75.43 5
d ₄ 30	0.5792		4	$\Delta H_v/T_e$	19.27 5
a	0.61601		4	d -60 to	77.03 5
b	-0.00102		4	e 0 °C	0.1750 5
Ref. Index n _D 20°C	1.342 ^f		2	d _c g/ml	0.238 2
25	1.339 ^f		2	v _c ml/g	4.200 2
30	1.335		4	t _c °C	160.60 2
"C"	0.7779		4	P _c mm	23993. 2
MR (Obs.)	25.72 ^f		2	PV/RT 25°C	0.9321 5
MR (Calc.)	25.290 _d		5	30 mm	1.0000 5
(n _D -d/2)	1.046 _d		2	BP	0.9554 4
Dielectric	1.801		5	t_e	0.9557 5
A -60 to	6.73812		2	t_c	0.269 2
B 55 °C	950.84		2	ΔH_c kcal/m	777.37 2
C	237.0		2	ΔH_f	-44.98 2
A* -60 to	1.10831		5	ΔF_f (gas)	-3.66 2
B* 20 °C	886.37		5	Viscosity centistokes	
K				η -10 °C	0.626 2
c				-5	0.576 2
t _k to				0	0.534 2
t _x °C				5	0.498 2
A' to				B ^v -10 to	484.9 4
B' °C				A ^v 5 °C	3.95415 4
C' °C				(B ^v) to	
A'* to				(A ^v) °C	
B'* °C				c _p liq. °K	
Ac 55 to	7.23672		5	c _p vap. 300°K	0.40487 2
Bc t _c °C	1261.3		5	400	0.52047 2
Gc °C	280.8		5	c _v vap.	
Cryos. A°	0.00595		2		
const. B°					
t _e °C	9.167		5		
T _R = 0.75 T _c					
REFERENCES:	1-Dow	2-API	3-Lit.	4-Calc. from det. data	5-Calc. by formula
SOURCE:	API				
PURIFICATION:	API				
LITERATURE REFERENCES:					

NAME		n-Hexane			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₄ CH ₃			
Mole % Pur. 99.99	Ref. 2	Molecular Formula C ₆ H ₁₄	Molecular Weight 86.172					
F.P. °C	-95.348	2	dt/dP °C/mm					
F.P. 100%			25°C	0.1524	4	f	to	
B.P. °C			BP	0.04191	2	g	°K	
760 mm	68.740	2	t _e	0.0363	5	h		
100	15.81	2	t _e 30 mm	0.5815	4	f'	to	
30	-7.44	4				g'	°K	
10	-25.1	4	ΔHm cal/g	36.137	2	h'		
1	-54.0	5				m	300 to	0.0304
Pressure mm 25°C	151.3	4	ΔHv cal/g 25°C	87.50	2	n	600 °K	0.0014
t _e	914.5	5	30 mm	93.37	5	o		-0.0643
Density g/ml 20°C	0.65937	2	BP	80.03	2			
t 25	0.65481	2	t _e (d, e)	79.01	5	m'	700 to	0.1040
d ₄ 30	0.65023	4	ΔHv/T _e	19.57	5	n'	1000 °K	0.0012
						o'		-0.0640
a	0.67765	4	d -10 to	92.06	5	Surface tension dynes/cm. 20°C		
b	-0.03885	4	e 75 °C	0.1751	5	γ	30	18.42
Ref. Index n _D 20°C	1.37486	2	d' to				40	17.38
25	1.37226	2	e' °C			2		
30	1.36938	4				2		
"C"	0.7607	4	d _c g/ml	0.234	2	Parachor [P]		
MR (Obs.)	29.907	2	v _c ml/g	4.271	2		20°C	271.0
MR (Calc.) (n _D -d/2)	29.908	5	t _c °C	234.7	2		30	270.9
Dielectric	1.890	3	P _c mm	22739.	2		40	270.9
A -10 to	6.87776	2					Sugd.	268.2
B 110 °C	1171.53	2	PV/RT 25°C	0.9847	5	Exp. L. 1.%/wt.		
C	224.366	2	30 mm	1.0000	5	u.		3.5
A* -10 to	1.25780	5	BP	0.9503	4	Dispersion		18.0
B* 100 °C	1098.66	5	t _e	0.9447	5	Flash Point °C		98.0
K	24.0	4	t _c	0.264	2	Fire Point		-26.0
c	-0.13176	5	ΔHc kcal/m	928.93	2	M. Spec.	Yes	1
t _k 100 to	117.	4	ΔHf	-47.52	2	Ultra V.		
t _x 195 °C	285.6	5	ΔFf	-1.03	2	X-Ray Dif.		
A' to			Viscosity centistokes η 30 °C	0.4389	2	Infrared	60.	1
B' °C			40	0.4085	2	Solubility in +		
C' °C			50	0.3817	2	Acetone	∞	
A'*			60	0.3577	2	Carbon tet.	∞	
B'*			B ^v 15 to	297.4	4	Benzene	∞	
			A ^v 60 °C	2.66156	4	Ether	∞	
			(B ^v) -30 to	309.4	4	n-Heptane	∞	
			(A ^v) 15 °C	2.61885	4	Ethanol	∞	
Ac 110 to	7.31938	4	c _p liq. °K	0.39885	2	Water	∞	
Bc t _c °C	1483.1	4		0.50446	2	Water in		
Cc °C	265.9	4	c _v vap. 300°K			Viscosity centistokes η		
Cryos. A° const. B°	0.04956	2	p 400			-20°C	0.691	2
t _e °C	0.0039	2				20	0.4741	2
	74.76	5				70	0.336	2
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: API								
PURIFICATION: API								
LITERATURE REFERENCES: 3 NBS 514; 3' NFPA 325								

No. 10

NAME		2-Methylpentane		STRUCTURAL FORMULA		
		Isohexane		$\text{CH}_3\text{CHCH}_2\text{CH}_2\text{CH}_3$ CH_3		
Mole % Pur.	99.99	Ref. 2	Molecular Formula C_6H_{14}	Molecular Weight 86.172		
		Ref.			Ref.	Ref.
F.P. °C	-153.670	2	dt/dP °C/mm		f	to
F.P. 100%			25°C	0.1143	g	°K
B.P. °C			BP	0.04141	h	
760 mm	60.271	2	t_e	0.0366	f'	to
100	8.06	2	30 mm	0.5717	g'	°K
30	-14.82	4	ΔH_m cal/g	17.407	h'	
10	-32.1	4	ΔH_v cal/g		m	300 to
1	-60.55	5	25°C	82.83	n	600 °K
Pressure mm 25°C	211.8	4	30 mm	89.76	o	0.0150
t_e	891.5	5	BP	77.09		0.0014
Density g/ml 20°C	0.65315	2	t_e	76.25	m'	700 to
25	0.64852	2	t_e (d, e)	76.23	n'	1000 °K
d_4^{25}	0.64386	4	$\Delta H_v/T_e$	19.41	o'	0.1533
						0.0011
						-0.0635
a	0.67177	4	d -15 to	87.26	Surface tension dynes/cm. 20°C	
b	-0.03890	4	e 65 °C	0.1688	30	17.38
Ref. Index n_D 20°C	1.37145	2	d' to		40	16.37
25	1.36873	2	e' °C			15.36
30	1.36586	4	d c g/ml	0.235	Parachor [P]	
"C"	0.7613	4	v c ml/g	4.259	20°C	269.7
MR (Obs.)	29.946	2	t c °C	224.9	30	269.7
MR (Calc.) (nD-d/2)	1.04488	2	P c mm	22762.	40	269.6
Dielectric	1.881	5	PV/RT		Sugd.	268.2
A -15 to	6.83910	2	25°C	0.9793	Exp. L. l. %/wt.	
B 100 °C	1135.410	2	30 mm	1.0000	u.	
C	226.572	2	BP	0.9512	Dispersion	98.6
A* -15 to	1.22708	5	t_e	0.9463	Flash Point °C	-14.
B* 75 °C	1063.37	5	t_c	0.269	Fire Point	
K			ΔH_c kcal/m	927.23	M Spec.	
c			ΔH_f	-48.82	Ultra V.	
t_x to			ΔF_f	-1.97	X-Ray Dif.	
t_x °C			Viscosity centistokes		Infrared	Yes
A' to			η 0 °C	0.5525	Solubility in +	
B' °C			20	0.4746	Acetone	∞
C'			30	0.4349	Carbon tet.	∞
A** to			B ^v -10 to	286.99	Benzene	∞
B** °C			A ^v 40 °C	1.69184	Ether	∞
			(B ^v) to		n-Heptane	∞
			(A ^v) °C		Ethanol	∞
Ac 100 to	7.31635	4	c _p liq. °K		Water	∞
Bc t_c °C	1468.9	4	c _p vap. 300°K	0.40187	Water in	
Cc t_c °C	271.5	4	400	0.51061		
Cryos. A°	0.05287	2	c _v vap. 388.56°K	0.366		
const. B°	0.005	2				
t_e °C	65.38	5				
$T_R = 0.75 T_c$						
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. 11

NAME		3-Methylpentane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$		
Mole % Pur. 99.8	Ref. 3	Molecular Formula C_6H_{14}	Molecular Weight 86.172				
		Ref.					Ref.
F.P. °C			dt/dP °C/mm		f	to	
F.P. 100%			25°C	0.1262	g	°K	
B.P. °C			BP	0.04182	h		
760 mm	63.282	2	t_e	0.0366	f'	to	
100	10.53	2	30 mm	0.5781	g'	°K	
30	-12.61	4	$\Delta\text{Hm cal/g}$		h'		
10	-30.1	4	$\Delta\text{Hv cal/g}$		m	300 to	0.0804
1	-58.87	5	25°C	83.96	n	600 °K	0.0014
Pressure mm 25°C	189.8	4	30 mm	90.29	o		-0.0643
t_e	902.1	5	BP	77.88			
Density g/ml 20°C	0.66431	2	t_e	76.99	m'	700 to	0.0648
d_4^{25}	0.65976	2	t_e (d, e)	76.97	n'	1000 °K	0.0013
d_4^{30}	0.65519	4	$\Delta\text{Hv}/T_e$	19.40	o'		-0.0646
a	0.68259	4	d -15 to	88.23	Surface tension dynes/cm. 20°C		
b	-0.0388	4	e 70 °C	0.1636	30 18.12		
Ref. Index $n_D^{20°C}$			d' to		40 17.08		
25	1.37652	2	e' °C		2 16.03		
30	1.37386	2	d g/ml	0.235	Parachor [P]		
	1.37106	4	v ml/g	4.259	20°C 267.9		
"C"	0.7582	4	t_c	231.2	30 267.8		
MR (Obs.)	29.802	2	P_c mm	23431.	40 267.6		
MR (Calc.)	29.908	5	PV/RT		Sugd. 268.2		
(nD-d/2)	1.04436	2	25°C	0.9822	Exp. L.l. %/wt. u.		
Dielectric	1.895	5	30 mm	1.0000	Dispersion 97.1		
A -15 to	6.84887	2	BP	0.9531	Flash Point °C -35.		
B 105 °C	1152.368	2	t_e	0.9480	Fire Point		
C	227.129	2	t_c	0.273	M. Spec. Ultra V.		
A* -15 to	1.22845	5	$\Delta\text{Hc kcal/m}$	927.87	X-Ray Dif.		
B* 80 °C	1078.38	5	ΔHf	-48.28	Infrared Yes		
K			ΔFf	-1.34	Solubility in +		
c			Viscosity centistokes		Acetone ∞		
t_k to			η 0 °C	0.5774	Carbon tet. ∞		
t_x °C			15	0.5068	Benzene ∞		
A' to			25	0.4653	Ether ∞		
B' °C			40	0.4156	n-Heptane ∞		
C' °C			B ^v -10 to	305.47	Ethanol ∞		
A'* to			A ^v 50 °C	2.64336	Water ∞		
B'* °C			(B ^v) to		Water in		
Ac 105 to	7.36387	4	(A ^v) °C				
Bc t_c °C	1520.0	4	c_p liq. °K				
Cc t_c °C	276.46	4	c_p vap. 300°K	0.39885			
Cryos. A° const. B°			400	0.50446			
t_e °C	68.84	5	c_v vap.				
$T_R = 0.75 T_c$		+ 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 ACS 74, 1951 (1952); 3' Timmermans							

No. 12

NAME		2, 2-Dimethylbutane		STRUCTURAL FORMULA	
		Neohexane		$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \\ \\ \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₄	Molecular Weight	86.172
99.99	2				
F.P. °C	-99.870	2	dt/dP °C/mm		
F.P. 100%			25°C	0.0814	4
B.P. °C			BP	0.04117	2
760 mm	49.741	2	t _e	0.0372	5
100	-2.0	2	30 mm	0.5619	4
30	-24.49	4	ΔHm cal/g	1.607	2
10	-41.5	4	ΔHv cal/g		
1	-69.3	5	25°C	76.79	2
Pressure mm 25°C	319.1	4	30 mm	84.62	2
t _e	864.9	5	BP	72.96	5
Density g/ml 20°C	0.64916	2	t _e	72.32	5
d _t 25	0.64446	2	t _e (d, e)	72.32	5
d ₄ 30	0.63972	4	ΔHv/T _e	19.06	5
a	0.66820	4	d -25 to	80.77	5
b	-0.03889	4	e -90 °C	0.1571	5
Ref. Index n _D 20°C	1.36876	2	e' to °C		
25	1.36595	2	d _c g/ml	0.240	2
30	1.36312	4	v _c ml/g	4.166	2
"C"	0.7608	4	t _c °C	216.2	2
MR (Obs.)	29.935	2	P _c mm	23309.	2
MR (Calc.)	29.908	5	PV/RT 25°C	0.9754	5
(nD-d/2)	1.04418	2	30 mm	1.0000	5
Dielectric	1.873	5	BP	0.9544	4
A -25 to	6.75483	2	t _e	0.9505	5
B 95 °C	1081.176	2	t _c	0.274	2
C	229.343	2	ΔHc kcal/m	924.53	2
A* -25 to	1.14940	5	ΔHf	-51.00	2
B* 65 °C	1009.44	5	ΔFf	-2.90	2
K			Viscosity centistokes		
c			η		
t _k to °C			0 °C	0.7144	3
t _x to °C			20	0.5777	3
A' to °C			25	0.5446	3
B' to °C			30	0.5158	3
C' to °C			B ^v -10 to	390.6	4
A'* to °C			A ^v 40 °C	Z. 42425	4
B'* to °C			(B ^v) to		
C'* to °C			(A ^v) °C		
Ac 95 to	7.34293	4	c _p liq. °K		
Bc t _c °C	1494.7	4	c _p vap. 300°K	0.39560	2
Cc 286.2	286.2	4	400	0.50712	2
Cryos. A°	0.002321	2	c _v vap.		
const. B°	0.000	2			
t _e °C	53.84	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: 3 Timmermans					

NAME		2, 3-Dimethylbutane			STRUCTURAL FORMULA					
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$					
Mole % Pur.	99.99	Ref.	Molecular Formula	C_6H_{14}	Molecular Weight	86.172				
F. P. °C	-128.538	2	dt/dP	°C/mm	0.1059	4	f	to		
F. P. 100%			25°C	BP	0.04173	2	g	°K		
B. P. °C	57.988	2	t _e	30 mm	0.0370	5	h			
760 mm	5.45	2			0.5738	4	f'	to		
100	-17.53	4			2.251	2	g'	°K		
30	-34.9	4					h'			
10	-63.37	5					m	300 to	-0.0058	
1							n	600 °K	0.0015	
Pressure mm 25°C	234.6	4					o		-0.0654	
t _e	887.5	5								
Density g/ml 20°C	0.66164	2					m'	700 to	0.0686	
d _t 25	0.65702	2					n'	1000 °K	0.0013	
d ₄ 30	0.65237	4					o'		-0.0646	
a	0.68026	4	d	-20 to	84.80	5	Surface tension dynes/cm. 20°C			
b	-0.03885	4	e	65 °C	0.1578	5	γ	30	17.37	2
Ref. Index n _D 20°C	1.37495	2	d'					40	16.37	2
25	1.37231	2	e'				Parachor [P] 20°C			
30	1.36939	4						30	266.2	4
"C"	0.7583	5	d _c g/ml	0.241	2			40	266.1	4
MR (Obs.)	29.810	2	v _c ml/g	4.154	2			Sugd.	268.2	5
MR (Calc.)	29.908	5	t _c °C	227.1	2			Exp. L. l. %/wt. u.		
(nD-d/2)	1.04413	2	P _c mm	23552.	2			Dispersion 98.3 2		
Dielectric	1.890	5						Flash Point °C -37. 5		
A ₁ -20 to	6.80983	2						Fire Point		
B ₁ 100 °C	1127.187	2						M. Spec. Ultra V.		
C ₁	228.900	2						X-Ray Dif.		
A* -20 to	1.19420	5						Infrared		
B* 75 °C	1053.55	5						Yes 2		
K								Solubility in +		
t _k to								Acetone ∞		
t _x °C								Carbon tet. ∞		
A' to								Benzene ∞		
B' °C								Ether ∞		
C'								n-Heptane ∞		
A* to								Ethanol ∞		
B* °C								Water ∞		
Ac 100 to	7.30917	4						Water in		
Bc t _c °C	1481.8	4								
Cc	277.4	4								
Cryos. A°	0.00467	2								
const. B°										
t _e °C	62.99	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:										

No. 14

NAME		n-Heptane		STRUCTURAL FORMULA					
				$\text{CH}_3(\text{CH}_2)_5\text{CH}_3$					
Mole % Pur.	Ref.	Molecular Formula		Molecular Weight					
99.94	2	C_7H_{16}		100	198				
F. P. °C	-90.610	2	dt/dP °C/mm			f	300 to 600 °K	0.0373	5
F. P. 100%			25°C	0.4376	4	g		0.0013	5
B. P. °C			BP	0.04479	5	h		-0.0639	5
760 mm	98.427	2	t_e	0.0365	5	f'			
100	41.772	2	30 mm	0.6237	4	g'			
30	16.80	4	ΔHm cal/g	33.474	2	h'			
10	-2.1	2	ΔHv cal/g			m	300 to 600 °K	0.0272	4
1	-33.2	4	25°C	87.18	2	n		0.0014	4
Pressure mm 25°C	45.81	4	30 mm	89.14	4	o		-0.0645	4
t_e	988.01	5	BP	75.60	2	m'	700 to 1000 °K	0.1062	4
Density g/ml 20°C	0.68376	2	t_e	73.96	5	n'		0.0012	4
d_t^{25}	0.67951	2	t_e (d, e)	74.08	5	o'		-0.0640	4
d_4^{30}	0.67525	4	$\Delta\text{Hv}/T_e$	19.46	5	Surface tension dynes/cm. 20°C			
a	0.70075	4	d 15 to 105 °C	91.93	4	y	30	19.29	5
b	-0.0384	4	d' to °C	0.1659	4		40	18.34	5
Ref. Index n_D^{20}			d 15 to 105 °C			Parachor [P] 20°C			
25	1.38764	2	d' to °C				30	307.2	5
30	1.38511	2	d' to °C			Sugd.			
	1.38250	4	d' to °C			Exp. L. l. %/wt.		3.4	3'
"C"	0.7572	4	d' to °C			u.		18.0	3'
MR (Obs.)	34.550	2	d' to °C			Dispersion		97.7	2
MR (Calc.)	34.526	5	d' to °C			Flash Point °C		-3.89	3'
(nD-d/2)	1.04576	2	d' to °C			Fire Point			
Dielectric	1.924	3	d' to °C			M Spec. Ultra V. X-Ray Dif. Infrared		593.	1
A 15 to 130 °C	6.90240	2	d' to °C			Solubility in +			
B 130 °C	1268.115	2	d' to °C			Acetone		∞	
C	216.90	2	d' to °C			Carbon tet.		∞	
A* 15 to 155 °C	1.33143	5	d' to °C			Benzene		∞	
B* 155 °C	1194.60	5	d' to °C			Ether		∞	
K	24.	5	d' to °C			n-Heptane		∞	
c	-0.14584	4	d' to °C			Ethanol		∞	
t_x 155 to 220 °C	157.	4	d' to °C			Water		∞	
	321.	5	d' to °C			Water in			
A' to °C			d' to °C						
B' to °C			d' to °C						
C' to °C			d' to °C						
A* to °C			d' to °C						
B* to °C			d' to °C						
Ac 130 to 1581.7 °C	7.3270	5	B ^v 20 to 100 °C	344.88	4				
Bc 1581.7 °C	1581.7	5	A ^v 100 °C	Z. 60962	4				
Cc 257.6 °C	257.6	5	(B ^v) -60 to 20 °C	391.3	4				
Cryos. A*	0.05065	2	(A ^v) 20 °C	Z. 44706	4				
const. B*	0.0033	2	c_p liq. 300 °K	0.39780	5				
t_e °C	107.58	5	400	0.50182	5				
			c_p vap. 300 °K	0.39781	2				
			400	0.50320	2				
			c_v vap.						
TR = 0.75 T _c									
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' NFPA 325									

No. 15

NAME		2-Methylhexane		STRUCTURAL FORMULA	
				CH ₃ CHCH ₂ (CH ₂) ₂ CH ₃ CH ₃	
Mole % Pur.	Ref.	Molecular Formula C ₇ H ₁₆	Molecular Weight 100.198		
F. P. °C	-118.276	2	dt/dP °C/mm		
F. P. 100%			25°C	0.3189	4
B. P. °C			BP	0.04431	2
760 mm	90.052	2	t _e	0.0366	5
100	34.093	2	30 mm	0.6145	4
30	9.52	4	ΔHm cal/g	21.907	2
10	-9.09	4	ΔHv cal/g		
1	-39.7	5	25°C	83.02	2
Pressure mm 25°C	65.88	4	30 mm	85.98	5
t _e	971.1	5	BP	73.14	2
Density g/ml 20°C	0.67859	2	t _e	71.85	5
t 25	0.67439	2	t _e (d, e)	71.79	5
d ₄ 30	0.67022	4	ΔHv/T _e	19.37	5
a	0.69538	4	d 10 to	87.50	5
b	-0.03825	4	e 100 °C	0.1595	5
Ref. Index n _D 20°C	1.38485	2	d' to		
25	1.38227	2	e' °C		
30	1.37979	4	d _c g/ml	0.234	2
"C"	0.7576	4	v _c ml/g	4.272	2
MR (Obs.)	34.591	2	t _c °C	257.9	2
MR (Calc.) (n _D -d/2)	1.04556	2	P _c mm	20672.	2
Dielectric	1.919	3	PV/RT 25°C	0.9897	5
A 10 to	6.87318	2	30 mm	1.0000	5
B 125 °C	1236.026	2	BP	0.9467	4
C	219.545	2	t _e	0.9389	5
A* 10 to	1.30078	5	t _e	0.267	2
B* 110 °C	1161.12	5	ΔHc kcal/m	1074.14	2
K			ΔHf	-54.93	2
c			ΔFf	-0.68	2
t _k to °C			Viscosity centistokes η 20 °C	0.5570	3'
t _x to °C			B ^v to °C		
A' to °C			A ^v to °C		
B' to °C			(B ^v) to °C		
C' to °C			(A ^v) to °C		
A ^{1*} to °C			c _p liq. 19.38°C	0.5570	3'
B ^{1*} to °C			c _p vap. 300°K	0.39781	2
A _{cl} 125 to °C	7.31001	4	400	0.50320	2
B _c t _c °C	1555.4	4	c _v vap.		
C _c t _c °C	261.5	4			
Cryos. A ²	0.04605	2			
consts. B ²	0.0036	2			
t _e °C	98.53	5			
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: API					
PURIFICATION: API					
LITERATURE REFERENCES: 3 NBS 514; 3' Timmermans					

NAME		3-Methylhexane		STRUCTURAL FORMULA		
				$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}(\text{CH}_2)_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{16}	Molecular Weight	100.198	
		Ref.			Ref.	
F.P. °C			dt/dP °C/mm		f to	
F.P. 100%			25°C	0.3391	4	g °K
B.P. °C			BP	0.04459	2	h
760 mm	91.850	2	t_e	0.0369	5	f' to
100	35.561	2	30 mm	0.6179	4	g' °K
30	10.85	4	$\Delta\text{Hm cal/g}$			h'
10	-7.9	2	$\Delta\text{Hv cal/g}$			m 300 to
1	-38.6	5	25°C	83.68	2	n 600 °K
Pressure mm 25°C	61.59	4	30 mm	86.33	5	o
t_e	976.	5	BP	73.43	2	
Density g/ml 20°C	0.68713	2	t_e	72.11	5	m' 700 to
d_4^{25}	0.68295	2	t_e (d, e)	72.04	5	n' 1000 °K
d_4^{30}	0.67877	4	$\Delta\text{Hv}/T_e$	19.33	5	o'
a	0.70384	4	d 10 to	88.05	5	Surface tension dynes/cm. 20°C
b	-0.03822	4	e 100 °C	0.1592	5	30
Ref. Index n_D^{20}	1.38864	2	e' to °C			40
25	1.38609	2	d c g/ml	0.240	2	Parachor [P]
30	1.38351	4	v c ml/g	4.172	2	20°C
"C"	0.7553	4	t_c °C	262.4	2	30
MR (Obs.)	34.460	2	P c mm	21356.	2	40
MR (Calc.)	34.526	5	PV/RT			Sugd.
(nD-d/2)	1.04508	2	25°C	0.9915	5	Exp. L.l. %/wt. u.
Dielectric	20° 1.93	3	30 mm	1.0000	5	Dispersion
A 10 to	6.86764	2	BP	0.9468	4	Flash Point °C
B 130 °C	1240.196	2	t_e	0.9389	5	Fire Point
C	219.223	2	t_c	0.267	2	-14.
A* 10 to	1.29292	5	$\Delta\text{Hc kcal/m}$	1074.78	2	M Spec.
B* 110 °C	1164.9	5	ΔHf	-54.35	2	Ultra V.
K			ΔFf	-0.39	2	X-Ray Dif.
c			Viscosity centistokes °C			Infrared
t_x to						Yes
t_x °C						Solubility in +
A' to						Acetone
B' °C						Carbon tet.
C' °C						Benzene
A'* to						Ether
B'* °C						n-Heptane
						Ethanol
						Water
						Water in
Ac 130 to	7.39633	4	B ^v to °C			
Bc t_c °C	1635.1	4	A ^v to °C			
Cc	270.8	4	(B ^v) to °C			
			(A ^v) to °C			
Cryos. A° const. B°			c_p liq. °K			
t_e °C	100.58	5	c_p vap. 300°K	0.39781	2	
			400	0.50320	2	
			c_v vap.			
$T_R = 0.75 T_c$						
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						

NAME		3-Ethylpentane		Triethylmethane		STRUCTURAL FORMULA				
						$\text{CH}_3\text{CH}_2\underset{\text{C}_2\text{H}_5}{\text{CH}}\text{CH}_2\text{CH}_3$				
Mole % Pur.	Ref.	Molecular Formula	C_7H_{16}	Molecular Weight	100.198					
		Ref.			Ref.					
F.P. °C	-118.604	2	dt/dP			f		to		
F.P. 100%			°C/mm			g		°K		
B.P. °C			25°C	0.3584	4	h				
760 mm	93.475	2	BP	0.04482	2					
100	36.864	2	t_e	0.0367	5	f'		to		
30	12.00	4	30 mm	0.6218	4	g'		°K		
10	-6.8	4				h'				
1	-37.8	5	ΔHm cal/g	22.775	2					
Pressure mm 25°C	58.05	4	ΔHv cal/g			m	300 to	0.0272	4	
t_e	983.0	5	25°C	84.02	2	n	600 °K	0.0014	4	
			30 mm	86.47	5	o		-0.0645	4	
Density g/ml 20°C	0.69816	2	BP	73.83	2					
d ^t 25	0.69395	2	t_e	72.81	5	m'	700 to	0.1062	4	
d ^t 30	0.68982	4	t_e (d, e)	72.43	5	n'	1000 °K	0.0012	4	
			ΔHv/T _e	19.42	5	o'		-0.0640	4	
a	0.71499	4	d 10 to	88.34	5	Surface tension dynes/cm. 20°C				
b	-0.03829	4	e 100 °C	0.1552	5	γ	30	19.45	2	
			d' to				40	18.47	2	
Ref. Index			e' °C			Parachor [P]				
n _D 20°C	1.39339	2	d, g/ml	0.241	2	20°C	305.3		4	
25	1.39084	2	v _c ml/g	4.152	2	30	305.2		4	
30	1.38840	4	t _c °C	267.6	2	40	305.2		4	
"C"	0.7519	4	P _c mm	21736.	2	Sugd.	307.2		5	
MR (Obs.)	34.283	2	PV/RT			Exp. L. l. %/wt.				
MR (Calc.)	34.526	5	25°C	0.9917	5	u.				
(n _D -d/2)	1.04431	2	30 mm	1.0000	5	Dispersion	95.7		2	
Dielectric	1.939	3	BP	0.9485	4	Flash Point °C				
A 10 to	6.87564	2	t_e	0.9404	5	Fire Point				
B 130 °C	1251.827	2	t_c	0.268	2	-14.0				
C	219.887	2	ΔHc kcal/m	1075.40	2	M. Spec.				
A* 10 to	1.29505	5	ΔHf	-53.77	2	Ultra V.				
B* 115 °C	1174.98	5	ΔFf	1.04	2	X-Ray Dif.				
K			Viscosity centistokes			Infrared				
c			η	°C		Yes				
t _k to						Solubility in ⁺				
t _x °C						Acetone				
A' to						∞				
B' °C						Carbon tet.				
C' °C						∞				
A'* to						Benzene				
B'* °C						∞				
						Ether				
						∞				
						n-Heptane				
						∞				
						Ethanol				
						∞				
						Water				
						∞				
						Water in				
Ac 130 to	7.29098	4	B ^v to							
Bc t _c °C	1561.6	4	A ^v °C							
Cc °C	261.0	4	(B ^v) to							
			(A ^v) °C							
Cryos. A°	0.04807	2	c _p liq. °K							
consts. B°	0.0039	2	c _p vap.300°K	0.39781	2					
t_e °C	102.49	5	400	0.50320	2					
			c _v vap.							
$T_R = 0.75 T_c$						⁺ 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										

NAME		2, 2-Dimethylpentane		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CCH}_2\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	99.99	Ref. 2	Molecular Formula C ₇ H ₁₆	Molecular Weight 100.198	
		Ref.			Ref.
F.P. °C	-123.811	2	dt/dP °C/mm		f to
F.P. 100%			25°C	0.2138	g °K
B.P. °C			BP	0.04394	h
760 mm	79.197	2	t _e	0.0372	f' to
100	23.858	2	30 mm	0.6047	g' °K
30	-0.35	4	ΔHm cal/g	13.892	h'
10	-18.6	4			
1	-48.68	5			
Pressure mm 25°C	105.23	4	ΔHv cal/g		m 300 to
t _e	942.7	5	25°C	77.36	n 600 °K
			30 mm	81.39	o
Density g/ml 20°C	0.67385	2	BP	69.55	
d ₄ ²⁵	0.66953	2	t _e	68.44	m' 700 to
d ₄ ³⁰	0.66519	4	t _e (d, e)	68.45	n' 1000 °K
			ΔHv/T _e	19.06	o'
a	0.69115	4	d 0 to	81.34	Surface tension dynes/cm. 20°C
b	-0.03842	4	e 90 °C	0.1488	30
Ref. Index n _D ^{20°C}	1.38215	2	d' to		40
25	1.37955	2	e' °C		18.02
30	1.37694	4			17.08
"C"	0.7580	4	d _c g/ml	0.248	30
MR (Obs.)	34.617	2	v _c ml/g	4.032	40
MR (Calc.)	34.526	5	t _c °C	247.7	Sugd.
(nD-d/2)	1.04522	2	P _c mm	21584.	307.2
Dielectric	1.912	3	PV/RT		
A 0 to	6.81480	2	25°C	0.9878	Exp. L.1. %/wt. u.
B 115 °C	1190.033	2	30 mm	1.0000	Dispersion
C	223.303	2	BP	0.9486	99.3
A* 0 to	1.24946	5	t _e	0.9418	Flash Point °C
B* 95 °C	1115.26	5	t _c	0.268	-25.
K			ΔHc kcal/m	1071.45	Fire Point
c			ΔHf	-57.05	
t _k to			ΔFf	-1.15	M Spec. Ultra V.
t _x °C			Viscosity centistokes		X-Ray Dif.
A' to			η 20 °C	0.5773	Infrared
B' °C					Yes
C' °C					2
A** to			B ^v to		Solubility in +
B** °C			A ^v °C		Acetone
			(B ^v) to		Carbon tet.
Ac 115 to	7.50352	4	(A ^v) °C		Benzene
Bc t _c °C	1705.8	4			Ether
Cc t _c °C	290.5	4	c _p liq. °K		n-Heptane
					Ethanol
Cryos. A°	0.03140	2	c _p vap. 300°K	0.39781	Water
const. B°	0.0036	2	400	0.50320	Water in
t _e °C	86.57	5	c _v vap.		
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:		API			
PURIFICATION:		API			
LITERATURE REFERENCES: 3 NBS 514; 3' Ind. Eng. Chem. 38, 338 (1946)					

No. 19

NAME		2, 3-Dimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{16}	Molecular Weight	100.198		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.3103	4	h	
760 mm	89.784	2	BP	0.04482	2		
100	33.237	2	t_e	0.0369	5	f'	to
30	8.43	4	30 mm	0.6200	4	g'	°K
10	-10.3	4				h'	
1	-41.19	5	$\Delta\text{Hm cal/g}$			m	300 to
Pressure			$\Delta\text{Hv cal/g}$			n	600 °K
mm 25°C	68.87	4	25°C	81.68	2	o	0.0272
t_e	974.5	5	30 mm	84.58	5		0.0014
			BP	72.48	2		-0.0645
Density			t_e	71.23	5	m'	700 to
g/ml 20°C	0.69508	2	t_e (d, e)	71.19	5	n'	1000 °K
25	0.69091	2	$\Delta\text{Hv}/T_e$	19.20	5	o'	0.1062
30	0.68673	4					0.0012
d_4							-0.0640
a	0.71175	4	d 5 to	85.83	5	Surface tension	
b	-0.03819	4	e 100 °C	0.1487	5	dynes/cm. 20°C	
Ref. Index			d'			30	19.96
n_D 20°C	1.39196	2	e'			40	18.98
25	1.38945	2					18.02
30	1.38696	4	d, g/ml	0.247	2	Parachor [P]	
"C"	0.7527	4	v_c ml/g	4.042	2	20°C	304.8
MR (Obs.)	34.324	2	t_c °C	264.6	2	30	304.7
MR (Calc.)	34.526	5	P_c mm	22192.	2	40	304.6
(nD-d/2)	1.04442	2				Sugd.	307.2
Dielectric	1.939	3	PV/RT			Exp. L. l. %/wt.	
A 5 to	6.85382	2	25°C	0.9903	5	u.	
B 130 °C	1238.017	2	30 mm	1.0000	5	Dispersion	96.2
C	221.823	2	BP	0.9501	4	Flash Point °C	-16.
A* 5 to	1.27315	5	t_e	0.9424	5	Fire Point	
B* 110 °C	1160.44	5	t_c	0.268	2	M. Spec.	
K			$\Delta\text{Hc kcal/m}$	1073.12	2	Ultra V.	
c			ΔHf	-55.81	2	X-Ray Dif.	
t_k to			ΔFf	-1.27	2	Infrared	Yes
t_x °C			Viscosity			Solubility in +	
A' to			centistokes			Acetone	∞
B' °C			η 15 °C	0.6233	3'	Carbon tet.	∞
C'			30	0.6000	3'	Benzene	∞
A'* to						Ether	∞
B'* °C			B ^v to			n-Heptane	∞
			A ^v °C			Ethanol	∞
			(B ^v) to			Water	∞
Ac 130 to	7.40013	4	(A ^v) °C			Water in	∞
Bc t_c °C	1652.5	4					
Cc t_c °C	276.5	4	c_p liq. °K				
Cryos. A°			c_p vap. 300°K	0.39781	2		
const. B°			400	0.50320	2		
t_e °C	98.49	5	c_v vap.				
$T_R = 0.75 T_c$					+ 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							

NAME		2,4-Dimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}_2\text{CH} \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{16}	Molecular Weight	100.198		
F. P. °C	-119.242	2	dt/dP °C/mm			f	to
F. P. 100%			25°C	0.2252	4	g	°K
B. P. °C			BP	0.04376	2	h	
760 mm	80.500	2	t_e	0.0369	5	f'	to
100	25.359	2	30 mm	0.6031	4	g'	°K
30	1.22	4	ΔH_m cal/g	16.318	2	h'	
10	-17.0	4	ΔH_v cal/g	78.44	2	m	300 to
1	-47.0	5	25°C	82.54	5	n	600 °K
Pressure mm 25°C	98.395	4	30 mm	70.36	2	o	0.0272
t_e	946.4	5	BP	69.26	5	n'	0.0014
Density g/ml 20°C	0.67270	2	t_e (d, e)	69.21	5	o'	-0.0645
d ^t 25	0.66832	2	$\Delta H_v/T_e$	19.21	5		0.1062
d ^t 30	0.66393	4	d 0 to	82.73	5	Surface tension dynes/cm. 20°C	
a	0.69023	4	e -90 °C	0.1537	5	y	18.15
b	-0.0855	4	d' °C				17.17
Ref. Index n _D 20°C	1.38145	2	e' °C				16.23
25	1.37882	2	d ^c g/ml	0.239	2	Parachor [P]	
30	1.37617	4	v ^c ml/g	4.192	2	20°C	307.6
"C"	0.7580	4	t ^c °C	247.1	2	30	307.5
MR (Obs.)	34.619	2	P _c mm	20824.	2	40	307.5
MR (Calc.) (nD-d/2)	34.526	5	PV/RT			Sugd.	307.2
Dielectric	1.914	3	25°C	0.9865	5	Exp. L. l. %/wt. u.	
A 0 to	6.82621	2	30 mm	1.0000	5	Dispersion	
B 115°C	1192.041	2	BP	0.9487	4	Flash Point °C	
C	221.634	2	t _e	0.9418	5	Fire Point	
A* 0 to	1.26088	5	t _c	0.270	2	M Spec. Ultra V. X-Ray Dif. Infrared	
B* 100°C	1117.86	5	Viscosity centistokes	1072.44	2	Solubility in +	
K			η 15 °C	-56.17	2	Acetone	
c			η 30	-0.49	2	Carbon tet.	
t _k to				0.5538	3'	Benzene	
t _x °C				0.5351	3'	Ether	
A' to						n-Heptane	
B' °C			B ^v to			Ethanol	
C' °C			A ^v °C			Water	
A** to			(B ^v) to			Water in	
B** °C			(A ^v) °C				
Ac 115 to	7.33247	4	c _p liq. °K				
Bc t _c °C	1559.5	4	c _p vap 300°K	0.39781	2		
Cc 270.5	270.5	4	400	0.50320	2		
Cryos. A°	0.03473	2	c _v vap.				
const. B°	0.0038	2					
t _e °C	87.98	5					
T _R = 0.75 T _c							
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							

NAME		3, 3-Dimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	99.99	Ref. 2	Molecular Formula C ₇ H ₁₆	Molecular Weight 100.198			
		Ref.			Ref.		
F. P. °C	-134.46	2	dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.2674	g	°K	
B. P. °C			BP	0.04509	h		
760 mm	86.064	2	t _e	0.0374	f'	to	
100	29.241	2	30 mm	0.6215	g'	°K	
30	4.36	4	ΔHm cal/g	16.857	h'		
10	-14.4	2	ΔHv cal/g		m	300 to	0.0272
1	-45.3	4	25°C	78.76	n	600 °K	0.0014
Pressure mm 25°C	82.84	4	30 mm	81.94	o		-0.0645
t _e	966.5	5	BP	70.71			
Density g/ml 20°C	0.69327	2	t _e	69.56	m'	700 to	0.1062
d ₄ ^t 25	0.68908	2	t _e (d, e)	69.55	n'	1000 °K	0.0012
d ₄ ³⁰	0.68488	4	ΔHv/T _e	18.95	o'		-0.0640
a	0.71004	4	d 0 to	82.54	Surface tension dynes/cm. 20°C		
b	-0.03820	4	e 100 °C	0.1375	30		
Ref. Index n _D 20°C	1.39092	2	d' to		40		
25	1.38842	2	e' °C		19.59		
30	1.38595	4	d 0 to		18.62		
"C"	0.7527	4	e 100 to		17.67		
MR (Obs.)	34.332	2	c g/ml	0.239	Parachor [P]		
MR (Calc.)	34.526	5	v _c ml/g	4.183	20°C		
(n _D -d/2)	1.04428	2	t _c °C	263.0	30		
Dielectric	1.937	3	P _c mm	22800.	40		
A 5 to	6.82667	2	PV/RT		Sugd.		
B 130 °C	1228.663	2	25°C	0.9898	304.2		
C	225.316	2	30 mm	1.0000	304.1		
A* 5 to	1.24360	5	BP	0.9520	40		
B* 105 °C	1149.27	5	t _e	0.9447	307.2		
K			t _c		Exp. L. l. %/wt. u.		
c			ΔHc kcal/m	1072.57	Dispersion		
t _k to			ΔHf	-56.07	Flash Point °C		
t _x °C			ΔFf	-0.69	Fire Point		
A' to			Viscosity centistokes		M. Spec. Ultra V. X-Ray Dif. Infrared		
B' °C			η °C		Yes		
C' °C			B _v to		Solubility in +		
A** to °C			A _v °C		Acetone		
B** to °C			(B _v) to		Carbon tet.		
C** to °C			(A _v) °C		Benzene		
Ac 130 to	7.55060	4	c _p liq. °K		Ether		
Bc t _c °C	1795.1	4	c _p vap. 300°K	0.39781	n-Heptane		
Cc t _c °C	299.3	4	c _p vap. 400	0.50320	Ethanol		
Cryos. A°	0.04418	2	c _v vap.		Water		
consts. B°	0.0040	2			Water in		
t _e °C	94.53	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: 3 NBS 514; 3' ASTM 109							

NAME		2, 2, 3-Trimethylbutane				STRUCTURAL FORMULA					
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CHCH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$					
Mole % Pur.	Ref.	Molecular Formula	C_7H_{16}	Molecular Weight	100.198						
		Ref.			Ref.						
F.P. °C	-24.912	2	dt/dP			f			to		
F.P. 100%			°C/mm			g			°K		
B.P. °C			25°C	0.2227	4	h					
760 mm	80.882	2	BP	0.04484	2	f'					
100	24.469	2	t _e	0.0377	5	g'			to		
30	-0.18	4	30 mm	0.6152	4	h'			°K		
10	-18.8	4	ΔHm cal/g	5.393	2	m		300 to		-0.0081	4
1	-49.3	5				n		600 °K		0.0015	4
Pressure mm 25°C	102.36	4	ΔHv cal/g	76.42	2	o				-0.0654	4
t _e	951.3	5	25°C	80.10	5						
			30 mm	80.10	5						
Density g/ml 20°C	0.69011	2	BP	69.04	2	m'		700 to		0.1121	4
d ₄ ^t 25	0.68588	2	t _e (d, e)	67.98	5	n'		1000 °K		0.0012	4
d ₄ ^t 30	0.68163	4	ΔHv/T _e	18.82	5	o'				-0.0642	4
a	0.70705	4	d 0 to	80.08	5	Surface tension dynes/cm. 20°C					
b	-0.03825	4	e 90 °C	0.1365	5	y		30		18.76	2
Ref. Index n _D 20°C	1.38944	2	d' to					40		17.77	2
25	1.38692	2	e' °C			Parachor [P] 20°C					
30	1.38433	4	d _c g/ml	0.254	2			30		302.4	4
"C"	0.7535	4	v _c ml/g	3.932	2			40		302.1	4
MR (Obs.)	34.374	2	t _c °C	258.3	2			Sugd.		301.9	4
MR (Calc.)	34.526	5	P _c mm	22610.	2					307.2	5
(n _D -d/2)	1.04438	2	PV/RT			Exp. L.l. %/wt. u.					
Dielectric	1.930	5	25°C	0.9888	5	Dispersion					
A 0 to	6.79230	2	30 mm	1.0000	5	98.3					
B 125 °C	1200.563	2	BP	0.9516	4	Flash Point °C					
C	226.050	2	t _e	0.9447	5	-22.					
A* 0 to	1.21608	5	t _c	0.269	2	Fire Point					
B* 100 °C	1122.41	5	ΔHc kcal/m	1071.78	2	M Spec. Ultra V.					
K			ΔHf	-56.63	2	Yes					
c			ΔFf	-0.17	2	X-Ray Dif.					
t _k to			Viscosity centistokes			Infrared					
t _x °C			η			Yes					
A' to						Solubility in +					
B' °C						Acetone ∞					
C'						Carbon tet. ∞					
A'* to			B ^v to			Benzene ∞					
B'* °C			A ^v °C			Ether ∞					
			(B ^v) to			n-Heptane ∞					
Ac 125 to	7.40100	4	(A ^v) °C			Ethanol ∞					
Bc t _c °C	1666.5	4	c _p liq. °K			Water ∞					
Cc °C	288.7	4				Water in					
Cryos. A* const. B*	0.00441	2	c _p vap. 300 °K	0.39781	2						
	0.0033	2	400	0.50320	2						
t _e °C	88.73	5	c _v vap.								
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:											

NAME	n-Octane				STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₆ CH ₃			
Mole % Pur. 99.96	Ref. 2	Molecular Formula C ₈ H ₁₈	Molecular Weight 114.224					
	Ref.			Ref.			Ref.	
F.P. °C	-56.795	2	dt/dP °C/mm		f	to		
F.P. 100%			25°C	1.2698	g	°K		
B.P. °C			BP	0.04738	h			
760 mm	125.665	2	t _e	0.0364	f'	to		
100	65.704	2	30 mm	0.6613	g'	°K		
30	39.28	4	ΔHm cal/g	43.397	h'			
10	19.2	2	ΔHv cal/g		m	300 to	0.0265	
1	-14.9	4	25°C	86.80	n	600 °K	0.0014	
		5	30 mm	85.63	o		-0.0646	
Pressure mm 25°C	14.036	4	BP	71.91				
t _e	1064.5	5	t _e	70.06	m'	700 to	0.1079	
Density g/ml 20°C	0.70252	2	t _e (d, e)	70.05	n'	1000 °K	0.0012	
g/t 25	0.69849	2	ΔHv/T _e	19.45	o'		-0.0640	
d ₄ 30	0.69445	4						
a	0.71862	4	d 20 to	90.50	Surface tension dynes/cm. 20°C			
b	-0.03802	4	e 140 °C	0.1479	y			
			d' to °C		30			
			e' to °C		40			
Ref. Index n _D 20°C	1.39743	2			Parachor [P] 20°C			
25	1.39505	2	d _c g/ml	0.235	30			
30	1.39269	4	v _c ml/g	4.255	30			
"C"	0.7547	4	t _c °C	296.2	40			
MR (Obs.)	39.192	2	P _c mm	18726.	Sugd. 346.2			
MR (Calc.) (n _D -d/2)	39.144	5	PV/RT 25°C	1.0000	Exp. L.I. %/wt. u.			
Dielectric	1.948	3	30 mm	1.0000	Dispersion			
A 40 to	6.92377	2	BP	0.9411	Flash Point °C			
B 155 °C	1355.126	2	t _e	0.9299	Fire Point			
C	209.517	2	t _c	0.256				
A* 40 to	1.38276	4	ΔHc kcal/m	1222.77	M. Spec. Ultra V.			
B* 150 °C	1278.24	4	ΔHf	-59.74	X-Ray Dif.			
K	24.	5	ΔFf	1.58	Infrared			
c	0.14684	4	Viscosity centistokes η		Yes			
t _k 150 to	190.	4	60 °C	0.5353	Solubility in +			
t _x 250 °C	353.	5	80	0.4602	Acetone ∞			
A' 15 to	7.47176	4	100	0.4022	Carbon tet. ∞			
B' 40 °C	1641.52	4	120	0.3560	Benzene ∞			
C'	234.5	4	B ^v 20 to	392.25	Ether ∞			
A'* 15 to	1.87375	4	A ^v 75 °C	2.55168	n-Heptane ∞			
B'* 40 °C	1541.29	4	(B ^v) 75	387.11	Ethanol ∞			
Ac 155 to	7.30712	4	(A ^v) 130	2.56694	Water ∞			
Bc t _c °C	1648.0	4	c _p liq. 20 °C.	0.52	Water in			
Cc	246.9	4	c _p vap. 300°K	0.39703	Viscosity centistokes			
Cryos. A°	0.05329	2	400	0.50217	30°C 0.7005			
const. B°	0.0031	2	c _v vap.		70 0.4950			
t _e °C	138.25	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: 3 NBS Circ. 514; 3' Timmermans; 3 ² NFPA 325								

NAME		2-Methylheptane		STRUCTURAL FORMULA			
				$\text{CH}_3\text{CH}(\text{CH}_2)_4\text{CH}_3$ CH_3			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224		
		Ref.			Ref.		
F. P. °C	-109.040	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.903	4	h	
760 mm	117.647	2	BP	0.04691	2	f'	to
100	58.297	2	t_e	0.0364	5	g'	°K
30	32.15	4	30 mm	0.6542	4	h'	
10	12.3	2	ΔHm cal/g			m	300 to
1	-21.7	5	25°C			n	600°K
Pressure mm 25°C	20.637	5	30 mm	83.02	2	o	0.0265
t_e	1052.	5	BP	82.65	5		0.0014
Density g/ml 20°C	0.69792	2	t_e	70.30	2	m'	700 to
25	0.69392	2	t_e (d, e)	68.65	5	n'	1000°K
d ₄ ^t 30	0.68991	4	ΔHv/T _e	68.56	5	o'	0.1079
		2		19.46	5		0.0012
a	0.71390	4	d 25 to	87.30	5	Surface tension dynes/cm. 20°C	
b	-0.03794	4	e 130 °C	0.1445	5	30	20.60
Ref. Index n _D 20°C			d' °C			40	19.68
25	1.39494	2	e' °C				18.77
30	1.39257	2	d c g/ml	0.234	2	Parachor [P]	
	1.39020	4	v c ml/g	4.273	2	20°C	348.7
"C"	0.7551	4	t c °C	288.	2	30	348.8
MR (Obs.)	39.231	2	P c mm	18848.	2	40	348.8
MR (Calc.)	39.144	2	PV/RT			Sugd.	346.2
(n _D -d/2)	1.04598	2	25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	1.946	5	30 mm	1.0000	5	Dispersion	98.5
A 35 to	6.91735	2	BP	0.9487	4	Flash Point °C	
B 150 °C	1337.468	2	t_e	0.9386	5	Fire Point	
C	213.693	2	t_c	0.263	2	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 35 to	1.36848	5	ΔHc kcal/m	1221.08	2	Solubility in +	
B* 140 °C	1257.10	5	ΔHf	-60.98	2	Acetone	∞
K			ΔFf	0.92	2	Carbon tet.	∞
c			Viscosity centistokes			Benzene	∞
t _x °C			γ °C			Ether	∞
t _x °C			B ^v to			n-Heptane	∞
A' 0 to	7.66293	5	A ^v °C			Ethanol	∞
B' 35 °C	1729.19	5	(B ^v) to			Water	∞
C'	247.4	5	(A ^v) °C			Water in	
A'* 10 to	2.05206	5	c _p liq. °K				
B'* 35 °C	1620.47	5	c _p vap. 300°K	0.39703	2		
Ac 150 to	7.24113	4	400	0.50217	2		
B _c t _c °C	1581.7	4	c _v vap.				
C _c t _c °C	245.3	4					
Cryos. A ^s const. B ^s	0.0458	2					
t _e °C	129.66	5					
TR = 0.75 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		3-Methylheptane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_2)_3\text{CH}_3$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224		
		Ref.			Ref.		
F.P. °C	-120.500	2	dt/dP °C/mm		f	to	
F.P. 100%			25°C	0.9478	g	°K	
B.P. °C			BP	0.04712	h		
760 mm	118.925	2	t_e	0.0361	f'	to	
100	59.358	2	30 mm	0.6556	g'	°K	
30	33.15	4	$\Delta\text{Hm cal/g}$	23.813	h'		
10	13.3	2	$\Delta\text{Hv cal/g}$		m	300 to	0.0265
1	-21.0	5	25°C	83.35	n	600 °K	0.0014
Pressure mm 25°C	19.582	4	30 mm	83.01	o		-0.0646
t_e	1070.6	5	BP	71.30			
Density g/ml 20°C	0.70582	2	t_e	69.60	m'	700 to	0.1079
25	0.70175	2	t_e (d, e)	69.56	n'	1000 °K	0.0012
d ₄ 30	0.69767	4	$\Delta\text{Hv}/T_e$	19.64	o'		-0.0640
a	0.72208	4	d 25 to	87.54	Surface tension dynes/cm. 20°C		
b	-0.03809	4	e 130 °C	0.1366	21.17		
Ref. Index			d' to		30 20.24		
n_D 20°C	1.39848	2	e' °C		40 19.32		
25	1.39610	2	d, g/ml	0.239	Parachor [P]		
30	1.39374	2	v_c ml/g	4.185	20°C 347.2		
"C"	0.7531	4	t_c °C	292.	30 347.3		
MR (Obs.)	39.100	2	P_c mm	19456.	40 347.4		
MR (Calc.)	39.144	5	PV/RT		Sugd. 346.2		
(n_D -d/2)	1.04557	2	25°C	1.0000	Exp. L. l. %/wt.		
Dielectric	1.956	5	30 mm	1.0000	u.		
A 30 to	6.89944	2	BP	0.9601	Dispersion		
B 150 °C	1331.530	2	t_e	0.9504	97.5		
C	212.414	2	t_c	0.264	Flash Point °C		
A* 30 to	1.33027	5	$\Delta\text{Hc kcal/m}$	1221.76	6.		
B* 140 °C	1246.6	5	ΔHf	-60.34	Fire Point		
K			ΔFf	1.12	M. Spec.		
c			Viscosity centistokes		Ultra V.		
t_k to			η °C		X-Ray Dif.		
t_x °C					Infrared		
A' 0 to	7.77698	5			Yes		
B' 30 °C	1797.39	5	B ^v to		Solubility in +		
C'	252.16	5	A ^v °C		Acetone ∞		
A'* 10 to	2.15798	5	(B ^v) to		Carbon tet. ∞		
B'* 30 °C	1684.52	5	(A ^v) °C		Benzene ∞		
Ac 150 to	7.30319	5	c _p liq. °K		Ether ∞		
Bc t_c °C	1640.9	5	c _p vap. 300°K	0.39703	n-Heptane ∞		
Cc	252.4	5	400	0.50217	Water ∞		
Cryos. A° const. B°	0.0587	2	c _v vap.		Water in		
t_e °C	131.67	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:							

NAME		4-Methylheptane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₂ CH(CH ₂) ₂ CH ₃ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight		
99.99	2	C ₈ H ₁₈	114.224		
F.P. °C	-120.955	2	dt/dP °C/mm		
F.P. 100%			25°C	0.9068	5
B.P. °C			BP	0.04695	2
760 mm	117.709	2	t _e	0.0361	5
100	58.347	2	30 mm	0.6534	4
30	32.23	4	ΔHm cal/g	22.675	2
10	12.4	2	ΔHv cal/g		
1	-22.0	4	25°C	83.01	2
Pressure mm 25°C	20.55	4	30 mm	82.79	5
t _e	1063.6	5	BP	70.91	2
Density g/ml 20°C	0.70463	2	t _e	69.23	5
d ₄ ^t 25	0.70055	2	t _e (d, e)	69.18	5
d ₄ ^t 30	0.69646	4	ΔHv/T _e	19.61	5
a	0.72093	4	d 30 to	87.27	5
b	-0.02810	4	e 130 °C	0.1390	5
Ref. Index n _D 20°C	1.39792	2	d' to		
25	1.39553	2	e' °C		
30	1.39316	4	d c g/ml	0.240	2
"C"	0.7533	4	v c ml/g	4.167	2
MR (Obs.)	39.117	2	t c °C	290.	2
MR (Calc.)	39.144	5	P c mm	19456.	2
(nD-d/2)	1.04560	2	PV/RT 25°C	1.0000	5
Dielectric	1.954	5	30 mm	1.0000	5
A 25 to	6.90065	2	BP	0.9575	4
B 150 °C	1327.661	2	t _e	0.9477	5
C	212.568	2	t _c	0.264	2
A* 25 to	1.33746	5	ΔHc kcal/m	1221.89	2
B* 140 °C	1244.16	5	ΔHf	-60.17	2
K			ΔFf	1.86	2
c			Viscosity centistokes °C		
t _k to					
t _x °C					
A' 0 to	7.8970	5	B ^v to		
B' 35 °C	1860.28	5	A ^v °C		
C'	257.54	5	(B ^v) to		
A** 10 to	2.2715	5	(A ^v) °C		
B** 35 °C	1743.38	5	c _p liq. °K		
Ac 150 to	7.31607	4	c _p vap. 300°K	0.39703	2
Bc t _c °C	1645.2	4	400	0.50217	2
Cc	253.5	4	c _v vap.		
Cryos. A° const. B°	0.0563	2			
t _e °C	130.15	5			
T _R = 0.75 T _c					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		3-Ethylhexane			STRUCTURAL FORMULA	
					$\text{CH}_3\text{CH}_2\text{CH}(\text{C}_2\text{H}_5)(\text{CH}_2)_2\text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224	
F. P. °C				dt/dP °C/mm		f
F. P. 100%				25°C	0.9283	g
B. P. °C				BP	0.04719	h
760 mm	118.534	2		t _e	0.0359	f'
100	58.902	2		30 mm	0.6559	g'
30	32.68	4		ΔHm cal/g		h'
10	12.8	2		ΔHv cal/g		m
1	-20.47	5		25°C	83.19	n
				30 mm	82.70	o
Pressure mm 25°C	20.03	5		BP	71.70	m'
t _e	1080.9	5		t _e	70.52	n'
				t _e (d, e)	70.01	o'
Density g/ml 20°C	0.71358	2		ΔHv/T _e	19.88	
d ₄ 25	0.70948	2		d _e 30 to	86.88	Surface tension
d ₄ 30	0.70537	5		e 130 °C	0.1281	dynes/cm. 20°C
				d'		30
a	0.72996	4		e'		40
b	-0.0381	4				21.51
						20.58
						19.64
Ref. Index n _D 20°C	1.40162	2		d _c g/ml	0.245	2
25	1.39919	2		v _c ml/g	4.080	2
30	1.39644	5		t _c °C	294.	5
"C"	0.7498	5		P _c mm	19914.	5
MR (Obs.)	38.944	2		PV/RT		
MR (Calc.) (nD-d/2)	39.144	5		25°C	1.0000	5
	1.04483	2		30 mm	1.0000	5
Dielectric	1.964	5		BP	0.9687	4
A 25 to	6.89098	2		t _e	0.9596	5
B 150 °C	1327.884	2		t _c	0.264	2
C	212.595	2		ΔHc kcal/m	1222.19	2
A* 25 to	1.30712	5		ΔHf	-59.88	2
B* 140 °C	1239.30	5		ΔFf	1.80	2
K				Viscosity centistokes		
t _k to				η °C		
t _k °C						
A' 0 to	7.30017	5		B ^v to		
B' 35 °C	1529.6	5		A ^v °C		
C'	230.	5		(B ^v) to		
				(A ^v) °C		
A* 10 to	1.72722	5		c _p liq. °K		
B* 35 °C	1437.6	5		c _p vap. 300°K	0.39703	2
				400	0.50217	2
Ac 150 to	7.29602	5		c _v vap.		
Bc t _c °C	1639.8	5				
Cc	253.2	5				
Cryos. A° const. B°						
t _e °C	131.67	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:						

NAME		2,2-Dimethylhexane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	99.99	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224				
		Ref.				Ref.				
F.P. °C	-121.18	2	dt/dP	°C/mm			f	300 to	0.0445	5
F.P. 100%			25°C		0.5772	4	g	600°K	0.0013	5
B.P. °C			BP		0.04650	2	h		-0.0637	5
760 mm	106.840	2	t_e		0.0366	5	f'	to		
100	48.222	2	30 mm		0.6417	4	g'	°K		
30	22.54	4	ΔHm cal/g				h'			
10	3.1	2	ΔHv cal/g				m	300 to	0.0265	4
1	-28.8	4	25°C		78.02	2	n	600°K	0.0014	4
Pressure mm 25°C	34.05	4	30 mm		79.03	5	o		-0.0646	4
t_e	1033.1	5	BP		67.7	2	m'	700 to	0.1079	4
Density g/ml 20°C	0.69528	2	t_e	(d, e)	66.23	5	n'	1000°K	0.0012	4
25	0.69112	2	$\Delta\text{Hv}/T_e$		66.19	5	o'		-0.0640	4
d ₄ 30	0.68695	4	d	20 to	82.06	4	Surface tension dynes/cm. 20°C			
a	0.71190	4	e	120 °C	0.1344	4	y	30	19.60	2
b	-0.03823	4	e'	to °C				40	18.69	2
Ref. Index n _D 20°C	1.39349	2	d _c	g/ml	0.245	2	Parachor [P] 20°C			
25	1.39104	2	v _c	ml/g	4.088	2		30		
30	1.38850	4	t _c	°C	279.	2		40		
"C"	0.7552	4	P _c	mm	19456.	2		Sugd.	346.2	5
MR (Obs.)	39.252	2	PV/RT				Exp. L.l. %/wt. u.			
MR (Calc.)	39.144	5	25°C		0.99147	5	Dispersion			99.7
(n _D -d/2)	1.04585	2	30 mm		1.0000	5	Flash Point °C			-3.
Dielectric	1.942	5	BP		0.9580	4	Fire Point			
A 20 to	6.83715	2	t_e		0.9490	5	M Spec. Ultra V.			
B 40 °C	1273.594	2	t _c		0.264	2	X-Ray Dif.			
C	215.072	2	ΔHc kcal/m		1218.88	2	Infrared			Yes
A* 20 to	1.28438	5	ΔHf		-62.63	2	Solubility in +			
B* 30 °C	1191.69	5	ΔFf		0.72	2	Acetone			∞
K			Viscosity centistokes	°C			Carbon tet.			∞
c			η				Benzene			∞
t _x to °C			B ^v to °C				Ether			∞
t _x to °C			A ^v to °C				n-Heptane			∞
A' to °C			(B ^v) to °C				Ethanol			∞
B' to °C			(A ^v) to °C				Water			∞
C' to °C			c _p liq. 300°K		0.39891	5	Water in			
A'* to °C			400		0.50224	5				
B'* to °C			c _p vap. 300°K		0.39703	2				
Ac 140 to °C	7.24434	5	400		0.50217	2				
Bc °C	1580.0	5	c _v vap.							
Cc	256.0	5								
Cryos. A° const.	0.0354	2								
B°										
t _e °C	118.07	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:										

NAME		2, 3-Dimethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224			
		Ref.			Ref.	Ref.		
F. P. °C			dt/dP		f	300 to	0.0445	5
F. P. 100%			°C/mm		g	600 °K	0.0013	5
B. P. °C			25°C	0.8131	4			
760 mm	115.607	2	BP	0.04724	2			
100	55.965	2	t _e	0.0363	5			
30	29.77	4	30 mm	0.6548	4			
10	9.9	2						
1	-25.45	4	ΔHm cal/g					
Pressure mm 25°C	23.44	4	ΔHv cal/g					
t _e	1066.2	5	25°C	81.17	2	300 to	0.0265	4
			30 mm	81.29	4	600 °K	0.0014	4
Density g/ml 20°C	0.71214	2	BP	70.20	2			
d ₄ ^t 25	0.70809	2	t _e	68.59	5			
d ₄ ^t 30	0.70403	4	t _e (d, e)	68.57	5	700 to	0.1079	4
			ΔHv/T _e	19.52	5	1000 °K	0.0012	4
a	0.72832	4	d 30 to	85.14	4	Surface tension dynes/cm. 20°C		
b	-0.03804	4	e 130 °C	0.1293	4	γ	30	20.99
			d' to				40	20.07
Ref. Index n _D 20°C	1.40113	2	e' °C					19.16
25	1.39880	2				Parachor [P] 20°C		
30	1.39625	4	d _c g/ml	0.248	2			
"C"	0.7509	4	v _c ml/g	4.036	2			
MR (Obs.)	38.981	2	t _c °C	293.	2			
MR (Calc.) (nD-d/2)	39.144	5	P _c mm	20216.	2			
	1.04506	2						
Dielectric	1.963	5	PV/RT					
A 25 to	6.87004	2	25°C	1.0000	5	Exp. L. l. %/wt. u.		
B 150 °C	1315.503	2	30 mm	1.0000	5	Dispersion		97.0
C	214.157	2	BP	0.9639	4	Flash Point °C		
A* 25 to	1.29661	5	t _e	0.9546	5	Fire Point		
B* 140 °C	1228.9	5	t _c	0.264	2	M. Spec. Ultra V. X-Ray Dif. Infrared		Yes
K			ΔHc kcal/m	1221.45	2			
t _k to °C			ΔHf	-60.40	2			
t _x °C			ΔFf	2.17	2			
A' 0 to	8.51379	4	Viscosity centistokes η °C			Solubility in +		
B' 30 °C	2239.64	4				Acetone	∞	
C'	288.51	4	B ^v to °C			Carbon tet.	∞	
			A ^v °C			Benzene	∞	
A** 10 to	2.84821	4	(B ^v) to °C			Ether	∞	
B** 30 °C	2097.36	4	(A ^v) °C			n-Heptane	∞	
						Ethanol	∞	
Ac 150 to	7.27817	5	c _P liq. 300°K	0.39891	5	Water	∞	
Bc t _c °C	1630.7	5	400	0.50224	5	Water in		
Cc	255.6	5	c _P vap. 300°K	0.39703	2			
			400	0.50217	2			
Cryos. A° const. B°			c _v vap.					
t _e °C	128.23	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:								

NAME		2,4-Dimethylhexane		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH} \quad \text{CH}_2\text{CH} \quad \text{CH}_2\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224
			Ref.	Ref.	
F. P. °C			dt/dP °C/mm		f 300 to 0.0445 4
F. P. 100%			25°C	0.6388	g 600 °K 0.0013 5
B. P. °C			BP	0.04664	h -0.037 5
760 mm	109.429	2	t_e	0.0365	f' to
100	50.585	2	t_e (d, e)		g' °K
30	24.77	4	$\Delta\text{Hm cal/g}$		h'
10	5.2	2	$\Delta\text{Hv cal/g}$		m 300 to 0.0265 4
1	-26.9	4	25°C	79.02	n 600 °K 0.0014 4
			30 mm	79.82	o -0.046 4
Pressure mm 25°C	30.35	4	BP	68.5	m' 700 to 0.1079 4
t_e	1042.0	5	t_e	66.99	n' 1000 °K 0.0012 4
Density g/ml 20°C	0.70036	2	t_e	66.95	o' -0.040 4
d ₄ 25	0.69620	2	$\Delta\text{Hv}/T_e$	19.41	
d ₄ 30	0.69203	4			Surface tension dynes/cm. 20°C
a	0.71698	4	d 25 to 83.13 4		30 20.05 2
b	-0.03824	4	e 120 °C 0.1337 4		40 19.13 2
Ref. Index			e' °C		40 18.22 2
n_D 20°C	1.39534	2	d _c g/ml	0.245	Parachor [P] 20°C
25	1.39291	2	v_c ml/g	4.080	30
30	1.39050	4	t_c °C	282.	40
"C"	0.7533	4	P_c mm	19608.	Sugd. 346.2
MR (Obs.)	39.130	2	PV/RT		Exp. L. l. %/wt. u.
MR (Calc.)	39.144	5	25°C	0.9907	Dispersion
(n_D -d/2)	1.04516	2	30 mm	1.0000	Flash Point °C
Dielectric	1.947	5	BP	0.9591	Fire Point
A 15 to	6.85305	2	t_e	0.9501	M Spec.
B 145 °C	1287.876	2	t_c	0.264	Ultra V.
C	214.790	2	$\Delta\text{Hc kcal/m}$	1220.15	X-Ray Dif.
A* 15 to	1.29519	5	ΔHf	-61.47	Infrared
B* 130 °C	1204.86	5	ΔFf	0.89	Solubility in +
K			Viscosity centistokes		Acetone
c			η °C		Carbon tet.
t_k to					Benzene
t_x °C					Ether
A' to					n-Heptane
B' °C					Ethanol
C' °C					Water
A'* to			B ^v to		Water in
B'* °C			A ^v °C		
Ac 145 to	7.29625	5	(B ^v) to		
Bc t_c °C	1624.8	5	(A ^v) °C		
Cc °C	258.9	5	c_p liq. 300°K	0.39891	
Cryos. A° const. B°			400	0.50224	
t_e °C	121.02	5	c_p vap. 300°K	0.39703	
			400	0.50217	
			c_v vap.		
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: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

No. 31

NAME		2, 5-Dimethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \quad \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}_3\text{CH} (\text{CH}_2)_2\text{CH} \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula		Molecular Weight				
99.99	2	C_8H_{18}		114.224				
		Ref.			Ref.			
F.P. °C	-91.200	2	dt/dP °C/mm		f	300 to 600 °K	0.0445	5
F.P. 100%			25°C	0.6359	g		0.0013	5
B.P. °C			BP	0.04646	h		-0.0637	5
760 mm	109.103	2	t _e	0.0364	f'			
100	50.468	2	30 mm	0.6432	g'			
30	24.74	4	ΔHm cal/g		h'			
10	5.3	2			m	300 to 600 °K	0.0265	4
1	-26.76	4	ΔHv cal/g		n		0.0014	4
Pressure mm 25°C	30.41	4	25°C	79.21	o		-0.0646	4
t _e	1040.3	5	30 mm	80.03				
Density g/ml 20°C	0.69354	2	BP	68.60	m'	700 to 1000 °K	0.1079	4
25	0.68934	2	t _e (d, e)	67.08	n'		0.0012	4
d ₄ 30	0.68513	4	t _e	67.04	o'		-0.0640	4
			ΔHv/T _e	19.46				
a	0.71032	4	d 25 to 120 °C	83.39	Surface tension dynes/cm. 20°C			
b	-0.03831	4	d' to °C	0.1355	30			19.73
Ref. Index n _D 20°C	1.39246	2	e' to °C		40			18.82
25	1.39004	2	d _c g/ml	0.239	20°C			17.92
30	1.38740	4	v _c ml/g	4.185	30			346.8
"C"	0.7552	4	t _c °C	279.	40			347.6
MR (Obs.)	39.260	2	P _c mm	19000.	Sugd.			346.2
MR (Calc.) (n _D -d/2)	39.144	5	PV/RT 25°C	0.9904	Exp. L. l. %/wt. u.			
	1.04569	2	30 mm	1.0000	Dispersion			99.0
Dielectric	1.939	5	BP	0.9585	Flash Point °C			1.
A 20 to 140 °C	6.85984	2	t _e	0.9495	Fire Point			
B 140 °C	1287.274	2	t _c	0.264	M. Spec. Ultra V. X-Ray Dif. Infrared			
C	214.412	2	ΔHc kcal/m	1219.37	ΔHf			
A* 20 to 130 °C	1.30385	5	ΔHf	-62.26	ΔFf			
B* 130 °C	1204.84	5	Viscosity centistokes η		15 °C			
K			30	0.7340	30			0.6305
t _k to °C			B ^v to °C		Solubility in +			
t _x to °C			A ^v to °C		Acetone			∞
A' to °C			(B ^v) to °C		Carbon tet.			∞
B' to °C			(A ^v) to °C		Benzene			∞
C' to °C			c _p liq. 300°K	0.39891	Ether			∞
A ^{1*} to °C			400	0.50224	n-Heptane			∞
B ^{1*} to °C			c _p vap. 300°K	0.39703	Ethanol			∞
			400	0.50217	Water			∞
Ac ₁ 140 to B _c t _c °C	7.23831	5	c _v vap.		Water in			
C _c t _c °C	1570.2	5						
	251.5	5						
Cryos. A ¹ const. B ¹	0.0467	2						
t _e °C	120.58	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: 3 Timmermans								

NAME		3, 3-Dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} - (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{18}	Molecular Weight	114.224		
		Ref.				Ref.	Ref.
F.P. °C	-126.10	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	0.6825	4	h	
760 mm	111.969	2	BP	0.04741	2	f'	to
100	52.16	2	t_e	0.03679	5	g'	°K
30	25.93	4	30 mm	0.65557	4	h'	
10	6.1	2	$\Delta\text{Hm cal/g}$			m	300 to
1	-27.	5	$\Delta\text{Hv cal/g}$			n	600 °K
Pressure mm 25°C	28.611	5	25°C	79.20	4	o	0.0265
t_e	1053.406	5	30 mm	79.15	5		0.0014
Density g/ml 20°C	0.71000	2	BP	68.5	2		-0.0646
t 25	0.70596	2	t_e	66.89	5	m'	700 to
d 4	0.70192	4	t_e (d, e)	66.99	5	n'	1000 °K
			$\Delta\text{Hv}/T_e$	19.26	5	o'	0.1079
a	0.72614	4	d 25 to	82.36	4		0.0012
b	-0.0380	4	e 125 °C	0.1238	4	Surface tension dynes/cm. 20°C	
Ref. Index			d' 10 to	80.61	5	y	30
n_D 20°C	1.40009	2	e' 25 °C	0.0563	5		40
25	1.39782	2	d_c g/ml	0.254	2	Parachor [P]	
30	1.39526	4	v_c ml/g	3.940	2	20°C	342.9
"C"	0.7513	4	t_c °C	277.9	5	30	343.0
MR (Obs.)	39.009	2	P_c mm	17388.	5	40	343.0
MR (Calc.)	39.144	5	PV/RT			Sugd.	346.2
(nD-d/2)	1.04509	2	25°C	1.0000	4	Exp. L. l. %/wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	
A 25 to	6.85121	2	BP	0.96198	4	97.3	
B 140 °C	1307.882	2	t_e	0.95282	5	Flash Point °C	
C	217.439	2	t_c	0.264	2	Fire Point	
A* 25 to	1.28231	5	$\Delta\text{Hc kcal/m}$	1219.97	2	M Spec.	
B* 135 °C	1221.27	5	ΔHf	-61.58	2	Ultra V.	
K			ΔFf	1.23	2	X-Ray Dif.	
c			Viscosity centistokes			Infrared	
t_k to			η °C			Solubility in +	
t_x °C			BV to			Acetone	
A' 0 to	7.2390	5	AV °C			Carbon tet.	
B' 35 °C	1503.4	5	(BV) to			Benzene	
C'	235.	5	(AV) °C			Ether	
A'* 10 to	1.64796	5	c_p liq. °K			n-Heptane	
B'* 35 °C	1404.8	5	c_p vap. 300°K	0.39703	2	Ethanol	
Ac 140 to	7.26174	5	c_p vap. 400	0.50217	2	Water	
Bc t_c °C	1617.9	5	c_v vap.			Water in	
Cc °C	257.6	5					
Cryos. A°	0.04	2					
const. B°							
t_e °C	124.168	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:							

NAME		3,4-Dimethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_2\text{CH} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula C_8H_{18}	Molecular Weight 114.224					
		Ref.			Ref.			
F. P. °C			dt/dP °C/mm		f	300 to	0.0445	5
F. P. 100%			25°C	0.8713	g	600 °K	0.0013	5
B. P. °C			BP	0.04752	h		-0.0637	5
760 mm	117.725	2	t_e	0.03643	f'	to		
100	57.693	2	t_e (d, e)	0.6596	g'	°K		
30	31.31	4	ΔHm cal/g		h'			
10	11.3	2			m	300 to	0.0265	4
1	-22.33	4			n	600 °K	0.0014	4
Pressure mm 25°C	21.64	4	ΔHv cal/g	81.65	o		-0.0646	4
t_e	1066.3	5	25°C	81.52				
Density g/ml 20°C	0.71923	2	30 mm	70.20				
d_4^{25}	0.71516	2	BP	68.72	m'	700 to	0.1079	4
d_4^{30}	0.71108	4	t_e	68.55	n'	1000 °K	0.0012	4
			$\Delta\text{Hv}/T_e$	20.08	o'		-0.0640	4
a	0.73550	4	d	30 to	Surface tension dynes/cm. 20°C			
b	-0.0381	4	e	130 °C	85.63	30	21.64	2
Ref. Index			d'	to	0.1310	40	20.71	2
n_D^{20}	1.40406	2	e'	°C		30	19.79	2
25	1.40180	2	d	g/ml				
30	1.39901	4	v	ml/g	0.253	Parachor [P]		
"C"	0.7486	4	t_c	°C	3.957	20°C	343.3	4
MR (Obs.)	38.845	2	P_c	mm	298.	30	343.2	4
MR (Calc.)	39.144	5			20824.	40	342.6	4
(nD-d/2)	1.04444	2				Sugd.	346.2	5
Dielectric	1.971	5	PV/RT					
A 30 to	6.87986	2	25°C	1.0002	5	Exp. L. l. %/wt.		
B 155 °C	1330.035	2	30 mm	1.0000	5	u.		
C	214.863	2	BP	0.9593	4	Dispersion	96.6	2
A* 30 to	1.31108	5	t_e	0.9496	5	Flash Point °C	4.	5
B* 140 °C	1244.36	5	t_c	0.264	2	Fire Point		
K			ΔHc kcal/m	1221.68	2	M. Spec.		
c			ΔHf	-60.23	2	Ultra V.		
t_k to			ΔFf	2.03	2	X-Ray Dif.		
t_x °C			Viscosity centistokes			Infrared	Yes	2
A' 0 to	7.27803	5	η	°C		Solubility in +		
B' 30 °C	1533.24	5				Acetone	∞	
C'	233.	5	B ^v to			Carbon tet.	∞	
A''* 10 to	1.68498	5	A ^v °C			Benzene	∞	
B''* 30 °C	1434.84	5	(B ^v) to			Ether	∞	
Acl 155 to	7.33062	5	(A ^v) °C			n-Heptane	∞	
Bc t_c °C	1684.6	5				Ethanol	∞	
Cc t_c °C	261.3	5	c _p liq. 300°K	0.39891	5	Water	∞	
			400	0.50224	5	Water in		
Cryos. A° const. B°			c _p vap. 300°K	0.39703	2			
t_e °C	130.424	5	400	0.50217	2			
			c _v vap.					
$T_R = 0.75 T_c$						+ 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		3-Ethyl-2-methylpentane				STRUCTURAL FORMULA			
						$\begin{array}{c} \text{CH}_3\text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH CH} \quad \text{CH}_2\text{CH}_3 \end{array}$			
Mole % Pur. 99.995		Ref. 2	Molecular Formula C_8H_{18}	Molecular Weight 114.224					
		Ref.			Ref.				
F.P. °C	-114.960	2	dt/dP			f	300 to	0.0445	5
F.P. 100%			25°C/mm			g	600°K	0.0013	5
B.P. °C			25°C	0.8023	4	h		-0.0637	5
760 mm	115.650	2	BP	0.04748	2	f'			
100	55.712	2	t _e	0.0366	5	g'	to		
30	29.40	4	t _e	0.6577	4	h'	°K		
10	9.5	2	ΔHm cal/g			m	300 to	0.0265	4
1	-26.1	4				n	600°K	0.0014	4
Pressure mm 25°C	23.92	4	ΔHv cal/g	80.60	2	o		-0.0646	4
t _e	1063.7	5	25°C	80.74	5	m'	700 to	0.1079	4
Density g/ml 20°C	0.71932	2	30 mm	69.70	2	n'	1000°K	0.0012	4
100	0.71522	2	BP	68.11	5	o'		-0.0640	4
25	0.71522	2	t _e (d, e)	68.09	5	Surface tension dynes/cm. 20°C			
d ₄ 30	0.71111	4	ΔHv/T _e	19.38	5	γ	30	21.52	2
a	0.73571	4	d 25 to	84.51	4	40	20.58	2	
b	-0.03814	4	e 130 °C	0.1280	4	40	19.65	2	
Ref. Index n _D 20°C	1.40401	2	d' to			Parachor [P] 20°C			
25	1.40167	2	e' to			30			
30	1.39910	4	e' to			40			
"C"	0.7486	4	d _c g/ml	0.254	2	Sugd.	346.2	5	
MR (Obs.)	38.836	2	v _c ml/g	3.940	2	Exp. L. l. %/wt. u.			
MR (Calc.)	39.144	5	t _c °C	295.	2	Dispersion	96.1	2	
(n _D -d/2)	1.04435	2	P _c mm	20824.	2	Flash Point °C			
Dielectric	1.971	5	PV/RT			Fire Point	3.	5	
A 25 to	6.86358	2	25°C	1.0000	5	M Spec. Ultra V. X-Ray Dif. Infrared			
B 150 °C	1318.120	2	30 mm	1.0000	5				
C	215.306	2	BP	0.9618	4				
A* 25 to	1.29252	5	t _e	0.9524	5				
B* 140 °C	1231.73	5	t _c	0.264	2				
K			ΔHc kcal/m	1222.11	2				
c			ΔHf	-59.69	2				
t _x to			ΔFf	3.03	2				
A' 0 to	8.55861	4	Viscosity centistokes °C						
B' 30 °C	2278.23	4	γ						
C'	292.312	4	B ^v to						
A [*] 10 to	2.88842	4	A ^v °C						
B [*] 30 °C	2132.76	4	(B ^v) to						
Ac 150 to	7.40735	5	(A ^v) °C						
Bc t _c °C	1749.0	5	c _p liq. 300°K	0.39891	5				
Cc t _c °C	271.2	5	400	0.50224	5				
Cryos. A° const. B°	0.0544	2	c _p vap. 300°K	0.39703	2				
t _e °C	128.25	5	400	0.50217	2				
T _R = 0.75 T _c			c _v vap.						
			† grams/100 grams solvent						
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula									
SOURCE: API									
PURIFICATION: API									
LITERATURE REFERENCES:									

NAME		3-Ethyl-3-methylpentane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{C}_2\text{H}_5 \end{array} \text{CH}_2\text{CH}_3$				
Mole % Pur.	99.995	Ref. 2	Molecular Formula	C_8H_{18}	Molecular Weight	114.224				
		Ref.					Ref.			
F.P. °C	-90.870	2	dt/dP				f	300 to	0.0445	5
F.P. 100%			°C/mm				g	600 °K	0.0013	5
B.P. °C			25°C		0.8459	4	h		-0.0637	5
760 mm	118.259	2	BP		0.04844	2	f'			
100	57.103	2	t _e		0.0370	5	g'			
30	30.25	4	30 mm		0.6713	4	h'			
10	9.9	2	ΔHm cal/g				m	300 to	0.0265	4
1	-25.9	4	ΔHv cal/g				n	600 °K	0.0014	4
Pressure mm 25°C	23.01	5	25°C		79.49	2	o		-0.0646	4
t _e	1072.7	5	30 mm		79.55	4	m'	700 to	0.1079	4
Density g/ml 20°C	0.72742	2	BP		69.30	2	n'	1000 °K	0.0012	4
d ₄ ^t 25	0.72354	2	t _e (d, e)		67.75	5	o'		-0.0640	4
d ₄ ^t 30	0.71965	4	ΔHv/T _e		67.76	5	Surface tension dynes/cm. 20°C			
a	0.74293	4	d 30 to		83.08	5	γ	30	21.99	2
b	-0.0377	4	e 130 °C		0.1165	5		40	21.07	2
Ref. Index n _D 20°C	1.40775	2	d'				Parachor [P] 20°C			
25	1.40549	2	e'					30		
30	1.40316	4	d _v g/ml		0.263	2		40		
"C"	0.7466	4	v _c ml/g		3.808	2	Sugd. 346.2			
MR (Obs.)	38.717	2	t _c °C		305.	2	Exp. L. l. %/wt. u.			
MR (Calc.) (nD-d/2)	39.144	5	P _c mm		21964.	2	Dispersion			
Dielectric	1.982	5	PV/RT				Flash Point °C			
A 30 to	6.86731	2	25°C		1.0000	5	Fire Point			
B 160 °C	1347.209	2	30 mm		1.0000	5	M. Spec. Ultra V.			
C	219.684	2	BP		0.9625	4	X-Ray Dif. Infrared			
A* 30 to	1.28717	5	t _e		0.9528	5	Solubility in +			
B* 140 °C	1257.01	5	t _c		0.265	2	Acetone ∞			
K			ΔHc kcal/m		1221.20	2	Carbon tet. ∞			
c			ΔHf		-60.46	2	Benzene ∞			
t _k - to °C			ΔFf		2.69	2	Ether ∞			
t _x - to °C			Viscosity centistokes η °C				n-Heptane ∞			
A' 0 to	8.17016	5	B _v to				Ethanol ∞			
B' 30 °C	2077.18	5	A _v to				Water ∞			
C'	280.096	5	(B _v) to				Water in			
A'* 10 to	2.51548	5	(A _v) °C							
B'* 30 °C	1942.04	5	c, liq. 300°K		0.39891	5				
Ac 160 to	7.49210	5	400		0.50224	5				
Bc t _c °C	1864.1	5	p vap. 300°K		0.39703	2				
Cc t _c °C	286.7	5	400		0.50217	2				
Cryos. A° const. B°	0.0392	2	c _v vap.							
t _e °C	131.44	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:										

NAME		2, 2, 3-Trimethylpentane		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} - \text{CH} - \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight		
99.88	2	C ₈ H ₁₈	114.224		
F.P. °C	-112.27	Ref.			
F.P. 100%					
B.P. °C			dt/dP °C/mm		
760 mm	109.841	2	25°C	0.6199	4
100	49.922	2	BP	0.04755	2
30	23.69	4	t _e	0.0372	5
10	3.9	2	30 mm	0.6553	4
1	-28.7	4			
Pressure mm 25°C	32.06	4	ΔHm cal/g		
t _e	1043.0	5	ΔHv cal/g		
Density g/ml 20°C	0.71602	2	25°C	77.24	2
d ₄ ^t 25	0.71207	2	30 mm	78.00	4
d ₄ 30	0.70811	4	BP	67.30	2
			t _e	65.84	5
			t _e (d, e)	65.83	5
			ΔHv/T _e	19.05	5
a	0.73180	4	d 25 to	80.94	4
b	-0.03781	4	e 120 °C	0.1242	4
Ref. Index n _D 20°C	1.40295	2	d _e g/ml	0.261	2
25	1.40066	2	v _c ml/g	3.826	2
30	1.39811	4	t _c °C	294.	2
"C"	0.7500	4	P _c mm	21432.	2
MR (Obs.)	38.925	2	PV/RT		
MR (Calc.)	39.144	5	25°C	0.9925	5
(n _D -d/2)	1.04494	2	30 mm	1.0000	5
Dielectric	1.968	5	BP	0.9585	4
A 20 to	6.82546	2	t _e	0.9493	5
B 150 °C	1294.875	2	t _c	0.265	2
C	218.420	2	ΔHc kcal/m	1219.98	2
A* 20 to	1.26422	5	ΔHf	-61.44	2
B* 130 °C	1209.78	5	ΔFf	2.22	2
K			Viscosity centistokes °C		
c			η		
t _x to					
t _x °C					
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v) to		
A** to			(A ^v) °C		
B** °C					
Ac 150 to	7.29189	5	c _p liq. 300°K	0.39891	5
Bc t _c °C	1663.7	5	400	0.50224	5
Cc	267.9	5	c _p vap. 300°K	0.39703	2
Cryos. A°	0.0401	2	400	0.50217	2
const. B°			c _v vap.		
t _e °C	121.69	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:					

NAME		2, 2, 4-Trimethylpentane		STRUCTURAL FORMULA	
		Isooctane		$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{CH} \quad \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula C ₈ H ₁₈	Molecular Weight 114.224		
	Ref.				Ref.
F. P. °C	-107.380	2	dt/dP °C/mm		
F. P. 100%			25°C	0.4226	4
B. P. °C			BP	0.04651	2
760 mm	99.238	2	t _e	0.03732	5
100	40.667	2	30 mm	0.6398	4
30	15.05	4	ΔHm cal/g		
10	-4.3	2	ΔHv cal/g		
1	-36.1	4	25°C	73.50	2
Pressure mm 25°C	49.34	4	30 mm	75.31	4
t _e	1009.4	5	BP	64.87	2
Density g/ml 20°C	0.69192	2	t _e	63.60	5
d ₄ 25	0.68777	2	t _e (d, e)	63.59	5
d ₄ 30	0.68361	4	ΔHv/T _e	18.98	5
a	0.70850	4	d _e 15 to °C	77.17	5
b	-0.03817	4	e _e 10 °C	0.1240	5
Ref. Index n _D 20°C	1.39145	2	d _e ' °C		
25	1.38901	2	d _e g/ml	0.237	2
30	1.38646	5	v _c ml/g	4.220	2
"C"	0.7552	4	t _c °C	271.15	2
MR (Obs.)	39.262	2	P _c mm	19380.	2
MR (Calc.)	39.144	5	PV/RT 25°C	0.9910	4
(n _D -d/2)	1.04549	2	30 mm	1.0000	5
Dielectric	1.936	5	BP	0.9562	4
A 15 to °C	6.81189	2	t _e	0.9478	5
B 135 °C	1257.840	2	t _e	0.275	2
C	220.735	2	ΔHc kcal/m	1219.01	2
A* 15 to °C	1.26590	5	ΔHf	-61.97	2
B* 120 °C	1175.54	5	ΔFf	1.65	2
K			Viscosity centistokes η		
c			20 °C	0.7259	1
t _k to °C			40	0.5958	1
t _x °C			60	0.4999	1
A ¹ to °C			80	0.4270	1
B ¹ °C			B ^v 30 to °C	400.09	4
C ¹			A ^v 90 °C	Z.49766	4
A ^{1*} to °C			(B ^v) to °C		
B ^{1*} °C			(A ^v) °C		
Ac 135 to °C	7.27905	5	c _p liq. °K		
Bc t _c °C	1612.2	5	c _p vap. 300°K	0.39703	2
Cc t _c °C	267.7	5	400	0.50217	2
Cryos. A° const. B°	0.04031	2	c _v vap.		
t _e °C	109.60	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: 3 NFPA 325					

NAME		2, 3, 3-Trimethylpentane		STRUCTURAL FORMULA					
				$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \\ \text{CH}_3\text{CH C CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$					
Mole % Pur.	99.87	Ref.	2	Molecular Formula	C_8H_{18}	Molecular Weight	114.224		
F.P. °C	-100.70	Ref.	2	dt/dP °C/mm		f	300 to 600 °K	0.0445	5
F.P. 100%				25°C	0.7357	g		0.0013	5
B.P. °C	114.760		2	BP	0.04833	h		-0.0637	5
760 mm	53.815		2	t_e	0.0373	f'	to		
100	27.10		4	30 mm	0.6676	g'	°K		
30	6.9		2	ΔH_m cal/g		h'			
10	-33.15		4	ΔH_v cal/g		m	300 to 600 °K	0.0265	4
1				25°C	77.87	n		0.0014	4
Pressure mm 25°C	27.00		4	30 mm	78.34	o		-0.0646	4
t_e	1060.3		5	BP	68.10				
Density g/ml 20°C	0.72619		2	t_e	66.61	m'	700 to 1000 °K	0.1079	4
d_4^{25}	0.72232		2	t_e (d, e)	66.62	n'		0.0012	4
d_4^{30}	0.71844		4	$\Delta H_v/T_e$	18.99	o'		-0.0640	4
a	0.74166		4	d 25 to	81.50	Surface tension dynes/cm. 20°C			
b	-0.03767		4	e 125 °C	0.1168	y	30	21.56	2
Ref. Index n_D^{20}	1.40750		2	d'			40	20.65	2
25	1.40522		2	e'		Parachor [P]			
30	1.40291		4	d c g/ml	0.264		20°C		
"C"	0.7474		4	v c ml/g	3.791		30		
MR (Obs.)	38.762		2	t c °C	303.		40		
MR (Calc.)	39.144		5	P c mm	22040.		Sugd.	346.2	5
(nD-d/2)	1.04440		2	PV/RT		Exp. L. l. %/wt. u.			
Dielectric	1.981		5	25°C	1.0002	Dispersion			96.1
A 25 to	6.84353		2	30 mm	1.0000	Flash Point °C			
B 160 °C	1328.046		2	BP	0.9607	Fire Point			
C	220.375		2	t_e	0.9512	M Spec. Ultra V.			
A* 25 to	1.27011		5	t_c	0.266	X-Ray Dif.			
B* 140 °C	1239.27		5	ΔH_c kcal/m	1220.86	Infrared			Yes
K				ΔH_f	-60.63	Solubility in +			
c				ΔF_f	2.54	Acetone			∞
t_k				Viscosity centistokes °C		Carbon tet.			∞
t_x				B ^v to		Benzene			∞
A' to				A ^v °C		Ether			∞
B' °C				(B ^v) to		n-Heptane			∞
C' °C				(A ^v) °C		Ethanol			∞
A'* to				c _p liq. 300°K	0.39891	Water			∞
B'* °C				400	0.50224	Water in			∞
Ac 160 to	7.38917		5	c _p vap. 300°K	0.39703				
Bc t _c °C	1774.2		5	400	0.50217				
Cc t _c °C	279.5		5	c _v vap.					
Cryos. A°	0.0062		2						
const. B°									
t _e °C	127.46		5						
$T_R = 0.75 T_c$									
REFERENCES: 1-Dow		2-API		3-Lit.		4-Calc. from det. data		5-Calc. by formula	
SOURCE:		API							
PURIFICATION:		API							
LITERATURE REFERENCES:									

NAME		2, 3, 4-Trimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH}_2 \\ \quad \quad \\ \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH} \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₈	Molecular Weight	114.224		
		Ref.			Ref.		
F. P. °C					f		
F. P. 100%	-109.210	2	dt/dP °C/mm		g	to	
B. P. °C			25°C	0.7192	h	°K	
760 mm	113.467	2	BP	0.04761			
100	53.404	2	t _e	0.0370	f'	to	
30	27.06	4	30 mm	0.6585	g'	°K	
10	7.1	2			h'		
1	-25.65	4	ΔHm cal/g		m	300 to	0.0265
Pressure mm 25°C	27.01	4	ΔHv cal/g		n	600 °K	0.0014
t _e	1051.	5	25°C	79.52	o		-0.0646
Density g/ml 20°C	0.71906	2	30 mm	79.39			
d ₄ ^t 25	0.71503	2	BP	68.37	m'	700 to	0.1079
d ₄ ^t 30	0.71099	4	t _e (d, e)	66.45	n'	1000 °K	0.0012
		2	t _e	66.82	o'		-0.0640
		4	ΔHv/T _e	19.04			
a	0.73517	4	d 20 to	82.84	Surface tension dynes/cm. 20°C		
b	-0.0380	4	e 120 °C	0.1276	30		
Ref. Index n _D 20°C	1.40422	2	e' to °C		40		
25	1.40198	2			21.14		
30	1.39931	4			20.22		
"C"	0.7491	4			19.31		
MR (Obs.)	38.868	2	d _c g/ml	0.256	Parachor [P]		
MR (Calc.) (nD-d/2)	39.144	5	v _c ml/g	3.913	20°C		
Dielectric	1.972	5	t _c °C	295.	30		
A 25 to	6.85396	2	P _c mm	20976.	40		
B 150 °C	1315.084	2			Sugd. 346.2		
C 150 °C	217.526	2	PV/RT		Exp. L. l. %/wt. u.		
A* 25 to	1.29238	5	25°C	1.0000	Dispersion		
B* 135 °C	1230.23	5	30 mm	1.0000	Flash Point °C		
K		5	BP	0.9566	Fire Point		
t _c to °C			t _e	0.9470	M. Spec. Ultra V. X-Ray Dif. Infrared		
A' to °C			t _c	0.265	Yes		
B' to °C			ΔHc kcal/m	1220.61	Solubility in +		
C' to °C			ΔHf	-60.98	Acetone		
A'*	to °C		ΔFf	2.54	Carbon tet.		
B'*	to °C		Viscosity centistokes η °C		Benzene		
Acl 150 to	7.33497	5			Ether		
Bc t _c °C	1695.6	5	B ^v to °C		n-Heptane		
Cc t _c °C	267.7	5	(B ^v) to °C		Ethanol		
			(A ^v) °C		Water		
			c _p liq. °K		Water in		
Cryos. A° const. B°	0.04147	2	c _p vap. 300°K	0.39703			
t _e °C	0.0035	2	400	0.50217			
	125.62	5	c _v vap.				
T _R = 0.75 T _c							
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, 2, 3, 3-Tetramethylbutane				STRUCTURAL FORMULA					
						$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} - \text{C} - \text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$					
Mole % Pur.	Ref.	Molecular Formula C ₈ H ₁₈	Molecular Weight 114.224								
F. P. °C		Ref.	dt/dP °C/mm		Ref.		f		Ref.		
+100.69		2					to °K				
F. P. 100%			25°C 0.8149		4		g				
B. P. °C			BP 0.0476		3		h				
760 mm 106.47		2	t _e 0.0373		5		f'				
100 54.70 [‡]		3	30 mm 0.6604		4		g'				
30 31.33 [‡]		2	ΔHm cal/g				m				
10 13.09 [‡]		3	ΔHv cal/g				n		300 to -0.0414		
1 -18.03 [‡]		3	25°C 89.36 [#]		2		o		600°K 0.0017		
Pressure mm 25°C		3	30 mm 75.46		4		m'		700 to 0.1205		
t _e 1035.		5	BP 66.2		2		n'		1000°K 0.0013		
Density g/ml 23°C		3 ¹	t _e 65.02		5		o'		-0.0646		
t 25 0.8242 [‡]		3 ¹	t _e (d, e) 64.92		5		Surface tension dynes/cm. 20°C		21.14		
d ₄ 30 0.8188		3 ¹	ΔHv/T _e 19.80		5		y		30 20.22		
a 0.8352 [‡]		4	d 20 to 78.03		5		40 19.31		2		
b -0.0354		4	e 120 °C 0.1113		5		Parachor [P]				
Ref. Index n _D 20°C		3 ¹	d _v g/ml 0.239		2		20°C				
25 1.4695		3 ¹	v _c ml/g 4.189		2		30				
30		3 ¹	t _c °C 270.8		2		40				
"C"			P _c mm 18620.		3		Sugd. 346.2		5		
MR (Obs.)			PV/RT				Exp. L. l. %/wt.				
MR (Calc.)		39.144	25°C 1.0000		5		u.				
(nd-d/2)		5	30 mm 1.0000		5		Dispersion				
Dielectric			BP 0.9599		4		Flash Point °C				
A 101 to 6.87665		2	t _e 0.9515		5		Fire Point				
B 160 °C 1327.8		2	t _c 0.262		4		M Spec.				
C 226.0		2	ΔHc kcal/m 1218.59		2		Ultra V.				
A* 101 to 1.31013		5	ΔHf -64.23		2		X-Ray Dif.				
B* 135 °C 1238.8		5	ΔFf 3.13		2		Infrared				
K			Viscosity centistokes				Solubility in +				
c			γ °C				Acetone				
t _k to °C			B ^v to °C				Carbon tet.				
t _x to °C			A ^v to °C				Benzene				
A ¹ -20 to 7.92864 [‡]		3	(B ^v) to				Ether				
B ¹ 101 °C 1709.428		3	(A ^v) °C				n-Heptane				
C ¹ 233.634		3	c _p liq. 20°C		3		Ethanol				
A ^{1*} -20 to 1.59522		5	40 0.497		3		Water				
B ^{1*} 101 °C 1620.5		5	c _p vap. 300°K		2		Water in				
Ac 160 to 8.79823		5	400 0.39703		2						
Bc t _c °C 3213.7		5	c _v vap.								
Cc °C 438.9		5									
Crys. A° const. B°		2									
t _e °C 117.83		5									
‡ solid state #104.9°C #heat of sublimation 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, Lit.											
PURIFICATION: API, Lit.											
LITERATURE REFERENCES: 3 JACS 74, 883 (1952) D. W. Scott et al; 3 ¹ JACS 71, 3447 (1949) Wm. F. Seyer et al.											

NAME		n-Nonane			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₇ CH ₃				
Mole % Pur.	99.997	Ref. 2	Molecular Formula C ₉ H ₂₀	Molecular Weight 128.250					
		Ref.			Ref.				
F.P. °C	-53.519	2	dt/dP		Ref.	f	300 to 600 °K	0.0496	5
F.P. 100%			°C/mm			g		0.0013	5
B.P. °C			25°C	3.660	5	h		-0.0635	5
760 mm	150.798	2	BP	0.04967	2	f'			
100	87.899	2	t _e	0.0365	5	g'			
30	60.16	4	30 mm	0.6943	4	h'			
10	39.0	2	ΔHm cal/g	28.83	3 ²	m	300 to 600 °K	0.0294	4
1	3.6	5	ΔHv cal/g			n		0.0015	4
Pressure mm 25°C	4.351	5	25°C	86.54	2	o		-0.0652	4
t _e	1127.4	5	30 mm	82.67	4	m'	700 to 1000 °K	0.1222	4
Density g/ml 20°C	0.71763	2	BP	68.44	4	n'		0.0013	4
d ₄ 25	0.71381	2	t _e (d, e)	66.42	5	o'		-0.0645	4
d ₄ 30	0.70999	4	ΔHv/T _e	19.38	5	Surface tension dynes/cm. 20°C			
a	0.73290	4	d 60 to 165 °C	92.11	4	γ	30	22.92	2
b	-0.03762	4	d' 10 to 60 °C	0.1570	4		30	21.95	2
Ref. Index n _D 20°C	1.40542	2	e' 10 to 60 °C	89.29	4		40	21.00	2
25	1.40311	2	d _c g/ml	0.244	2	Parachor [P] 20°C			
30	1.39984	4	v _c ml/g	4.094	2		30		
"C"	0.7509	4	t _c °C	322.	2		40		
MR (Obs.)	43.842	2	F _c mm	17279.	2	Sugd. 385.2			5
MR (Calc.) (nD-d/2)	43.762	5	PV/RT			Exp. L. l. %/wt. u.			3'
Dielectric	1.972	3	25°C	1.0000	5	Dispersion			3'
A 60 to 185 °C	6.93513	2	30 mm	1.0000	5	Flash Point °C			3'
B 185 °C	1428.811	2	BP	0.9380	4	Fire Point			
C	201.619	2	t _e	0.9482	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
A* 60 to 180 °C	1.43093	4	t _c	0.250	2	Yes			1
B* 180 °C	1351.7	4	ΔHc kcal/m	1369.70	2	Yes			2
K	24.	5	ΔHf			Solubility in ⁺			
c	-0.15644	5	ΔFf			Acetone			∞
t _k 180 to 270 °C	227.	5	Viscosity centistokes η			Carbon tet.			∞
t _x 270 °C	381.	5	80 °C	0.5502	2	Benzene			∞
A' 20 to 185 °C	7.30801	5	100	0.4743	2	Ether			∞
B' 60 °C	1630.71	5	120	0.4151	2	n-Heptane			∞
C' 60 °C	219.5	5	140	0.3675	2	Ethanol			∞
A'* 20 to 185 °C	1.76177	5	B ^v 30 to 90 °C	437.7	4	Water			∞
B'* 60 °C	1536.61	5	A ^v 90 °C	Σ.50135	4	Water in			∞
Ac 185 to 185 °C	7.43583	5	(B ^v) 90 to 150 °C	427.1	4	Viscosity centistokes			
Bc 185 to 185 °C	1842.3	5	(A ^v) 150 °C	Σ.53159	4	40°C			0.7921
Cc 185 to 185 °C	254.0	5	c _p liq. 300°K	0.39979	5	60			0.6515
Cryos. A° const. B°	0.03856	3 ²	c _p 400	0.50256	5	110			0.4430
t _e °C	166.351	5	c _p vap. 300°K	0.39649	2	150			0.3473
			c _p 400	0.50136	2				
			c _v vap.						
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: 3 NBS Circ. 514; 3' NFPA Circ.; 3 ² JACS 76, 333 (1954) Finke et al.									

NAME		2-Methyloctane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}(\text{CH}_2)_5\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250			
		Ref.			Ref.	Ref.		
F. P. °C	-80.4	2	dt/dP °C/mm			f 300 to	0.0496	5
F. P. 100%			25°C	2.527	5	g 600 °K	0.0013	5
B. P. °C			BP	0.0494	2	h	-0.035	5
760 mm	143.26	2	t _e	0.0360	5	f' to		
100	81.0	2				g' °K		
30	53.15	4	ΔHm cal/g			h'		
10	32.2	2	ΔHv cal/g			m 300 to	0.0294	4
1	-2.5	5	25°C	83.2	2	n 600 °K	0.0015	4
Pressure mm 25°C	6.554	5	30 mm	79.78	2	o	-0.052	4
t _e	1142.	5	BP	68.3	4	m' 700 to	0.1222	4
Density g/ml 20°C	0.7134	2	t _e	66.31	5	n' 1000 °K	0.0013	4
d ₄ ^t 25	0.7095	2	t _e (d, e)	66.26	5	o'	-0.045	4
d ₄ ^t 30	0.7056	4	ΔHv/T _e	19.67	5	Surface tension dynes/cm. 20°C		
a	0.7290	4	d 55 to	86.55	4	y 30	21.88	2
b	-0.03778	4	e 160 °C	0.1274	4	30	20.94	2
Ref. Index n _D 20°C	1.4031	2	d' 10 to	86.24	4	40	20.00	2
25	1.4008	2	e' 55 °C	0.1216	4	Parachor [P] 20°C		
30	1.3983	4	d _c g/ml			30		
"C"	0.7530	4	v _c ml/g			40		
MR (Obs.)	43.88	2	t _c °C	311.0	5	Sugd.	385.2	5
MR (Calc.)	43.762	5	P _c mm	16595.	5	Exp. L. l. %/wt. u.		
(nD-d/2)	1.0464	2.	PV/RT 25°C	1.0000	5	Dispersion	98.4	2
Dielectric	1.969	5	30 mm	1.0000	5	Flash Point °C	32.	5
A 50 to	6.9179	2	BP	0.9610	4	Fire Point		
B 175 °C	1410.0	2	t _e	0.9495	5	M Spec. Ultra V. X-Ray Dif. Infrared		
C	206.0	2	ΔHc kcal/m			Solubility in +		
A* 50 to	1.3740	5	ΔHf			Acetone	∞	
B* 170 °C	1321.0	5	ΔFf			Carbon tet.	∞	
K			Viscosity centistokes °C			Benzene	∞	
c						Ether	∞	
t _k to						n-Heptane	∞	
t _x °C						Ethanol	∞	
A' 20 to	7.0924	5	B ^v to			Water	∞	
B' 50 °C	1501.9	5	A ^v °C			Water in		
C'	214.3	5	(B ^v) to					
A'* 20 to	1.5590	5	(A ^v) °C					
B'* 50 °C	1412.9	5	c _p liq. 300°K	0.39979	5			
Ac 175 to	7.39626	5	400	0.50256	5			
Bc t _c °C	1799.9	5	c _p vap. 300°K	0.39649	2			
Cc t _c °C	255.7	5	400	0.50136	2			
Cryos. A° const. B°			c _v vap. 15.6°C	0.381	3			
t _e °C	159.28	5						
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: 3 ASTM Spec. Tech. Pub. No. 109								

No. 43

NAME		3-Methyloctane			STRUCTURAL FORMULA		
					CH_3 $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_2)_4\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
F.P. °C	-107.6	2					
F.P. 100%							
B.P. °C							
760 mm	144.18	2					
100	81.	2					
30	53.71	4					
10	33.	2					
1	-2.1	5					
Pressure mm 25°C	6.367	5					
t_e	1149.4	5					
Density g/ml 20°C	0.7207	2					
d ₂₅	0.7168	2					
d ₄ 30	0.7129	4					
a	0.7363	4					
b	-0.0378	4					
Ref. Index n_D 20°C	1.4062	2					
25	1.4039	2					
30	1.4016	4					
"C"	0.7508	4					
MR (Obs.)	43.73	2					
MR (Calc.)	43.762	5					
(nD-d/2)	1.0459	2					
Dielectric	1.977	5					
A 50 to	6.9102	2					
B 195 °C	1411.0	2					
C	206.0	2					
A* 50 to	1.3601	5					
B* 170 °C	1320.40	5					
K							
c							
t_k to							
t_x °C							
A' 20 to	7.0418	5					
B' 50 °C	1480.2	5					
C'	212.3	5					
A'* 20 to	1.5108	5					
B'* 50 °C	1392.5	5					
Ac 195 to	7.38835	5					
Bc t_c °C	1803.0	5					
Cc	256.2	5					
Cryos. A° const.							
B°							
t_e °C	160.52	5					
$T_R = 0.77 T_c$				+ 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:							

NAME		4-Methyloctane			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_2\text{CH}(\text{CH}_2)_3\text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
F.P. °C	-113.2	2				f	300 to	0.0496	5
F.P. 100%						g	600 °K	0.0013	5
B.P. °C					2.445	5			
760 mm	142.48	2			0.049	2			
100	80.	2			0.0360	5			
30	52.53	4			0.6882	4			
10	32.	2							
1	-2.80	5							
Pressure mm 25°C	6.756	5							
t_e	1141.1	5							
Density g/ml 20°C	0.7199	2							
d_4^{25}	0.7160	2							
	0.7121	4							
a	0.7355	5							
b	-0.03778	5							
Ref. Index $n_D^{20°C}$	1.4061	2							
	1.4038	2							
	1.4015	4							
"C"	0.7515	4							
MR (Obs.)	43.77	2							
MR (Calc.)	43.762	5							
(nD-d/2)	1.0462	2							
Dielectric	1.977	5							
A 50 to	6.9155	2							
B 165 °C	1406.0	2							
C	206.0	2							
A* 50 to	1.3714	5							
B* 170 °C	1317.0	5							
K									
t_x — to									
t_x — °C									
A' 20 to	6.9689	5							
B' 55 °C	1433.8	5							
C'	208.5	5							
A'* 20 to	1.4441	5							
B'* 55 °C	1348.9	5							
Ac 165 to	7.39191	5							
Bc t_c °C	1794.2	5							
Cc t_c °C	255.6	5							
Cryos. A° const. B°									
t_e °C	158.42	5							
$T_R = 0.77 T_c$									
+ 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:									

NAME		3-Ethylheptane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{CH} (\text{CH}_2)_3\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250			
		Ref.			Ref.			
F. P. °C			dt/dP °C/mm		f	300 to	0.0496	5
F. P. 100%			25°C	2.457	5	600 °K	0.0013	5
B. P. °C			BP	0.0496	4		-0.0635	5
760 mm	143.0	2	t_e	0.0359	5			
100	80.3	2	30 mm	0.6904	4			
30	52.7	4	$\Delta\text{Hm cal/g}$					
10	32.	2						
1	-2.65	5						
Pressure mm 25°C	6.715	5	$\Delta\text{Hv cal/g}$	83.5	2	300 to	0.0294	4
t_e	1152.5	5	25°C	79.44	4	600 °K	0.0015	4
Density g/ml 20°C	0.727	2	30 mm	68.5	2		-0.0652	4
d ⁴ 25	0.723	2	BP	66.55	5			
d ⁴ 30	0.719	4	t_e	66.51	5	700 to	0.1222	4
			t_e (d, e)			1000 °K	0.0013	4
			$\Delta\text{Hv}/T_e$	19.73	5		-0.0645	4
a	0.743	4	d 50 to	85.82	4	Surface tension dynes/cm. 20°C		
b	-0.03798	4	e 160 °C	0.1211	4	30	22.81	2
Ref. Index			d' 10 to	87.17	5	40	21.87	2
n_D 20°C	1.4093	2	e' 50 °C	0.1467	5		20.93	2
25	1.4070	2				Parachor [P] 20°C		
30	1.4045	4	d_c g/ml			30		
"C"	0.7496	4	v_c ml/g	313.1	5	40		
MR (Obs.)	43.6	2	t_c °C			Sugd.	385.2	5
MR (Calc.)	43.762	5	P_c mm	16895.	5	Exp. L. l. %/wt. u.		
(n_D -d/2)	1.046	2	PV/RT			Dispersion	96.6	2
Dielectric	1.986	5	25°C	1.0000	5	Flash Point °C	28.	5
A 50 to	6.901	2	30 mm	1.0000	5	Fire Point		
B 195 °C	1403.	2	BP	0.9682	4	M. Spec. Ultra V. X-Ray Dif. Infrared		
C	206.	2	t_e	0.9575	5	Solubility in +		
A* 50 to	1.344	5	t_c			Acetone	∞	
B* 170 °C	1311.	5	$\Delta\text{Hc kcal/m}$			Carbon tet.	∞	
K			ΔHf			Benzene	∞	
t_k to °C			ΔFf			Ether	∞	
t_x to °C			Viscosity centistokes η			n-Heptane	∞	
A' 25 to	6.878	5				Ethanol	∞	
B' 55 °C	1391.	5	B^v to °C			Water	∞	
C'	205.	5	A^v to °C			Water in	∞	
A** 25 to	1.358	5	(B^v) to °C					
B** 55 °C	1309.	5	(A^v) °C					
Ac 195 to	7.37800	5	c_p liq. 300°K	0.39979	5			
Bc t_c °C	1793.5	5	400	0.50256	5			
Cc t_c °C	256.2	5	c_p vap. 300°K	0.39649	2			
Cryos. A° const. B°			400	0.50136	2			
t_e °C	159.42	5	c_v vap.					
$T_R = 0.77 T_c$		+ 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:								

NAME		4-Ethylheptane			STRUCTURAL FORMULA				
					$C_{12}H_{26}$ $CH_3(CH_2)_2CH(CH_2)_2CH_3$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
		Ref.			Ref.				
F.P. °C			dt/dP °C/mm			f	300 to 600°K	0.0496	5
F.P. 100%			25°C	2.3002	5	g		0.0013	5
B.P. °C			BP	0.050	2	h		-0.0635	5
760 mm	141.2	2	t_e	0.0358	5	f'	to		
100	79.	2	30 mm	0.6864	4	g'	°K		
30	51.4	4	ΔH_m cal/g			h'			
10	31.	2	ΔH_v cal/g			m	300 to 600°K	0.0294	4
1	-3.41	5	25°C	83.5	2	n		0.0015	4
Pressure mm 25°C	7.174	5	30 mm	79.27	2	o		-0.0652	4
t_e	1147.7	5	BP	68.3	2	m'	700 to 1000°K	0.1222	4
Density g/ml 20°C	0.730	2	t_e	66.43	5	n'		0.0013	4
d ₂₅	0.726	2	t_e (d, e)	66.33	5	o'		-0.0645	4
d ₄	0.722	4	$\Delta H_v/T_e$	19.79	5	Surface tension dynes/cm. 20°C			
a	0.746	4	d 50 to	85.54	4	y	30	22.81	2
b	-0.038	4	e 155 °C	0.1221	4		40	21.87	2
Ref. Index			d'	87.51	4		40	20.93	2
n_D 20°C	1.4096	2	e'	0.1605	4	Parachor [P] 20°C			
25	1.4073	2	d _c g/ml				30		
30	1.4049	4	v _c ml/g				40		
"C"	0.7472	4	t _c °C	311.0	5		Sugd.	385.2	5
MR (Obs.)	43.5	2	P _c mm	17072.	5	Exp. L.l. %/wt. u.			
MR (Calc.)	43.762	5	PV/RT 25°C	1.0000	5	Dispersion			
(nD-d/2)	1.0446	2	30 mm	1.0000	5	Flash Point °C			
Dielectric	1.987	5	BP	0.9676	4	Fire Point			
A 50 to	6.905	2	t_e	0.9582	5	M Spec. Ultra V. X-Ray Dif. Infrared			
B 190 °C	1397.	2	t_c			Solubility in +			
C	206.	2	ΔH_c kcal/m			Acetone		∞	
A* 50 to	1.350	5	ΔH_f			Carbon tet.		∞	
B* 170 °C	1305.	5	ΔF_f			Benzene		∞	
K			Viscosity centistokes			Ether		∞	
c			η °C			n-Heptane		∞	
t_k to			B ^v to			Ethanol		∞	
t_x °C			A ^v °C			Water		∞	
A' 20 to	6.782	5	(B ^v) to			Water in		∞	
B' 55 °C	1334.	5	(A ^v) °C						
C'	200.	5	c _p liq. 300°K	0.39979	5				
A'* 20 to	1.270	5	400	0.50256	5				
B'* 55 °C	1255.	5	c _p vap. 300°K	0.39649	2				
Ac 190 to	7.38178	5	400	0.50136	2				
Bc t _c °C	1785.7	5	c _v vap.						
Cc	256.0	5							
Cryos. A° const. B°									
t_e °C	157.31	5							
$T_R = 0.8 T_c$						+ 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:									

NAME		2, 2-Dimethylheptane			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} (\text{CH}_2)_4\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
		Ref.			Ref.				
F.P. °C	-113.00	2	dt/dP °C/mm			f	300 to 0.0496	5	
F.P. 100%			25°C	1.582	5	g	600 °K	0.0013	5
B.P. °C			BP	0.049	2	h		-0.0635	5
760 mm	132.69	2	t_e	0.0368	5	f'			
100	71.0	4	30 mm	0.6775	4	g'			
30	43.82	4	$\Delta\text{Hm cal/g}$			h'			
10	23.3	5				m	300 to 0.0294	4	
1	-11.	5	$\Delta\text{Hv cal/g}$			n	600 °K	0.0015	4
Pressure mm 25°C	11.06	5	25°C	78.8	2	o		-0.0652	4
t_e	1097.6	5	30 mm	76.62	4				
Density g/ml 20°C	0.7105	2	BP	64.8	2	m'	700 to 0.1222	4	
d ^t 25	0.7066	2	t_e	63.00	2	n'	1000 °K	0.0013	4
d ^t 30	0.7027	4	t_e (d, e)	62.91	5	o'		-0.0645	4
			$\Delta\text{Hv}/T_e$	19.23	5				
a	0.7261	4	d 45 to 82.44	4		Surface tension dynes/cm. 20°C			
b	-0.0378	4	e 145 °C	0.1330	4	g	30	19.88	2
Ref. Index			d' 10 to 81.70	4			40	18.97	2
n _D 20°C	1.4016	2	e' 45 °C	0.1160	4				
25	1.3993	2	d _c g/ml			Parachor [P] 20°C			
30	1.3964	4	v _c ml/g				30		
"C"	0.7527	4	t _c °C	295.2	5		40		
MR (Obs.)	43.91	2	P _c mm	15656.	5		Sugd.	385.2	5
MR (Calc.)	43.762	5	PV/RT			Exp. L.l. %/wt. u.			
(n _D -d/2)	1.0464	2	25°C	1.0000	5		Dispersion	99.5	2
Dielectric			30 mm	1.0000	5	Flash Point °C			
A 40 to 6.8580		2	BP	0.9506	4	Fire Point			
B 165 °C	1355.0	2	t_e	0.9390	5	M. Spec. Ultra. V. X-Ray Dif. Infrared			
C	208.00	2	t_c			Solubility in ⁺			
A* 40 to 1.34316		5	$\Delta\text{Hc kcal/m}$			Acetone	∞		
B* 155 °C	1272.7	5	ΔHf			Carbon tet.	∞		
K			ΔFf			Benzene	∞		
c			Viscosity centistokes			Ether	∞		
t _k to °C			η			n-Heptane	∞		
t _x to °C						Ethanol	∞		
A' 10 to 7.02527		5	B ^v to °C			Water	∞		
B' 45 °C	1440.55	5	A ^v to °C			Water in			
C'	215.8	5	{B ^v } to °C						
A' * 10 to 1.4984		5	{A ^v } to °C						
B' * 45 °C	1352.6	5	c _p liq. 300°K	0.39979	5				
Ac 165 to 7.33533		5	400	0.50256	5				
Bc t _c °C	1733.9	5	c _p vap. 300°K	0.39649	2				
Cc	256.9	5	400	0.50136	2				
Cryos. A°	0.042	2	c _v vap.						
const. B°									
t _e °C	146.94	5							
$T_R = 0.77 T_c$						⁺ 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:									

NAME		2, 3-Dimethylheptane			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} - \text{CH} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
		Ref.			Ref.				
F. P. °C			dt/dP °C/mm			f	300 to 600°K	0.0496	5
F. P. 100%			25°C	2.182	5	g		0.0013	5
B. P. °C			BP	0.0496	4	h		-0.0635	5
760 mm	140.5	2	t_e	0.0362	5	f'	to		
100	78.	2	30 mm	0.6885	4	g'	°K		
30	50.3	4				h'			
10	29.4	5							
1	-5.18	5							
Pressure mm 25°C	7.738	5	$\Delta\text{Hm cal/g}$			m	300 to 600°K	0.0294	4
t_e	1137.3	5	25°C	81.6	2	n		0.0015	4
Density g/ml 20°C	0.7260	2	30 mm	78.51	4	o		-0.0652	4
d_t	0.7221	2	BP	67.3	2				
d_4	0.7182	4	t_e	65.44	5	m'	700 to 1000°K	0.1222	4
		2	t_e (d, e)	65.33	5	n'		0.0013	4
		2	$\Delta\text{Hv}/T_e$	19.54	5	o'		-0.0645	4
a	0.7416	4	d	50 to 84.76	4				
b	-0.0378	4	e	155 °C	4				
Ref. Index n_D 20°C	1.4085	2	d'	10 to 84.66	4				
25	1.4062	2	e'	50 °C	4				
30	1.4042	4	d	g/ml					
"C"	0.7500	4	v	ml/g					
MR (Obs.)	43.63	2	c	°C	309.5				
MR (Calc.)	43.762	2	P	cm	16649.				
(nD-d/2)	1.0455	2	PV/RT						
Dielectric	1.984	5	25°C	1.0000	5				
A	50 to 6.887	2	30 mm	1.0000	5				
B	175 °C	2	BP	0.9619	4				
C	207.0	2	t_e	0.9517	5				
A*	50 to 1.3421	5	t_c						
B*	165 °C	5							
K	1302.4	5							
c									
t_k									
t_x									
A'	10 to 7.0269	5							
B'	50 °C	5							
C'	213.7	5							
A'*	10 to 1.4968	5							
B'*	50 °C	5							
Ac	175 to 7.36579	5							
Bc	t_c °C	5							
Cc	1782.3	5							
	257.3	5							
Cryos. A° const. B°									
t_e °C	156.34	5							
$T_R = 0.77 T_c$									
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula									
SOURCE: API									
PURIFICATION: API									
LITERATURE REFERENCES:									

NAME		2,4-Dimethylheptane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH} - \text{CH}_2\text{CH} (\text{CH}_2)_2\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C ₉ H ₂₀	Molecular Weight	128.250					
		Ref.			Ref.					
F. P. °C			dt/dP			f		to		
F. P. 100%			°C/mm			g		°K		
B. P. °C			25°C	1.606	4	h				
760 mm	133.5	2	BP	0.049	2	f'		to		
100	71.	2	t _e	0.0359	5	g'		°K		
-30	44.23	4	30 mm	0.6772	4	h'				
10	23.8	5	ΔHm cal/g			m	300 to	0.0294	4	
1	-9.6	5	25°C	79.9	2	n	600 °K	0.0015	4	
Pressure mm 25°C	10.738	4	30 mm	76.85	5	o		-0.0652	4	
t _e	1131.2	5	BP	65.9	2	m'	700 to	0.1222	4	
Density g/ml 20°C	0.716	2	t _e	64.85	5	n'	1000 °K	0.0013	4	
d ₄ ^t 25	0.712	2	t _e (d, e)	64.07	5	o'		-0.0645	4	
d ₄ ^t 30	0.708	4	ΔHv/T _e	19.73	5	Surface tension dynes/cm. 20°C				
a	0.732	4	d 45 to	82.27	4	γ	30	21.30	2	
b	-0.03796	4	e 150 °C	0.1226	4		40	20.38	2	
Ref. Index n _D 20°C	1.4033	2	d' 10 to	83.87	5	Parachor [P] 20°C				
25	1.4010	2	e' 45 °C	0.1587	5		30	20.38	2	
30	1.398	4	d _v g/ml				40	19.46	2	
"C"	0.7501	4	t _c ml/g	297.7	5	Sugd. 385.2				
MR (Obs.)	43.7	2	t _c °C			Exp. L. l. %/wt. u.				
MR (Calc.)	43.762	5	P _c mm	16179.	5	Dispersion 97.8				
MR (nD-d/2)	1.0453	2	PV/RT 25°C	1.0000	5	Flash Point °C				
Dielectric			30 mm	1.0000	5	Fire Point				
A 40 to	6.869	2	BP	0.9610	5	M. Spec. Ultra V.				
B 165 °C	1360.	2	t _e	0.9642	5	X-Ray Dif. Infrared				
C	208.	2	t _c			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
A* 40 to	1.3129	5	ΔHc kcal/m							
B* 160 °C	1267.	5	ΔHf							
K			ΔFf							
t _k to °C			Viscosity centistokes η °C							
t _x to °C			B _v to °C							
A' 25 to	6.7010	5	A _v to °C							
B' 45 °C	1277.	5	(B _v) to °C							
C'	200.	5	(A _v) °C							
A* 25 to	1.1957	5	c _p liq. °K							
B* 45 °C	1199.	5	c _p vap 300°K	0.39649	2					
Ac 165 to	7.34717	5	c _p vap 400	0.50136	2					
Bc t _c °C	1741.6	5	c _v vap.							
Cc	257.3	5								
Cryos. A° const. B°										
t _e °C	148.44	5								
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:										

NAME		2, 5-Dimethylheptane			STRUCTURAL FORMULA						
					$\begin{array}{c} \text{CH}_3\text{CH}(\text{CH}_2)_2\text{CH}(\text{CH}_2)\text{CH}_3 \\ \qquad \qquad \qquad \\ \text{CH}_3 \qquad \qquad \qquad \text{CH}_3 \end{array}$						
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250						
		Ref.			Ref.						
F. P. °C			dt/dP °C/mm			f	300 to 600°K	0.0496	5		
F. P. 100%			25°C	1.847	5	g		0.0013	5		
B. P. °C			BP	0.049	2	h		-0.0635	5		
760 mm	136.0	2	t_e	0.0362	5	f'					
100	74.1	2	30 mm	0.6802	4	g'					
30	46.9	4	ΔH_m cal/g			h'					
10	26.2	2	ΔH_v cal/g			m	300 to 600°K	0.0294	4		
1	-8.4	5	25°C	79.9	2	n		0.0015	4		
Pressure mm 25°C	9.338	5	30 mm	77.80	5	o		-0.0652	4		
t_e	1119.5	5	BP	66.4	2	m'	700 to 1000°K	0.1222	4		
Density g/ml 20°C	0.715	2	t_e	64.56	5	n'		0.0013	4		
25	0.711	2	t_e (d, e)	64.48	5	o'		-0.0645	4		
d ^t 30	0.707	4	$\Delta H_v/T_e$	19.52	5	Surface tension dynes/cm. 20°C					
a	0.731	4	d 45 to 83.80	4	21.30				2		
b	-0.038	4	e 150 °C	0.1280	4	30				20.38	2
Ref. Index			d' 10 to 82.29	4	40				19.46	2	
20°C	1.4038	2	e' 45 °C	0.0957	4	Parachor [P]					
25	1.4015	2	d _c g/ml			20°C					
30	1.3989	4	v _c ml/g			30					
"C"	0.7526	4	t_c °C	300.7	5	40					
MR (Obs.)	43.9	2	P_c mm	16142.	5	Sugd. 385.2				5	
MR (Calc.)	43.762	5	PV/RT			Exp. L. l. %/wt. u.					
(nD-d/2)	1.046	2	25°C	1.0000	5	Dispersion				97.8	2
Dielectric	1.971	5	30 mm	1.0000	5	Flash Point °C				23.0	5
A 45 to 6.881		2	BP	0.9591	4	Fire Point					
B 170 °C 1372.0		2	t_e	0.9484	5	M Spec. Ultra V. X-Ray Dif. Infrared					
C 207.		2	t_c			Solubility in +					
A* 45 to 1.3473		5	ΔH_c kcal/m			Acetone				∞	
B* 160 °C 1285.3		5	ΔH_f			Carbon tet.				∞	
K			ΔF_f			Benzene				∞	
c			Viscosity centistokes			Ether				∞	
t_k --- to			η °C			n-Heptane				∞	
t_x --- °C			B ^v to			Ethanol				∞	
A' 10 to 7.2515		5	A ^v --- °C			Water				∞	
B' 50 °C 1566.6		5	(B ^v) to			Water in					
C' 224.4		5	(A ^v) °C								
A'* 10 to 1.7094		5	c_p liq. 300°K	0.39979	5						
B'* 50 °C 1471.6		5	400	0.50256	5						
Ac 185 to 7.35739		5	c_p vap. 300°K	0.39649	2						
Bc t_c °C 1753.3		5	400	0.50136	2						
Cc 256.0		5	c_v vap.								
Cryos. A°											
const. B°											
t_e °C	151.04	5									
$T_R = 0.77 T_c$		+ 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. 51

NAME		2,6-Dimethylheptane			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3\text{CH}(\text{CH}_2)_3\text{CH}-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
		Ref.			Ref.	Ref.			
F. P. °C	-102.9	2	dt/dP			f	300 to	0.0496	5
F. P. 100%			°C/mm			g	600 °K	0.0013	5
B. P. °C			25°C	1.780	5	h		-0.0635	5
760 mm	135.21	2	BP	0.049	2	f'	to		
100	73.35	4	t _e	0.0363	5	g'	°K		
30	46.18	4	30 mm	0.6793	4	h'			
10	25.5	4	ΔHm cal/g			m	300 to	0.0294	4
1	-8.8	5	ΔHv cal/g			n	600 °K	0.0015	4
Pressure mm 25°C	9.700	5	25°C	79.8	2	o		-0.0652	4
t _e	1117.7	5	30 mm	77.55	4	m'	700 to	0.1222	4
Density g/ml 20°C	0.7089	2	BP	66.2	2	n'	1000 °K	0.0013	4
d _t 25	0.7049	2	t _e	64.35	5	o'		-0.0645	4
d ₄ 30	0.7009	4	t _e (d, e)	64.29	5	Surface tension dynes/cm. 20°C			
			ΔHv/T _e	19.49	5	δ	30	20.83	2
a	0.7249	4	d 45 to	83.44	4	δ	40	19.92	2
b	-0.0380	4	e 150 °C	0.1275	4	δ	40	19.00	2
Ref. Index n _D 20°C	1.4007	2	d' 10 to	82.45	4	Parachor [P] 20°C			
25	1.3983	2	e' 45 °C	0.1061	4	30			
30	1.3959	4	d _c g/ml			40			
"C"	0.7536	4	v _c ml/g	298.6	5	Sugd.	385.2		5
MR (Obs.)	43.92	2	t _c °C			Exp. L. l. %/wt. u.			
MR (Calc.)	43.762	5	P _c mm	15863.	5	Dispersion	98.9		2
(n _D -d/2)	1.0462	2	PV/RT			Flash Point °C			5
Dielectric	1.962	5	25°C	1.0000	5	Fire Point			
A 45 to	6.8725	2	30 mm	1.0000	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
B 170 °C	1366.0	2	BP	0.9599	4	Solubility in +			
C	207.0	2	t _e	0.9488	5	Acetone	∞		
A* 45 to	1.3392	5	t _c			Carbon tet.	∞		
B* 160 °C	1279.4	5	ΔHc kcal/m			Benzene	∞		
K			ΔHf			Ether	∞		
c			Δf			n-Heptane	∞		
t _k to			Viscosity centistokes			Ethanol	∞		
t _x °C			η			Water	∞		
A' 10 to	7.1510	5	B ^v to			Water in			
B' 50 °C	1510.6	5	A ^v °C			+ grams/100 grams solvent			
C'	220.1	5	(B ^v) to			REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula			
A* 10 to	1.6157	5	(A ^v) °C			SOURCE: API			
B* 50 °C	1419.0	5	c _p liq. 300°K	0.39979	5	PURIFICATION: API			
Ac 170 to	7.34814	5	400	0.50256	5	LITERATURE REFERENCES:			
Bc t _c °C	1741.9	5	c _p vap 300°K	0.39649	2				
Cc	255.7	5	400	0.50136	2				
Cryos. A° const. B°			c _v vap.						
t _e °C	150.20	5							
T _R = 0.77 T _c									

No. 52

NAME		3, 3-Dimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.	Ref.	
F. P. °C			dt/dP °C/mm			f to	
F. P. 100%			25°C	1.833	5	g °K	
B. P. °C			BP	0.049	2	h	
760 mm	137.3	2	t_e	0.0367	5	f' to	
100	74.	2	30 mm	0.6897	4	g' °K	
30	46.9	4	ΔHm cal/g			h'	
10	26.	2	25°C			m 300 to	
1	-8.4	5	30 mm	79.5	2	n 600 °K	
Pressure mm 25°C	9.453	5	BP	76.72	5	o	
t_e	1124.	5	BP	65.8	2		
Density g/ml 20°C	0.725	2	t_e	64.01	5	m' 700 to	
25	0.721	2	t_e (d, e)	63.94	5	n' 1000 °K	
d ^t 30	0.717	4	ΔHv/T _e	19.28	5	o'	
a	0.7410	4	d 45 to	82.38	4	Surface tension dynes/cm. 20°C	
b	-0.0380	4	e 150 °C	0.1208	4	30	22.01
Ref. Index n _D 20°C	1.4085	2	d' 10 to	82.68	4	40	21.09
25	1.4062	2	e' 45 °C	0.1271	4		20.17
30	1.4037	4	d _c g/ml			Parachor [P]	
"C"	0.7503	4	v _c ml/g	304.5	5	20°C	
MR (Obs.)	43.7	2	t _c °C			30	
MR (Calc.)	43.762	5	P _c mm	16081.	5	40	
(n _D -d/2)	1.046	2	PV/RT			Sugd.	385.2
Dielectric	1.984	5	25°C	1.0001	5	Exp. L.l. %/wt. u.	
A 45 to	6.869	2	30 mm	1.0000	5	Dispersion	
B 170 °C	1385.	2	BP	0.9591	5	97.4	
C	210.	2	t_e	0.9484	5	Flash Point °C	
A* 45 to	1.3305	5	t_c			Fire Point	
B* 160 °C	1296.	5	ΔHc kcal/m			M Spec.	
K			ΔHf			Ultra V.	
c			ΔFf			X-Ray Dif.	
t _k to			Viscosity centistokes			Infrared	
t _x °C			η °C			Solubility in +	
A' 10 to	6.8930	5	B ^v to			Acetone	
B' 50 °C	1397.4	5	A ^v °C			Carbon tet.	
C'	211.1	5	(B ^v) to			Benzene	
A'* 10 to	1.3696	5	(A ^v) °C			Ether	
B'* 50 °C	1311.9	5	c _p liq. °K			n-Heptane	
Ac 170 to	7.35298	5	c _p vap. 300°K	0.39649	2	Ethanol	
Bc t _c °C	1779.0	5	c _p vap. 400	0.50136	2	Water	
Cc t _c °C	260.9	5	c _v vap.			Water in	
Cryos. A° const. B°							
t _e °C	152.73	5					
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:							

NAME		3, 4-Dimethylheptane				STRUCTURAL FORMULA			
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{CH} \\ \\ (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250				
		Ref.			Ref.			Ref.	
F. P. °C			dt/dP			f		to	
F. P. 100%			°C/mm			g		°K	
B. P. °C			25°C	2.178	5	h			
760 mm	140.6	2	BP	0.050	2	f'		to	
100	78.	2	t_e	0.0360	5	g'		°K	
30	50.31	4	30 mm	0.6899	4	h'			
10	29.4	4	ΔH_m cal/g			m	300 to	0.0294	4
1	-5.09	5	ΔH_v cal/g			n	600 °K	0.0015	4
Pressure			25°C	81.7	2	o		-0.0652	4
mm 25°C	7.742	5	30 mm	78.35	5	m'	700 to	0.1222	4
t_e	1147.	5	BP	67.8	2	n'	1000 °K	0.0013	4
Density			t_e (d, e)	65.92	5	o'		-0.0645	4
g/ml 20°C	0.7314	2	t_e	65.90	5	Surface tension			
d_4^{25}	0.7275	2	$\Delta H_v/T_e$	19.66	5	dynes/cm. 20°C			
d_4^{30}	0.7236	4	d 50 to	84.22	4	30			
a	0.74699	4	-e 155 °C	0.1168	4	40			
b	-0.03777	4	e' 10 to	85.01	5	22.80			
Ref. Index			e' 50 °C	0.1325	5	21.87			
n_D 20°C	1.4111	2	d_c g/ml			20.94			
25	1.4089	2	v_c ml/g			Parachor [P]			
30			t_c °C	311.1	5	20°C			
"C"	0.7483	4	P_c mm	16953.	5	30			
MR (Obs.)	43.55	2	PV/RT			40			
MR (Calc.)	43.762	5	25°C	1.0001	5	Sugd. 385.2			
($n_D - d/2$)	1.0454	2	30 mm	1.0000	5	Exp. L. l. %/wt.			
Dielectric			BP	0.9692	5	u.			
A 50 to	6.897	2	t_e	0.9588	5	Dispersion			
B 175 °C	1400.	2	t_c			96.8			
C	208.0	2	ΔH_c kcal/m			Flash Point °C			
A* 50 to	1.3395	5	ΔH_f			Fire Point			
B* 165 °C	1306.8	5	ΔF_f			M. Spec.			
K			Viscosity			Ultra V.			
c			centistokes			X-Ray Dif.			
t_k to			η			Infrared			
t_x °C						Solubility in +			
A' 25 to	6.9320	5	B ^v to			Acetone			
B' 50 °C	1418.1	5	A ^v °C			Carbon tet.			
C'	209.7	5	(B ^v) to			Benzene			
A'* 25 to	1.4076	5	(A ^v) °C			Ether			
B'* 50 °C	1332.9	5	c_p liq. °K			n-Heptane			
Ac 175 to	7.37833	5	c_p vap. 300°K	0.39649	2	Ethanol			
Bc t_c °C	1794.8	5	c_p 400	0.50136	2	Water			
Cc	258.9	5	c_v vap.			Water in			
Cryos. A°									
const. B°									
t_e °C	156.83	5							
$T_R = 0.77 T_C$									
+ 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:									

NAME		3, 5-Dimethylheptane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	1.812	5	g	°K
B. P. °C			BP	0.049	2	h	
760 mm	136.0	2	t_e	0.0363	5	f'	to
100	73.9	4	30 mm	0.6824	4	g'	°K
30	46.59	4				h'	
10	26.	2				m	300 to
1	-8.	5				n	600 °K
Pressure mm 25°C	9.495	5	$\Delta\text{Hm cal/g}$			o	0.0294
t_e	1124.	5	25°C	80.1	2		0.0015
			30 mm	77.40	5		-0.0652
Density g/ml 20°C	0.723	2	BP	66.4	2	m'	700 to
25	0.719	2	t_e	64.57	5	n'	1000 °K
d_4^{25}	0.715	4	t_e (d, e)	64.52	5	o'	0.1222
			$\Delta\text{Hv}/T_e$	19.51	5		0.0013
a	0.739	4	d 45 to	83.13	4	Surface tension dynes/cm. 20°C	
b	-0.0380	4	e 150 °C	0.1230	4	30	21.77
Ref. Index n_D 20°C	1.4067	2	d' 10 to	83.23	5	40	20.85
25	1.4044	2	e' 45 °C	0.1250	5		19.93
30	1.4021	4	d c g/ml			Parachor [P]	
"C"	0.7493	4	v c ml/g	302.3	5	20°C	
MR (Obs.)	43.6	2	t_c °C	16335.	5	30	
MR (Calc.)	43.762	5	P c mm			40	
(n_D -d/2)	1.045	2	PV/RT			Sugd.	385.2
Dielectric			25°C	1.0000	5	Exp. L.l. %/wt. u.	
A 45 to	6.878	2	30 mm	1.0000	5	Dispersion	
B 160 °C	1375.0	2	BP	0.9626	5	96.9	
C	208.0	2	t_e	0.9519	5	Flash Point °C	
A* 45 to	1.33769	5	t_c			Fire Point	
B* 160 °C	1286.3	5	$\Delta\text{Hc kcal/m}$			M Spec.	
K			ΔHf			Ultra V.	
c			ΔFf			X-Ray Dif.	
t_x to			Viscosity centistokes			Infrared	
t_x °C			η °C			Solubility in +	
A' 25 to	6.97157	5	B ^v to			Acetone	
B' 50 °C	1423.06	5	A ^v °C			Carbon tet.	
C'	212.4	5	(B ^v) to			Benzene	
A'* 25 to	1.44661	5	(A ^v) °C			Ether	
B'* 50 °C	1336.7	5	c_p liq. °K			n-Heptane	
Ac 160 to	7.2756	5	c_p vap. 300°K	0.39649	2	Ethanol	
Bc t_c °C	1681.6	5	400	0.50136	2	Water	
Cc t_c °C	246.8	5	c_v vap.			Water in	
Cryos. A° const. B°							
t_e °C	151.27	5					
$T_R = 0.77 T_c$							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		4,4-Dimethylheptane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_2\text{C}(\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250					
F.P. °C		Ref.		dt/dP °C/mm		Ref.		f	to	Ref.
F.P. 100%				25°C	1.680	5		g	°K	
B.P. °C				BP	0.0496	4		h		
760 mm	135.2	2		t_e	0.0365	5		f'	to	
100	73.	2		30 mm	0.6865	4		g'	°K	
30	45.16	4						h'		
10	24.5	5		ΔHm cal/g				m	300 to	0.0294
1	-9.	5		25°C	79.5	2		n	600 °K	0.0015
Pressure mm 25°C	10.32	5		30 mm	76.26	5		o		-0.0652
t_e	1128.	5		BP	65.9	2		m'	700 to	0.1222
Density g/ml 20°C	0.725	2		t_e	64.05	5		n'	1000 °K	0.0013
25	0.721	2		t_e (d, e)	64.11	5		o'		-0.0645
d_4^{25}	0.717	4		ΔHv/T _e	19.37	5		Surface tension dynes/cm. 20°C		
a	0.74099	4		d 45 to	81.45	5		y	30	22.01
b	-0.03797	4		e 150 °C	0.1150	5			40	21.09
Ref. Index				d' 10 to	83.52	5		Parachor [P] 20°C		
n _D 20°C	1.4076	2		e' 45 °C	0.1609	5			30	385.2
25	1.4053	2		d _c g/ml					40	
30	1.4026	4		v _c ml/g	301.7	5		Sugd.		
"C"	0.7485	4		t _c °C				Exp. L. l. %/wt. u.		
MR (Obs.)	43.6	2		P _c mm	15996.	5		Dispersion		
MR (Calc.)	43.762	5		PV/RT 25°C	1.0000	5		Flash Point °C		
(n _D -d/2)	1.045	2		30 mm	1.0000	5		Fire Point		
Dielectric				BP	0.9673	5		M. Spec. Ultra V. X-Ray Dif. Infrared		
A 45 to	6.858	2		t_e	0.9562	5		Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B 160 °C	1373.	2		ΔHc kcal/m						
C	210.	2		ΔHf						
A* 45 to	1.30972	5		ΔFf						
B* 160 °C	1281.5	5		Viscosity centistokes						
K				η °C						
c				B ^v to						
t _k to				A ^v °C						
t _x °C				(B ^v) to						
A' 25 to	6.62226	5		(A ^v) °C						
B' 50 °C	1255.3	5		c _p liq. °K						
C' 198.8	198.8	5		c _p vap. 300°K	0.39649	2				
A'* 25 to	1.11783	5		P	0.50136	2				
B'* 50 °C	1178.6	5		c _v vap.						
Acl 160 to	7.2592	5								
Bc t _c °C	1684.1	5								
Cc t _c °C	249.6	5								
Cryos. A° const. B°										
t _e °C	150.77	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:										

NAME		3-Ethyl-2-methylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} (\text{CH}_2)_2(\text{CH}_3) \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f		to
F. P. 100%			25°C	1.929	g		°K
B. P. °C			BP	0.050	h		
760 mm	138.0	2	t_e	0.0361	f'		to
100	75.5	4	30 mm	0.6870	g'		°K
30	47.98	4			h'		
10	27.	2					
1	-6.	5					
Pressure mm 25°C	8.744	5	ΔHm cal/g		m		300 to
t_e	1140.	5	25°C	81.7	n		600 °K
Density g/ml 20°C	0.731	2	30 mm	77.57	o		0.0294
25	0.727	2	BP	67.1			0.0015
d ^t 30	0.723	4	t_e	65.40			-0.0652
			t_e (d, e)	65.24	m'		700 to
			$\Delta\text{Hv}/T_e$	19.65	n'		1000 °K
					o'		0.1222
							0.0013
							-0.0645
a	0.74699	4	d 50 to	83.14	Surface tension dynes/cm. 20°C		
b	-0.03797	4	e 155 °C	0.1163	22.80		
Ref. Index n_D 20°C	1.4120	2	d' 10 to	86.20	30 21.87		
25	1.4097	2	e' 50 °C	0.1799	40 20.94		
30	1.4059	4			Parachor [P] 20°C		
"C"	0.7479	5	d _c g/ml		30		
MR (Obs.)	43.6	2	v _c ml/g	306.7	40		
MR (Calc.)	43.762	5	t_c °C		Sugd. 385.2		
(nD-d/2)	1.046	2	P _c mm	16524.	Exp. L. l. %/wt. u.		
Dielectric			PV/RT		Dispersion		
A 45 to	6.872	2	25°C	1.0000	Flash Point °C		
B 160 °C	1381.0	2	30 mm	1.0000	Fire Point		
C	208.0	2	BP	0.9703	M Spec. Ultra V. X-Ray Dif. Infrared		
A* 45 to	1.31689	5	BP	0.9594	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 165 °C	1288.5	5	t_e				
K			t_c				
c			ΔHc kcal/m				
t_k to			ΔHf				
t_x °C			ΔFf				
A' 25 to	6.55701	5	Viscosity centistokes				
B' 50 °C	1224.4	5	η °C				
C'	193.1	5					
A'*	1.05788	5	B ^v to				
B'*	1150.8	5	A ^v °C				
Ac 160 to	7.2707	5	(B ^v) to				
Bc t_c °C	1691.5	5	(A ^v) °C				
Cc	247.5	5	c _p liq. °K				
Cryos. A ^o const. B ^o			c _p vap. 300°K	0.39649			
t_e °C	153.99	5	400	0.50136			
			c _v vap.				
TR = 0.75 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		4-Ethyl-2-methylhexane				STRUCTURAL FORMULA	
Mole % Pur.		Ref.	Molecular Formula	C ₉ H ₂₀	Molecular Weight	128.250	CH ₃ CH-CH ₂ CH-CH ₂ CH ₃ CH ₃ C ₂ H ₅
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	1.60471	4	h	
760 mm	133.8	2	BP	0.0490	2	f'	to
100	72.0	2	t _e	0.03630	5	g'	°K
30	44.31	4	30 mm	0.6820	4	h'	
10	24.0	2	ΔHm cal/g			m	300 to
1	-9.24	4				n	600 °K
Pressure mm 25°C	10.719	4	ΔHv cal/g	80.1	2	o	0.0294
t _e	1127.	5	25°C	76.35	5		0.0015
Density g/ml 20°C	0.723	2	30 mm	66.4	2		-0.0652
d _t 25	0.719	2	BP	64.805	5	m'	700 to
d ₄ 30	0.715	4	t _e	64.685	5	n'	1000 °K
			t _e (d, e)	19.675	5	o'	0.1222
			ΔHv/T _e				0.0013
a	0.73898	4					-0.0645
b	-0.0796	4	d 45 to	81.27	4	Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C	1.4068	2	e 150 °C	0.1111	4	γ	21.77
25	1.4046	2	d' 10 to	84.96	5		30
30	1.4015	4	e' 45 °C	0.1945	5		20.85
"C"	0.7486	4	d _c g/ml				40
MR (Obs.)	43.7	2	v _c ml/g	299.9	5	Parachor [P] 20°C	
MR (Calc.)	43.762	5	t _c °C				30
(nD-d/2)	1.045	2	P _c mm	16102.	5		40
Dielectric							Sugd. 385.2
A 40 to	6.854	2	PV/RT			Exp. L. l. %/wt. u.	
B 160 °C	1362.	2	25°C	1.0000	5	Dispersion	
C	209.0	2	30 mm	1.0000	5	96.9	
A* 40 to	1.30397	5	BP	0.9694	5	Flash Point °C	
B* 160 °C	1270.45	5	t _e	0.9591	5	Fire Point	
K						M. Spec. Ultra V. X-Ray Dif. Infrared.	
t _k to °C			ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A' 25 to	6.40991	5	ΔHf				
B' 45 °C	1146.31	5	ΔFi				
C'	188.1	5	ΔFi				
A** 25 to	0.92150	5	Viscosity centistokes η °C				
B** 45 °C	1076.64	5					
Ac 160 to	7.2532	5	B _v to °C				
Bc t _c °C	1669.5	5	A _v to °C				
Cc	248.2	5	(B _v) to °C				
Cryos. A° const. B°			(A _v) °C				
t _e °C	149.23	5	c _p liq. °K				
T _R = 0.75 T _c			c _p vap. 300°K	0.39649	2		
			400	0.50136	2		
			c _v vap.				
+ grams/100 grams solvent							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		3-Ethyl-3-methylhexane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} - (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250	
F. P. °C				dt/dP		f to
F. P. 100%				°C/mm		g °K
B. P. °C				25°C	1.991	5
760 mm	140.6	2		BP	0.050	2
100	77.0	2		t_e	0.0369	5
30	48.68	4		30 mm	0.7007	4
10	27.0	2				
1	-6.75	5		$\Delta\text{Hm cal/g}$		
Pressure				$\Delta\text{Hv cal/g}$		
mm 25°C	8.628	5		25°C	80.2	2
t_e	1143.	5		30 mm	76.37	5
Density				BP	66.6	2
g/ml 20°C	0.741	2		t_e	65.02	5
25	0.737	2		t_e (d, e)	64.86	5
d ₄ 30	0.733	4		$\Delta\text{Hv}/T_e$	19.39	5
a	0.75699	4		d 50 to	81.55	4
b	-0.03797	4		e 155 °C	0.1063	4
Ref. Index				d' 10 to	84.24	5
n_D 20°C	1.4142	2		e' 50 °C	0.1617	5
25	1.4120	2		d _c g/ml		
30	1.4094	4		v _c ml/g	312.5	5
"C"	0.7438	4		t_c °C		
MR (Obs.)	43.3	2		P _c mm	16423.	5
MR (Calc.)	43.762	5		PV/RT		
(nD-d/2)	1.044	2		25°C	1.0000	5
Dielectric				30 mm	1.0000	5
A 45 to	6.863	2		BP	0.9654	4
B 165 °C	1404.0	2		t_e	0.9550	5
C	212.0	2		t_c		
A* 45 to	1.30737	5		$\Delta\text{Hc kcal/m}$		
B* 170 °C	1309.87	5		ΔHf		
K				ΔFf		
c				Viscosity		
t_x to				centistokes		
t_x °C				η °C		
A' 25 to	6.57634	5		B ^v to		
B' 50 °C	1258.52	5		A ^v °C		
C'	198.1	5		(B ^v) to		
A'* 25 to	1.06948	5		(A ^v) °C		
B'* 50 °C	1181.44	5		c _p liq. °K		
Ac 165 to	7.2697	5		c _p vap. 300°K	0.39649	2
Bc t_c °C	1728.4	5		400	0.50136	2
Cc t_c °C	253.4	5		c _v vap.		
Cryos. A°						
const. B°						
t_e °C	157.00	5				
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: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		4-Ethyl-3-methylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{CH}-\text{CH}-\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	2.101	5	h	
760 mm	140.4	2	BP	0.05	2	f'	to
100	77.0	2	t _e	0.0362	5	g'	°K
30	50.	2	30 mm	0.69251	4	h'	
10	29.	2	ΔHm cal/g			m	300 to
1	-5.2	5				n	600 °K
Pressure mm 25°C			ΔHv cal/g			o	0.0294
t _e	8.00593	5	25°C	81.9	2		0.0015
	1147.	5	30 mm	77.76	5		-0.0652
Density g/ml 20°C			BP	67.8	2	m'	700 to
t _e 25	0.742	2	t _e	66.15	5	n'	1000 °K
d ₄ 30	0.738	2	t _e (d, e)	66.01	5	o'	0.1222
	0.734	4	ΔHv/T _e	19.73	5		0.0013
a	0.758	4					-0.0645
b	-0.038	4	d 50 to	83.22	4	Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C			e 155 °C	0.1098	4	γ	30
25	1.416	2	d' 10 to	86.09	5		40
30	1.414	2	e' 50 °C	0.1676	5	Parachor [P] 20°C	
	1.412	4	d _c g/ml				30
"C"	0.7459	4	v _c ml/g	312.3	5		40
MR (Obs.)	43.4	2	t _c °C				Sugd.
MR (Calc.) (nD-d/2)	43.762	5	P _c mm	17008.	5	385.2	
	1.045	2	PV/RT			Exp. L. l. %/wt. u.	
Dielectric			25°C	1.0000	5	Dispersion	
A 45 to	6.885	2	30 mm	1.0000	5	95.5	
B 165 °C	1399.	2	BP	0.9694	5	Flash Point °C	
C	209.0	2	t _e	0.9591	5	Fire Point	
A* 45 to	1.32622	5	t _e			M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 165 °C	1305.13	5	ΔHc kcal/m			Solubility in +	
K			ΔHf			Acetone	
c			ΔFf			Carbon tet.	
t _k to °C			Viscosity centistokes η °C			Benzene	
t _x °C						Ether	
A' 25 to	6.63329	5	B ^v to °C			n-Heptane	
B' 50 °C	1271.80	5	A ^v to °C			Ethanol	
C'	197.0	5	(B ^v) to °C			Water	
A'* 25 to	1.12712	5	(A ^v) °C			Water in	
B'* 50 °C	1195.27	5	c _p liq. °K				
Ac 165 to	7.2865	5	c _p vap 300°K	0.39649	2		
Bc t _c °C	1716.2	5	400	0.50136	2		
Cc °C	249.3	5	c _v vap.				
Cryos. A° const. B°							
t _e °C F	156.72	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:							

NAME		2, 2, 3-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3 - \text{C} - \text{CH} - (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.	Ref.	
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	1.551	5	g	°K
B.P. °C	133.60	2	BP	0.0490	2	h	
760 mm	71.0	2	t_e	0.0369	5	f'	to
100	43.	2	30 mm	0.6863	4	g'	°K
30	23.	2				h'	
10	-11.	5					
1			$\Delta\text{Hm cal/g}$				
Pressure mm 25°C	11.373	5	$\Delta\text{Hv cal/g}$	78.1	2	m	300 to
t_e	1114.	5	25°C	75.47	5	n	600 °K
Density g/ml 20°C	0.7292	2	30 mm	64.8	2	o	0.0294
25	0.7254	2	BP	63.05	5		0.0015
30	0.7216	4	t_e	63.02	5		-0.0652
d_4^{25}		2	t_e (d, e)	63.02	5	m'	700 to
		2	$\Delta\text{Hv}/T_e$	19.17	5	n'	1000 °K
		4				o'	0.1222
a	0.7444	4	d 45 to	80.62	4	Surface tension dynes/cm. 20°C	
b	-0.0756	4	e 150 °C	0.1184	4	21.86	
Ref. Index n_D 20°C	1.4105	2	d' 10 to	81.66	5	30 20.96	
25	1.4082	2	e' 45 °C	0.1423	5	40 20.06	
30			d c g/ml			Parachor [P] 20°C	
"C"	0.7494	4	v c ml/g			30	
MR (Obs.)	43.62	2	t c °C	300.9	5	40	
MR (Calc.)	43.762	5	P c mm	16053.	5	Sugd. 385.2	
(nD-d/2)	1.0459	2	PV/RT			Exp. L.l./wt. u.	
Dielectric			25°C	1.0000	5	Dispersion 97.3	
A 40 to	6.8448	2	30 mm	1.0000	5	Flash Point °C	
B 160°C	1366.0	2	BP	0.9601	5	Fire Point	
C	211.0	2	t_e	0.9490	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 40 to	1.30918	5	$\Delta\text{Hc kcal/m}$			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 150°C	1277.4	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes °C				
t_x to			η				
t_x °C			B ^v to				
A' 25 to	6.72059	5	A ^v °C				
B' 45 °C	1303.5	5	(B ^v) to				
C'	205.1	5	(A ^v) °C				
A'* 25 to	1.20927	5	c_p liq. °K				
B'* 45 °C	1223.0	5	c_p vap. 300°K	0.39649	2		
Ac 160 to	7.2477	4	400	0.50136	2		
Bc t_c °C	1678.6	1	c_v vap.				
Cc t_c °C	250.9	1					
Cryos. A° const. B°							
t_e °C	148.67	5					
$T_R = 0.77 T_c$		+ 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:							

NAME		2, 2, 4-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH}_2\text{CH} - \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₉ H ₂₀	Molecular Weight	128.250		
		Ref.			Ref.		
F. P. °C	-120.0	2	dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	1.17286	4	h	
760 mm	126.54	2	BP	0.0490	2	f'	to
100	65.	2	t _e	0.0370	5	g'	to °K
30	38.	2	30 mm	0.6767	4	h'	
10	17.	2	ΔHm cal/g			m	300 to
1	-16.	5	ΔHv cal/g			n	600 °K
Pressure mm 25°C	15.539	5	25°C	75.6	2	o	0.0294
t _e	1083.	5	30 mm	73.75	5		0.0015
Density g/ml 20°C	0.7156	2	BP	63.4	2		-0.0652
d ₄ ^t 25	0.7118	2	t _e	61.78	5	m'	700 to
d ₄ ^t 30	0.7080	4	t _e (d, e)	61.76	5	n'	1000 °K
			ΔHv/T _e	19.14	5	o'	0.1222
a	0.7308	4	d 40 to	78.13	4	Surface tension dynes/cm. 20°C	
b	-0.0376	4	e 140 °C	0.1164	4	γ	20.51
Ref. Index n _D 20°C	1.4033	2	d' 10 to	79.26	5		30
25	1.4010	2	e' 40 °C	0.1463	5		19.67
30	1.3987	4	d _c g/ml			Parachor [P] 20°C	
"C"	0.7512	4	v _c ml/g	288.7	5		30
MR (Obs.)	43.76	2	t _c °C				40
MR (Calc.)	43.762	5	P _c mm	15468.	5	Sugd.	385.2
(nD-d/2)	1.0455	2	PV/RT			Exp. L. l. %/wt. u.	
Dielectric			25°C	1.0000	5	Dispersion	98.8
A 35 to	6.8391	2	30 mm	1.0000	5	Flash Point °C	
B 150 °C	1344.0	2	BP	0.9601	4	Fire Point	
C	213.0	2	t _e	0.9496	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 35 to	1.31004	5	t _c			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 150 °C	1256.4	5	ΔHc kcal/m				
K			ΔHf				
c			ΔFf				
t _k to °C			Viscosity centistokes				
t _x °C			η				
A' 25 to	6.63114	5	B ^v to °C				
B' 40 °C	1241.8	5	A ^v °C				
C'	203.3	5	(B ^v) to °C				
A'* 25 to	1.12734	5	(A ^v) °C				
B'* 40 °C	1163.6	5	c _p liq. °K				
Ac 150 to	7.2430	5	c _p vap. 300°K	0.39649	2		
Bc t _c °C	1651.4	5	400	0.50136	2		
Cc	252.1	5	c _v vap.				
Cryos. A° const. B°	0.06	2					
t _e °C	140.65	5					
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:							

NAME		2, 2, 5-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - (\text{CH}_2)_2\text{CH} \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F.P. °C	-105.780	2	dt/dP °C/mm			f to	
F.P. 100%			25°C			g °K	
B.P. °C			BP	1.109	5	h	
760 mm	124.084	2	t_e	0.04838	2	f' to	
100	63.092	2	t_e (d, e)	0.0372	5	g' °K	
30	36.37	2	30 mm	0.6676	4	h'	
10	16.17	2	ΔHm cal/g			m 300 to	
1	-18.2	5	ΔHv cal/g			n 600 °K	
Pressure mm 25°C	16.593	5	25°C	74.86	2	o	
t_e	1066.	5	30 mm	74.14	5	n'	
Density g/ml 20°C	0.70721	2	BP	62.9	2	o'	
25	0.70322	2	t_e	61.44	5	m' 700 to	
d ₄ ^t 30	0.69922	4	t_e (d, e)	61.24	5	n' 1000 °K	
			$\Delta\text{Hv}/T_e$	19.21	5	o'	
a	0.72315	4	d 40 to	78.80	4	Surface tension dynes/cm. 20°C	
b	-0.03793	4	e 135 °C	0.1281	4	30	20.04
Ref. Index n _D 20°C	1.39972	2	d' 10 to	76.45	5	40	19.60
25	1.39728	2	e' 40 °C	0.0634	5		18.29
30	1.39515	4	d _c g/ml			Parachor [P]	
"C"	0.7538	4	v _c ml/g			20°C	
MR (Obs.)	43.935	2	t _c °C	282.1	5	30	
MR (Calc.)	43.762	2	P _c mm	15064.	5	40	
(n _D -d/2)	1.04612	2	PV/RT			Sugd.	385.2
Dielectric			25°C	1.0000	5	Exp. L.l. %/wt.	
A 35 to	6.83531	2	30 mm	1.0000	5	u.	
B 145 °C	1324.049	2	BP	0.9458	4	Dispersion	99.0
C	210.737	2	t_e	0.9347	5	Flash Point °C	
A* 35 to	1.33661	5	t _c			Fire Point	
B* 150 °C	1244.71	5	ΔHc kcal/m			M Spec.	
K			ΔHf			Ultra V.	
c			ΔFf			X-Ray Dif.	
t _k to			Viscosity centistokes			Infrared	
t _x °C			η °C			Solubility in +	
A' 25 to	7.43548	5	B ^v to			Acetone	
B' 40 °C	1637.27	5	A ^v °C			Carbon tet.	
C' 40 °C	238.4	5	(B ^v) to			Benzene	
A* 25 to	1.88305	5	(A ^v) °C			Ether	
B* 40 °C	1534.28	5	c _p liq. °K			n-Heptane	
Ac 145 to	7.2339	5	c _p vap.300°K	0.39649	2	Ethanol	
Bc t _c °C	1621.3	5	400	0.50136	2	Water	
Cc t _c °C	248.5	5	c _v vap.			Water in	
Cryos. A° const. B°	0.0265	2					
t _e °C	137.04	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:							

NAME		2, 3, 3-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}-\text{C} \quad (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
F.P. °C	-116.800	2					
F.P. 100%							
B.P. °C							
760 mm	137.68	2		1.749	5	f	to
100	74.	2		0.0505	4	g	°K
30	46.	2		0.0371	5	h	
10	25.	2		0.6982	4	f'	to
1	-9.	5				g'	°K
						h'	
Pressure mm 25°C						m	300 to
t_e	10.01	5		78.7	2	n	600 °K
	1130.	5		75.38	5	o	0.0015
				65.2	2		-0.0652
Density g/ml 20°C	0.738	2		63.43	5	m'	700 to
25	0.734	2		63.43	5	n'	1000 °K
d ₄ 30	0.730	4		19.06	5	o'	0.1222
							0.0013
							-0.0645
a	0.754	4	d 45 to	80.49	5	Surface tension dynes/cm. 20°C	
b	-0.03797	4	e 155 °C	0.1110	5	30	22.41
			d' 10 to	82.65	5	40	21.49
Ref. Index			e' 45 °C	0.1581	5		20.59
n _D 20°C	1.4141	2				Parachor [P] 20°C	
25	1.4119	2	d _c g/ml			30	
30	1.4092	4	v _c ml/g	307.8	5	40	
"C"	0.7467	4	t _c °C			Sugd.	385.2
MR (Obs.)	43.4	2	P _c mm	16059.	5	Exp. L.l.%/wt. u.	
MR (Calc.)	43.762	5				Dispersion	96.3
(n _D -d/2)	1.045	2	PV/RT 25°C	1.0000	5	Flash Point °C	
			30 mm	1.0000	5	Fire Point	
Dielectric			BP	0.9629	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A 45 to	6.8474	2	t _e	0.9517	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B 165 °C	1391.0	2	t _c				
C	213.0	2					
A* 45 to	1.29980	5	ΔH _c kcal/m				
B* 165 °C	1298.6	5	ΔH _f				
K			ΔF _f				
c			Viscosity centistokes				
t _k to °C			η °C				
t _x to °C							
A' 25 to	6.55736	5	B ^v to °C				
B' 45 °C	1244.81	5	A ^v to °C				
C'	199.0	5	(B ^v) to °C				
A'* 25 to	1.05181	5	(A ^v) °C				
B'* 45 °C	1167.7	5	c _p liq. °K				
Ac 165 to	7.2550	5	c _p vap.300°K	0.39649	2		
Bc t _c °C	1713.7	5	400	0.50136	2		
Cc	254.3	5	c _v vap.				
Cryos. A° const. B°	0.0447	2					
t _e °C	153.61	5					
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:							

NAME		2, 3, 4-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	1.914	5	g	_ _ °K
B. P. °C	139.0	2	BP	0.050	2	h	
760 mm	76.	2	t_e	0.0365	5	f'	to
100	48.	2	30 mm	0.6952	4	g'	_ _ °K
30	27.	2	ΔH_m cal/g			h'	
10	-7.	5	ΔH_v cal/g			m	300 to
1			25°C	80.0	2	n	_ 600 °K
Pressure mm 25°C	9.000	5	30 mm	76.57	5	o	
t_e	1144.	5	BP	66.5	2	n'	700 to
Density g/ml 20°C	0.7392	2	t_e	64.75	5	o'	1000 °K
d^t 25	0.7354	2	t_e (d, e)	64.70	5		
d^t 30	0.7316	4	$\Delta H_v/T_e$	19.38	5		
a	0.7544	4	d 50 to	81.85	4	Surface tension dynes/cm. 20°C	
b	-0.0376	4	e 155 °C	0.1104	4	y	30 21.87
Ref. Index n_D 20°C	1.4144	2	d' 10 to	83.76	5		40 20.94
25	1.4120	2	e'	0.1505	5	Parachor [P] 20°C	
30	1.4096	4	d_c g/ml				30
"C"	0.7441	4	v_c ml/g				40
MR (Obs.)	43.39	2	t_c °C	310.8	5		Sugd. 385.2
MR (Calc.)	43.762	5	P _c mm	16713.	5	Exp. L. l. %/wt. u. Dispersion	
(nD-d/2)	1.0448	2	PV/RT 25°C	1.0000	5		96.4
Dielectric			30 mm	1.0000	5	Flash Point °C	
A 45 to	6.867	2	BP	0.9689	4	Fire Point	
B 165 °C	1395.	2	t_e	0.9594	5	M Spec. Ultra V. X-Ray Dif. Infrared	
C	211.0	2	t_c			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 45 to	1.3076	5	ΔH_c kcal/m				
B* 165 °C	1300.	5	ΔH_f				
K			ΔF_f				
c			Viscosity centistokes				
t_k _ _ to			η °C				
t_x _ _ °C							
A' 25 to	6.6857	5	B ^v _ to				
B' 50 °C	1302.	5	A ^v _ °C				
C'	202.3	5	(B ^v) _ to				
A* 25 to	1.1738	5	(A ^v) _ °C				
B* 50 °C	1223.	5	c_p liq. °K				
Ac 165 to	7.2717	5	c_p vap. 300°K	0.39649	2		
Bc t_c °C	1715.5	5	400	0.50136	2		
Cc	251.9	5	c_v vap.				
Cryos. A° const. B°							
t_e °C	155.27	5					
$T_R = 0.76 T_c$							
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		2, 3, 5-Trimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} - \text{CH} - \text{CH}_2\text{CH} - \text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F. P. °C	-127.8	2	dt/dP °C/mm			f	to
F. P. 100%			25°C	1.442	5	g	°K
B. P. °C			BP	0.049	2	h	
760 mm	131.34	2	t _e	0.0369	5	f'	to
100	69.	2	30 mm	0.6814	4	g'	°K
30	42.	2	ΔHm cal/g			h'	
10	21.	2	ΔHv cal/g			m	300 to
1	-12.9	5	25°C	77.19	2	n	600 °K
Pressure mm 25°C	12.376	5	30 mm	75.27	5	o	0.0294
t _e	1104.	5	BP	64.9	2		0.0015
Density g/ml 20°C	0.7219	2	t _e	63.35	5		-0.0652
25	0.7179	2	t _e (d, e)	63.21	5	m'	700 to
d ₄ 30	0.7139	4	ΔHv/T _e	19.38	5	n'	1000 °K
			d 40 to	80.13	4	o'	0.1222
a	0.73788	4	e 145 °C	0.1159	4		0.0013
b	-0.03796	4	d' 10 to	80.03	5		-0.0645
Ref. Index n _D 20°C	1.4061	2	e' 40 °C	0.1137	5		21.27
25	1.4037	2	d _c g/ml				20.37
30	1.4013	4	v _c ml/g	295.6	5		19.49
"C"	0.7494	4	t _c °C				
MR (Obs.)	43.64	2	P _c mm	15745.	5		
MR (Calc.)	43.762	5	PV/RT				
(n _D -d/2)	1.0450	2	25°C	1.0000	5		
			30 mm	1.0000	5		
Dielectric			BP	0.9586	5		
A 40 to	6.8505	2	t _e	0.9475	5		
B 155 °C	1359.	2	t _c				
C	211.0	2	ΔHc kcal/m				
A* 40 to	1.32039	5	ΔHf				
B* 155 °C	1271.80	5	ΔFf				
K			Viscosity centistokes				
c			η °C				
t _k to							
t _x °C							
A' 25 to	6.96029	5	B ^v to				
B' 45 °C	1415.10	5	A ^v °C				
C'	216.2	5	(B ^v) to				
A ⁺ 25 to	1.43569	5	(A ^v) °C				
B ⁺ 45 °C	1327.54	5	c _p liq. °K				
Ac 155 to	7.2523	5	c _p vap. 300°K	0.39649	2		
Bc t _c °C	1667.6	5	400	0.50136	2		
Cc	250.3	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	145.96	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:							

NAME		2, 4, 4-Trimethylhexane		STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula C ₉ H ₂₀	Molecular Weight 128.250	$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH}_2\text{C} \text{---} \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
		Ref.		Ref.		
F.P. °C	-113.380	2	dt/dP °C/mm		f	to
F.P. 100%			25°C	1.356	g	°K
B.P. °C			BP	0.0496	h	
760 mm	130.648	2	t _e	0.0373	f'	to
100	68.069	2			g'	°K
30	40.62	2	ΔHm cal/g		h'	
10	19.86	2				
1	-14.2	5	ΔHv cal/g		m	300 to
Pressure mm 25°C	13.4	5	25°C	76.1	n	600 °K
t _e	1096.	5	30 mm	74.15	o	
Density g/ml 20°C	0.72381	2	BP	63.9		
25	0.72007	2	t _e	62.41	m'	700 to
d ₄ 30	0.71632	4	t _e (d, e)	62.26	n'	1000 °K
			ΔHv/T _e	19.14	o'	
a	0.73875	5	d 40 to	78.78	Surface tension dynes/cm. 20°C	
b	-0.03744	5	e 145 °C	0.1139	30	21.17
Ref. Index n _D 20°C	1.40745	2	d' 10 to	79.22	40	20.33
25	1.40515	2	e' 40 °C	0.1247		19.49
30	1.40300	4	d _c g/ml		Parachor [P] 20°C	
"C"	0.7499	4	v _c ml/g		30	
MR (Obs.)	43.660	2	t _c °C	295.6	40	
MR (Calc.)	43.762	5	P _c mm	15689.	Sugd.	385.2
(nD-d/2)	1.04554	2	PV/RT 25°C	1.0000	Exp. L.l. %/wt. u.	
Dielectric			30 mm	1.0000	Dispersion	
A 40 to	6.85163	2	BP	0.9533	98.2	
B 155 °C	1368.723	2	t _e	0.9421	Flash Point °C	
C	214.047	2	t _c		Fire Point	
A* 40 to	1.32827	5	ΔHc kcal/m		M Spec. Ultra V.	
B* 155 °C	1282.18	5	ΔHf		X-Ray Dif.	
K			ΔFf		Infrared	
c			Viscosity centistokes		Solubility in +	
t _k to			η °C		Acetone	
t _x °C					Carbon tet.	
A' 25 to	6.79316	5	B ^v to		Benzene	
B' 40 °C	1339.10	5	A ^v °C		Ether	
C'	211.3	5	(B ^v) to		n-Heptane	
A'* 25 to	1.27805	5	(A ^v) °C		Ethanol	
B'* 40 °C	1255.58	5	c _p liq. °K		Water	
Ac 155 to	7.2588	5	c _p vap. 300°K	0.39649	Water in	
Bc t _c -	1684.3	5	400	0.50136		
Cc °C	254.2	5	c _v vap.			
Cryos. A° const. B°	0.0535	2				
t _e °C	145.03	5				
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: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		3, 3, 4-Trimethylhexane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} - \text{CH} \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250	
F. P. °C	-101.20	2	dt/dP			f
F. P. 100%			°C/mm			g
B. P. °C			25°C	1.983	5	h
760 mm	140.46	2	BP	0.049	2	f'
100	77.	2	t _e	0.0375	5	g'
30	48.	2	30 mm	0.7011	4	h'
10	27.	2	ΔHm cal/g			m
1	-7.90	5				n
Pressure			ΔHv cal/g			o
mm 25°C	8.8191	5	25°C	78.8	2	
t _e	1121.	5	30 mm	76.23	5	
Density			BP	65.5	2	m'
g/ml 20°C	0.7454	2	t _e	63.85	5	n'
d ₄ ^t 25	0.7414	2	t _e (d, e)	63.67	5	o'
d ₄ ^t 30	0.7374	4	ΔHv/T _e	19.07	5	
a	0.7614	4	d 50 to	81.89	4	Surface tension
b	-0.0380	4	e 155 °C	0.1167	4	dynes/cm. 20°C
Ref. Index			d' 10 to	81.54	5	30
n _D 20°C	1.4178	2	e' 50 °C	0.1094	5	40
25	1.4154	2	d _c g/ml			Parachor [P]
30	1.4130	4	v _c ml/g			20°C
"C"	0.7458	4	t _c °C	312.0	5	30
MR (Obs.)	43.34	2	P _c mm	16275.	5	40
MR (Calc.)	43.762	5	PV/RT			Sugd.
(n _D -d/2)	1.0451	2	25°C	1.0000	5	Exp. L. l. %/wt.
Dielectric			30 mm	1.0000	5	u.
A 45 to	6.8557	2	BP	0.9514	4	Dispersion
B 165 °C	1401.0	2	t _e	0.9391	5	Flash Point °C
C	212.0	2	t _c			Fire Point
A* 45 to	1.32602	5	ΔHc kcal/m			M. Spec.
B* 165 °C	1313.63	5	ΔHf			Ultra V.
K			ΔFf			X-Ray Dif.
c			Viscosity			Infrared
t _k to			centistokes			Solubility in ⁺
t _x °C			η			Acetone
A' 25 to	6.97246	5				Carbon tet.
B' 50 °C	1462.49	5	B _v to			Benzene
C'	217.7	5	A _v °C			Ether
A* 25 to	1.43846	5	(B _v) to			n-Heptane
B* 50 °C	1372.08	5	(A _v) °C			Ethanol
A _c 165 to	7.2624	5	c _p liq. °K			Water
B _c t _c °C	1725.1	5	c _p vap. 300°K	0.39649	2	Water in
C _c t _c °C	253.4	5	400	0.50136	2	
Cryos. A°	0.033	2	c _v vap.			
const. B°						
t _e °C	156.12	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:						

NAME		3, 3-Diethylpentane		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{C}_2\text{H}_5 \end{array} \text{CH}_2\text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250
F. P. °C	-33.110	2	dt/dP °C/mm		
F. P. 100%			25°C	2.379	5
B. P. °C	146.168	2	BP	0.05153	2
760 mm	81.044	2	t_e	0.0371	5
100	52.40	2	30 mm	0.7164	4
30	30.71	2	ΔH_m cal/g		
10	-4.20	5	ΔH_v cal/g		
1			25°C	80.8	2
Pressure mm 25°C	7.168	5	30 mm	76.44	5
t_e	1157.	5	BP	67.1	2
Density g/ml 20°C	0.75359	2	t_e	65.46	5
d_t 25	0.75000	2	t_e (d, e)	65.38	5
d_4 30	0.74641	4	$\Delta H_v/T_e$	19.23	5
a	0.76794	4	d 50 to	81.66	4
b	-0.03716	4	e 165 °C	0.0996	4
Ref. Index n_D 20°C	1.42051	2	d' 10 to	84.78	5
25	1.41837	2	e' 50 °C	0.1591	5
30	1.41623	4	d_c g/ml		
"C"	0.7419	4	v_c ml/g		
MR (Obs.)	43.113	2	t_c °C	324.3	5
MR (Calc.)	43.762	5	P_c mm	17130.	5
(nD-d/2)	1.04372	2	PV/RT		
Dielectric			25°C	1.0000	5
A 50 to	6.89262	2	30 mm	1.0000	5
B 175 °C	1451.245	2	BP	0.9643	5
C	215.575	2	t_e	0.9526	5
A* 50 to	1.33005	5	t_c		
B* 175 °C	1353.96	5	ΔH_c kcal/m		
K			ΔH_f		
c			ΔF_f		
t_k — to			Viscosity centistokes		
t_x — °C			η °C		
A' 25 to	6.54752	5	B ^v — to		
B' 55 °C	1272.18	5	A ^v — °C		
C'	198.5	5	(B ^v) — to		
A** 25 to	1.03683	5	(A ^v) — °C		
B** 55 °C	1194.11	5	c_p liq. °K		
Ac 175 to	7.3074	5	c_p vap. 300°K	0.39649	2
Bc t_c °C	1793.2	5	400	0.50136	2
Cc — °C	259.2	5	c_v vap.		
Cryos. A° const. B°	0.0223	2			
t_e °C	163.42	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:					

NAME		3-Ethyl-2, 2-dimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH} - \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
F. P. °C	-99.2	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	1.521	5	h	
760 mm	133.83	2	BP	0.050	2	f'	to
100	71.	2	t _e	0.0371	5	g'	°K
30	43.	2	30 mm	0.6905	4	h'	
10	22.	2	ΔHm cal/g			m	300 to
1	-10.86	5	ΔHv cal/g			n	600 °K
Pressure mm 25°C	11.572	5	25°C	78.3	2	o	0.0294
t _e	1114.	5	30 mm	74.88	5		0.0015
Density g/ml 20°C	0.7348	2	BP	64.9	2		-0.0652
t	0.7310	2	t _e	63.36	5	m'	700 to
d ⁴	0.7272	4	t _e (d, e)	63.23	5	n'	1000 °K
			ΔHv/T _e	19.25	5	o'	0.1222
a	0.74998	4	d	45 to	4		0.0013
b	-0.03756	4	e	150 °C	4		-0.0645
Ref. Index n _D 20°C	1.4123	2	d'	10 to	5	Surface tension dynes/cm. 20°C	
25	1.4102	2	e'	45 °C	5	δ	22.38
30	1.4077	4					21.45
"C"	0.7469	4	d _c g/ml	79.63	4		20.52
MR (Obs.)	43.46	2	v _c ml/g	0.1101	4		
MR (Calc.) (nD-d/2)	43.762	5	t _c °C	83.01	5		
	1.0449	2	P _c mm	0.1883	5		
Dielectric			PV/RT			Parachor [P] 20°C	
A 40 to	6.8482	2	25°C	1.0000	5		30
B 160 °C	1376.0	2	30 mm	1.0000	5		40
C	213.0	2	BP	0.9599	5		Sugd. 385.2
A* 40 to	1.31046	5	t _e	0.9489	5	Exp. L. l. %/wt. u.	
B* 160 °C	1286.16	5	ΔHc kcal/m			Dispersion	
K			ΔHf			Flash Point °C	
t _c			ΔFf			Fire Point	
t _k to °C			Viscosity centistokes			M. Spec. Ultra V. X-Ray Dif. Infrared	
t _x to °C			η			Solubility in +	
A' 25 to	6.34515	5				Acetone	
B' 45 °C	1130.32	5	B ^v to °C			Carbon tet.	
C'	189.0	5	A ^v to °C			Benzene	
A* 25 to	0.85689	5	(B ^v) to °C			Ether	
B* 45 °C	1060.39	5	(A ^v) °C			n-Heptane	
Ac 160 to	7.2549	5	c _p liq. °K			Ethanol	
Bc t _c °C	1694.6	5	c _p vap. 300°K	0.39649	2	Water	
Cc t _c °C	253.8	5	c _p vap. 400	0.50136	2	Water in	
Cryos. A° const. B°			c _v vap.				
t _e °C	149.00	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:							

NAME		3-Ethyl-2,3-dimethylpentane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{CH}-\text{C}-\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250	
		Ref.			Ref.	Ref.
F.P. °C			dt/dP °C/mm			f to
F.P. 100%			25°C	2.0224	5	g °K
B.P. °C			BP	0.050	2	h
760 mm	142.	2	t_e	0.0374	5	f' to
100	77.	2	30 mm	0.7083	4	g' °K
30	49.	2	ΔHm cal/g			h'
10	28.	2	ΔHv cal/g			m 300 to
1	-7.09	5	25°C	79.3	2	n 600 °K
Pressure mm 25°C	8.591	5	30 mm	75.71	5	o
t_e	1138.	5	BP	65.8	2	m' 700 to
Density g/ml 20°C	0.754	2	t_e	64.22	5	n' 1000 °K
d_t 25	0.750	2	t_e (d, e)	64.05	5	o'
d_4 30	0.746	4	$\Delta\text{Hv}/T_e$	19.08	5	
a	0.76999	4	d 50 to	80.94	4	Surface tension dynes/cm. 20°C
b	-0.0797	4	e 160 °C	0.1066	4	30
Ref. Index n_D 20°C	1.419	2	d' 10 to	83.03	5	40
25	1.417	2	e' 50 °C	0.1493	5	23.87
30	1.415	4	d_c g/ml			22.94
"C"	0.7390	4	v_c ml/g			22.00
MR (Obs.)	43.0	2	t_c °C	316.4	5	Parachor [P] 20°C
MR (Calc.)	43.762	5	P_c mm	16454.	5	30
(nD-d/2)	1.042	2	PV/RT 25°C	1.0000	5	40
Dielectric			30 mm	1.0000	5	Sugd. 385.2
A 45 to	6.853	2	BP	0.9589	5	Exp. L. l. %/wt. u.
B 170 °C	1414.	2	t_e	0.9477	5	Dispersion
C	214.	2	ΔHc kcal/m			Flash Point °C
A* 45 to	1.30518	5	ΔHf			Fire Point
B* 170 °C	1321.20	5	ΔFf			M Spec. Ultra V. X-Ray Dif. Infrared
K			Viscosity centistokes °C			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
c			B^v to °C			
t_k to °C			A^v to °C			
t_x			(B ^v) to °C			
A' 25 to	6.60638	5	(A ^v) to °C			
B' 50 °C	1287.24	5	c_p liq. °K			
C'	201.9	5	c_p vap. 300°K	0.39649	2	
A** 25 to	1.09388	5	400	0.50136	2	
B** 50 °C	1207.57	5	c_v vap.			
Ac 170 to	7.2640	5				
Bc t_c °C	1746.3	5				
Cc t_c °C	256.6	5				
Cryos. A° const. B°						
t_e °C	158.42	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:						

NAME		3-Ethyl-2,4-dimethylpentane			STRUCTURAL FORMULA		
					$ \begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}-\text{CH} \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array} $		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
		Ref.			Ref.		
F.P. °C	-122.2	2	dt/dP °C/mm			f	to
F.P. 100%			25°C	1.684	5	g	°K
B.P. °C			BP	0.0503	4	h	
760 mm	136.73	2	t_e	0.0366	5	f'	to
100	73.	2	30 mm	0.6959	4	g'	°K
30	45.	2	ΔH_m cal/g			h'	
10	24.	2	ΔH_v cal/g			m	300 to
1	-8.42	5	25°C	80.0	2	n	600 °K
Pressure mm 25°C	10.228	5	30 mm	75.34	5	o	0.0294
t_e	1145.	5	BP	66.0	2		0.0015
Density g/ml 20°C	0.7379	2	t_e	64.43	5	m'	700 to
25	0.7341	2	t_e (d, e)	64.32	5	n'	1000 °K
d_4^{25}	0.73031	4	$\Delta H_v/T_e$	19.40	5	o'	0.1222
							0.0013
							-0.0645
a	0.75308	4	d 50 to	79.98	4	Surface tension dynes/cm. 20°C	
b	-0.0757	4	e 150 °C	0.1022	4	22.80	2
Ref. Index n_D 20°C	1.4137	2	d' 10 to	85.71	5	30	21.87
25	1.4115	2	e' 50 °C	0.2286	5	40	20.94
30	1.4091	4	d_c g/ml			Parachor [P] 20°C	
"C"	0.7461	4	v_c ml/g	307.6	5	30	
MR (Obs.)	43.40	2	t_c °C			40	
MR (Calc.)	43.762	2	P_c mm	16350.	5	Sugd.	385.2
(nD-d/2)	1.0488	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	
A 45 to	6.8524	2	BP	0.9753	5	Flash Point °C	
B 165 °C	1389.0	2	t_e	0.9650	5	Fire Point	
C	213.0	2	t_c			M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 45 to	1.2849	5	ΔH_c kcal/m			Solubility in +	
B* 165 °C	1291.5	5	ΔH_f			Acetone	∞
K			ΔF_f			Carbon tet.	∞
c			Viscosity centistokes			Benzene	∞
t_k to °C			η			Ether	∞
t_x to °C						n-Heptane	∞
A' 25 to	6.10396	5				Ethanol	∞
B' 45 °C	1029.13	5				Water	∞
C'	177.0	5				Water in	
A'* 25 to	0.62992	5					
B'* 45 °C	965.97	5					
Ac 165 to	7.2601	5					
Bc t_c °C	1711.9	5					
Cc	254.4	5					
Cryos. A° const. B°							
t_e °C	153.13	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. 72

NAME		2, 2, 3, 3-Tetramethylpentane				STRUCTURAL FORMULA			
		Mole % Pur.		Ref.	Molecular Formula C ₉ H ₂₀	Molecular Weight 128.250	$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} - \text{C} - \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
				Ref.				Ref.	
F. P. °C	-9.90	2			dt/dP °C/mm			f to	
F. P. 100%					25°C	1.893	5	g °K	
B. P. °C					BP	0.05124	2	h	
760 mm	140.274	2			t _e	0.0372	5	f' to	
100	75.705	2			30 mm	0.7064	4	g' °K	
30	47.43	2			ΔHm cal/g			h'	
10	26.05	2			ΔHv cal/g			m 300 to	0.0294
1	-10.3	5			25°C	76.4	2	n 600 °K	0.0015
Pressure mm 25°C	9.525	5			30 mm	75.17	5	o	-0.0652
t _e	1150.3	5			BP	65.7	2		
Density g/ml 20°C	0.75666	2			t _e	63.93	5	m' 700 to	0.1222
25	0.75299	2			t _e (d, e)	63.98	5	n' 1000 °K	0.0013
d ^t 25	0.74932	4			ΔHv/T _e	19.05	5	o'	-0.0645
d ^t 30					d 50 to	80.00	4	Surface tension dynes/cm. 20°C	
a	0.77133	4			e 160 °C	0.1020	4	30	23.38
b	-0.03731	4			d' 10 to	77.77	5	40	22.48
Ref. Index n _D 20°C	1.42360	2			e' 50 °C	0.0550	5	40	21.60
25	1.42140	2			d _c g/ml			Parachor [P] 20°C	
30	1.41921	4			v _c ml/g	316.6	5	30	
"C"	0.7440	4			t _c °C	16709.	5	40	
MR (Obs.)	43.215	2			P _c mm			Sugd.	385.2
MR (Calc.)	43.762	2			PV/RT 25°C	1.0000	5	Exp. L.l. %/wt. u.	
(n _D -d/2)	1.04527	5			30 mm	1.0000	5	Dispersion	
Dielectric					BP	0.9714	4	95.9	
A 45 to	6.82876	2			t _e	0.9606	5	Flash Point °C	
B 180 °C	1397.483	2			t _c			Fire Point	
C	213.703	2			ΔHc kcal/m			M Spec. Ultra V. X-Ray Dif. Infrared	
A* 45 to	1.26281	5			ΔHf			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 170 °C	1300.1	5			ΔFf				
K					Viscosity centistokes °C				
c									
t _k to					B ^v to				
t _x °C					A ^v °C				
A' 25 to	7.40914	5			(B ^v) to				
B' 50 °C	1717.03	5			(A ^v) °C				
C'	242.0	5			c _p liq. °K				
A'* 25 to	1.84194	5			c _p vap. 300°K	0.39649	2		
B'* 50 °C	1608.68	5			400	0.50136	2		
Ac 180 to	7.29516	5			c _v vap.				
Bc t _c °C	1788.9	5							
Cc	265.7	5							
Cryos. A° const. B°	0.00403	2							
t _e °C	157.18	5							
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. 73

NAME		2, 2, 3, 4-Tetramethylpentane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} - \text{CH} - \text{CH} \quad \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250					
		Ref.			Ref.					
F. P. °C	-121.09	2	dt/dP °C/mm			f		to		
F. P. 100%			25°C	1.434	4	g		°K		
B. P. °C			BP	0.05030	2	h				
760 mm	133.016	2	t_e	0.0374	5	f'		to		
100	69.617	2	30 mm	0.6938	4	g'		°K		
30	41.85	2				h'				
10	20.85	2	ΔHm cal/g			m	300 to	0.0294	4	
1	-13.0	5	25°C	76.4	2	n	600 °K	0.0015	4	
Pressure mm 25°C	12.574	4	30 mm	73.89	5	o		-0.0652	4	
t_e	1114.4	5	BP	63.9	2					
Density g/ml 20°C	0.73895	2	t_e	62.23	5	m'	700 to	0.1222	4	
25	0.73524	2	t_e (d, e)	62.23	5	n'	1000 °K	0.0013	4	
d ^t 25	0.73153	4	ΔHv/T _e	18.93	5	o'		-0.0645	4	
d ₄ 30		2								
a	0.75378	4	d 45 to	78.48	4	Surface tension dynes/cm. 20°C				
b	-0.03738	4	e 150 °C	0.1096	4					
Ref. Index			d' 10 to	80.12	5					
n _D 20°C	1.41472	2	e' 45 °C	0.1488	5	γ	30	21.11	2	
25	1.41246	2				40	20.25	2		
30	1.41026	4	d _c g/ml			Parachor [P] 20°C				
"C"	0.7467	4	v _c ml/g	302.3	5					
MR (Obs.)	43.436	2	t _c °C							30
MR (Calc.)	43.762	5	P _c mm	15991.	5	40				
(n _D -d/2)	1.04524	2	PV/RT			Sugd.	385.2		5	
Dielectric			25°C	1.0000	4	Exp. L. l. %/wt. u.				
A 40 to	6.83173	2	30 mm	1.0000	5					
B 160 °C	1374.042	2	BP	0.9613	4	Dispersion	96.8		2	
C 160 °C	214.762	2	t_e	0.9503	5	Flash Point °C				
A* 40 to	1.29082	5	t_c							
B* 160 °C	1282.8	5				Fire Point				
K			ΔHc kcal/m							
c			ΔHf			M. Spec. Ultra V. X-Ray Dif. Infrared				
t _k to °C			ΔFf							
t _x to °C			Viscosity centistokes			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
A' 25 to	6.56205	5	η							
B' 45 °C	1239.12	5								
C' 201.8		5	B ^v to °C							
A* 25 to	1.05786	5	A ^v to °C							
B* 45 °C	1161.40	5	(B ^v) to °C							
Ac 160 to	7.28064	5	(A ^v) °C							
Bc t _c °C	1735.3	5	c _p liq. °K							
Cc t _c °C	261.7	5	c _p vap. 300°K	0.39649	2					
Cryos. A° const. B°	0.0027	2	c _p vap. 400	0.50136	2					
t _e °C	148.29	5	c _v vap.							
$T_R = 0.76 T_c$						+ 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		2, 2, 4, 4-Tetramethylpentane				STRUCTURAL FORMULA				
Mole % Pur.		Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250	$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} - \text{CH}_2\text{C} - \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$			
		Ref.				Ref.				
F.P. °C	-66.54	2	dt/dP				f		to	
F.P. 100%			°C/mm				g		°K	
B.P. °C			25°C	0.968	4		h			
760 mm	122.284	2	BP	0.04932	2		f'		to	
100	60.154	2	t _e	0.0378	5		g'		°K	
30	33.00	2	30 mm	0.6778	4		h'			
10	12.50	2	ΔHm cal/g				m		300 to	0.0294
1	-24.7	5	ΔHv cal/g				n		600 °K	0.0015
Pressure mm 25°C	20.0524	5	25°C	71.0	2		o			-0.0652
t _e	1073.	5	30 mm	71.44	5		m'		700 to	0.1222
Density g/ml 20°C	0.71947	2	BP	61.2	2		n'		1000 °K	0.0013
t 25	0.71563	2	t _e	59.69	5		o'			-0.0645
d ₄ 30	0.71178	4	t _e (d, e)	59.66	5		Surface tension dynes/cm. 20°C			
a	0.73482	4	ΔHv/T _e	18.72	5		y		30	20.37
b	-0.03762	4	d 35 to	75.23	4				40	19.46
Ref. Index n _D 20°C	1.40694	2	e 135 °C	0.1147	4				40	18.55
25	1.40459	2	e' to °C				Parachor [P] 20°C			
30			d _v g/ml						30	
"C"	0.7535	4	t _c ml/g	283.0	5				40	
MR (Obs.)	43.875	2	t _c °C						Sugd.	385.2
MR (Calc.)	43.762	5	P _c mm	14836.	5		Exp. L. l. %/wt. u.			
(n _D -d/2)	1.04720	2	PV/RT				Dispersion			
Dielectric			25°C	1.0000	5		Flash Point °C			
A 30 to	6.79710	2	30 mm	1.0000	5		Fire Point			
B 155 °C	1325.183	2	BP	0.9538	4		M Spec. Ultra V.			
C 216.093	216.093	2	t _e	0.9431	5		X-Ray Dif.			
A* 30 to	1.28102	5	t _c				Infrared			
B* 145 °C	1239.69	5	Viscosity centistokes				Solubility in +			
K			γ °C				Acetone			
c			B ^v to				Carbon tet.			
t _k to °C			A ^v °C				Benzene			
t _x to °C			(B ^v) to				Ether			
A' 25 to	8.87467	5	(A ^v) °C				n-Heptane			
B' 35 °C	2562.31	5	c _p liq. °K				Ethanol			
C' 313.4	313.4	5	c _p vap. 300°K	0.39649	2		Water			
A* 25 to	3.21915	5	c _p vap. 400	0.50136	2		Water in			
B* 35 °C	2395.13	5	c _v vap.							
Ac 155 to	7.2058	5								
Bc t _c °C	1635.6	5								
Cc 256.0	256.0	5								
Cryos. A° const. B°	0.0273	2								
t _e °C	135.74	5								
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: API										
PURIFICATION: API										
LITERATURE REFERENCES:										

No. 75

NAME		2, 3, 3, 4-Tetramethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} - \text{C} - \text{CH}-\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_9H_{20}	Molecular Weight	128.250		
F.P. °C	-102.123	2					
F.P. 100%							
B.P. °C							
760 mm	141.551	2		1.997	5		
100	76.980	2		0.04223	2		
30	48.64	2		0.0376	5		
10	27.20	2		0.7083	4		
1	-8.44	5					
Pressure mm 25°C	8.867	5					
t_e	1131.	5					
Density g/ml 20°C	0.75473	2					
d_4^{25}	0.75113	2					
d_4^{30}	0.74753	4					
a	0.76912	4					
b	-0.03717	4					
Ref. Index n_D 20°C	1.42222	2					
25	1.42003	2					
30	1.41798	4					
"C"	0.7437	4					
MR (Obs.)	43.201	2					
MR (Calc.)	43.762	5					
($n_D-d/2$)	1.04486	2					
Dielectric							
A 45 to	6.85961	2					
B 175 °C	1417.473	2					
C	214.705	2					
A* 45 to	1.31873	5					
B* 170 °C	1326.25	5					
K							
c							
t_k to							
t_x °C							
A' 25 to	7.02779	5					
B' 50 °C	1507.44	5					
C'	222.9	5					
A* 25 to	1.48626	5					
B* 50 °C	1413.19	5					
Ac 175 to	7.2719	5					
Bc t_c °C	1751.7	5					
Cc	257.6	5					
Cryos. A° const. B°	0.0369	2					
t_e °C	157.71	5					
$T_R = 0.76 T_c$				+ 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		n-Decane				STRUCTURAL FORMULA				
						CH ₃ (CH ₂) ₈ CH ₃				
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276					
		Ref.			Ref.					
F.P. °C	-29.661	2	dt/dP °C/mm			f			to	
F.P. 100%			25°C	10.537	5	g			°K	
B.P. °C			BP	0.05172	2	h				
760 mm	174.123	2	t _e	0.0364	5	f'			to	
100	108.582	2	30 mm	0.7246	4	g'			°K	
30	79.65	4	ΔHm cal/g	48.24	3	h'				
10	57.56	5	ΔHv cal/g			m			300 to	0.0256
1	20.59	5	25°C	86.28	2	n			600 °K	0.0014
Pressure mm 25°C	1.366	5	30 mm	79.99	5	o				-0.0647
t _e	1190.8	5	BP	66.0	2	m'			700 to	0.1099
Density g/ml 20°C	0.73005	2	t _e (d, e)	63.55	5	n'			1000 °K	0.0012
25	0.72625	2	ΔHv/T _e	19.41	5	o'				-0.0640
d ₄ 30	0.72245	2	d 80 to	91.79	4	Surface tension dynes/cm. 20°C				
a	0.74525	4	e 190 °C	0.1481	4	γ			30	23.92
b	-0.03759	4	d' 10 to	89.16	5				40	22.96
Ref. Index n _D 20°C	1.41189	2	e' 80 °C	0.1151	5				40	22.02
25	1.40967	2	d _c g/ml	0.236	2	Parachor [P] 20°C				
30	1.40734	4	v _c ml/g	4.231	2				30	
"C"	0.7510	4	t _c °C	346.	2				40	
MR (Obs.)	48.481	2	P _c mm	15808.	2				Sugd.	424.2
MR (Calc.)	48.38	5	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.				
(nD-d/2)	1.04686	2	30 mm	1.0000	5	Dispersion			98.0	2
Dielectric			BP	0.9345	5	Flash Point °C				
A 75 to	6.95367	2	t _e	0.9187	5	Fire Point				
B 210 °C	1501.268	2	t _c	0.246	2	M Spec. Ultra V. X-Ray Dif. Infrared				
C	194.480	2	ΔHc kcal/m	1516.63	2	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
A* 75 to	1.47706	4	ΔHf			Viscosity centistokes η				
B* 200 °C	1422.53	4	ΔFf			110 °C			80°C	0.6544
K			Viscosity centistokes			130			120	0.4814
c			η			150				
t _x to °C			B ^v 70 to	462.90	4	A ^v 125 °C				
t _x to °C			A ^v 125 °C	Z.50523	4	(B ^v) 125 to				
A' 25 to	7.33883	5	(A ^v) 180 °C	464.77	4	c _p liq. °K				
B' 80 °C	1719.86	5	c _p vap. 300°K	0.39599	2					
C'	213.8	5	400	0.50072	2					
A'* 25 to	1.83020	4	c _v vap.							
B'* 80 °C	1626.19	4	T _R = 0.78 T _c			grams/100 grams solvent				
Ac 210 to	7.3363	5	REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
Bc t _c °C	1809.1	5	SOURCE: API							
Cc	232.0	5	PURIFICATION: API							
Cryos. A° const. B°	0.05824	3	LITERATURE REFERENCES: 3 JACS 76, 333 (1954) Finke et al							
t _e °C	192.66	5								

NAME		2-Methylnonane			STRUCTURAL FORMULA	
Mole % Pur.		Ref.	Molecular Formula	$C_{10}H_{22}$	Molecular Weight	$CH_3CH(CH_2)_6CH_3$ CH_3
					142.276	
		Ref.			Ref.	
F.P. °C	-74.50	2	dt/dP			f
F.P. 100%			°C/mm			g
B.P. °C			25°C	6.8858	5	h
760 mm	166.8	2	BP	0.05176	5	f'
100	101.27	4	t _e	0.0357	5	g'
30	72.38	4	30 mm	0.7231	5	h'
10	50.35	5				m
1	13.55	5	ΔHm cal/g			n
Pressure			ΔHv cal/g			o
mm 25°C	2.206	5	25°C	81.75	5	m'
t _e	122.39	5	30 mm	76.89	5	n'
Density			BP	66.18	5	o'
g/ml 20°C	0.7281	2	t _e	63.96	5	Surface tension
d 25	0.7242	2	t _e (d, e)	63.94	5	dynes/cm. 20°C
d 30	0.7203	4	ΔHv/T _e	19.79	5	30
a	0.7437	4				40
b	-0.0378	4	d 10 to	85.10	5	22.21
Ref. Index			e 90 °C	0.1134	5	21.27
n _D 20°C	1.4099	2	d' 20 to	84.32	5	20.36
25	1.4076	2	e' 70 °C	0.1026	5	Parachor [P]
30	1.4053	4				20°C
"C"	0.7496	4	d _c g/ml	0.245	5	30
MR (Obs.)	48.40	2	v _c ml/g	4.076	5	40
MR (Calc.)	48.38	5	t _c °C	336.	5	Sugd. 424.2
(n _D -d/2)	1.0459	2	P _c mm	15364.	5	Exp. L. l. %/wt.
Dielectric	1.988	5	PV/RT			u.
A 70 to	6.93010	5	25°C	1.0000	5	Dispersion
B 225 °C	1485.28	5	30 mm	1.0000	5	99.
C	200.	5	BP	0.9693	5	Flash Point °C
A* 70 to	1.3949	5	t _e	0.9568	5	Fire Point
B* 190 °C	1388.6	5	t _c	0.242	5	M. Spec.
K			ΔHc kcal/m			Ultra V.
c			ΔHf			X-Ray Dif.
t _k — to			ΔFf			Infrared
t _x — to			Viscosity			Solubility in +
A' 10 to	7.2905	5	centistokes			Acetone
B' 70 °C	1688.1	5	η			Carbon tet.
C'	218.	5				Benzene
A** 10 to	1.7817	5	B ^v — to			Ether
B** 70 °C	1592.7	5	A ^v — to			n-Heptane
Ac 225 to	7.7412	5	(B ^v) — to			Ethanol
Bc t _c °C	2254.1	5	(A ^v) — to			Water
Cc	298.5	5	(A ^v) — to			Water in
Cryos. A°			c _p liq. °K			
consts. B°			c _p vap. °K			
t _e °C	186.55	5	c _v vap.			
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:						

NAME		3-Methylnonane			STRUCTURAL FORMULA	
					CH ₃ CH ₂ CH(CH ₃)(CH ₂) ₅ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276	
		Ref.			Ref.	Ref.
F. P. °C	-84.80	2	dt/dP °C/mm			f to
F. P. 100%			25°C	7.8111	5	g °K
B. P. °C			BP	0.05101	5	h
760 mm	167.8	2	t _e	0.03565	5	f' to
100	103.08	4	t _e (d, e)			g' °K
30	74.40	4	ΔHm cal/g			h'
10	52.48	5	ΔHv cal/g			m to
1	15.75	5	25°C	83.37	5	n °K
Pressure			30 mm	78.24	5	o
mm 25°C	1.907	5	BP	66.38	5	m' to
t _e	1200.1	5	t _e	64.04	5	n' °K
Density			t _e (d, e)	64.01	5	o'
g/ml 20°C	0.7334	2	ΔHv/T _e	19.82	5	
d ^t 25	0.7296	2	d 75 to	87.68	5	Surface tension
d ₄ 30	0.7258	4	e 185 °C	0.1269	5	dynes/cm. 20°C
a	0.7486	4	d' 15 to	85.96	5	30
b	-0.0376	4	e' 75 °C	0.1039	5	40
Ref. Index			d _c g/ml	0.243	5	22.86
n _D 20°C	1.4125	2	v _c ml/g	4.117	5	21.93
25	1.4103	2	t _c °C	336.8	5	21.02
30	1.4080	4	P _c mm	16121.	5	Parachor [P]
"C"	0.7486	4	PV/RT			20°C
MR (Obs.)	48.32	2	25°C	1.0000	5	30
MR (Calc.)	48.38	5	30 mm	1.0000	5	40
(nD-d/2)	1.0458	2	BP	0.9536	5	Sugd. 424.2
Dielectric	1.995	5	t _e	0.9384	5	Exp. L.l. %/wt.
A 75 to	7.0020	5	t _c	0.234	5	u.
B 226 °C	1516.	5	ΔHc kcal/m			Dispersion
C 200.	200.	5	ΔHf			98.
A* 75 to	1.4957	5	ΔFf			Flash Point °C
B* 200 °C	1427.3	5	Viscosity			Fire Point
K			centistokes			M Spec.
c			η			Ultra V.
t _k to						X-Ray Dif.
t _x °C						Infrared
A' 15 to	7.3644	5	B ^v to			Solubility in +
B' 75 °C	1721.	5	A ^v °C			Acetone
C' 218.	218.	5	(B ^v) to			Carbon tet.
A** 15 to	1.8541	5	(A ^v) °C			Benzene
B** 75 °C	1625.7	5	c _p liq. °K			Ether
Ac 226 to	7.8175	5	c _p vap. °K			n-Heptane
Bc t _c -	2291.	5	c _v vap.			Ethanol
Cc t _c -	298.	5				Water
Cryos. A°						Water in
const. B°						
t _e °C	186.5	5				
T _R = 0.82 T _c						
REFERENCES:	1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE:	API					
PURIFICATION:	API					
LITERATURE REFERENCES:						

NAME		4-Methylnonane			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{CH}_3}{\text{CH}}(\text{CH}_2)_4\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F.P. °C	-98.7	2					
F.P. 100%							
B.P. °C							
760 mm	165.7	2		7.1296	5		
100	101.18	4		0.05085	5		
30	72.61	4		0.03566	5		
10	50.79	5					
1	14.25	5		0.7158	5		
Pressure mm 25°C	2.1059	5					
t_e	1195.8	5					
Density g/ml 20°C	0.7323	2					
t 25	0.7284	2					
d_4 30	0.7245	4					
a	0.7479	4					
b	-0.0378	4					
Ref. Index n_D 20°C	1.4123	2					
25	1.4100	2					
30	1.4076	4					
"C"	0.7494	4					
MR (Obs.)	48.38	2					
MR (Calc.)	48.38	5					
($n_D - d/2$)	1.0461	2					
Dielectric	1.994	5					
A 70 to	6.9904	5					
B 222°C	1503.	5					
C	200.	5					
A* 70 to	1.4844	5					
B* 190°C	1414.3	5					
K							
c							
t_k to							
t_x °C							
A' 15 to	7.3544	5					
B' 70°C	1708.0	5					
C'	218.	5					
A'* 15 to	1.8560	5					
B'* 70°C	1615.6	5					
Ac 222 to	7.7856	5					
Bc t_c °C	2249.3	5					
Cc	294.3	5					
Cryos. A° const. B°							
t_e °C	184.13	5					
$T_R = 0.82 T_c$				+ 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:							

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		5-Methylnonane			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\underset{\text{CH}_3}{\text{CH}}(\text{CH}_2)_3\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F.P. °C	-87.70	2	dt/dP °C/mm			f	to
F.P. 100%			25°C	6.8851	5	g	°K
B.P. °C			BP	0.0508	5	h	
760 mm	165.1	2	t _e	0.03560	5	f'	to
100	100.6	4	30 mm	0.7148	5	g'	°K
30	72.05	4	ΔHm cal/g			h'	
10	50.26	5	ΔHv cal/g			m	to
1	13.77	5	25°C	82.52	5	n	°K
Pressure mm 25°C	2.1860	5	30 mm	77.64	5	o	
t _e	1197.0	5	BP	65.87	5	m'	to
Density g/ml 20°C	0.7326	2	t _e	63.73	5	n'	°K
t	0.7288	2	t _e (d, e)	63.55	5	o'	
d ₄	0.7250	4	ΔHv/T _e	19.61	5	Surface tension dynes/cm. 20°C	
a	0.7478	4	d 70 to	86.76	5	γ	22.76
b	-0.0376	4	e 180 °C	0.1265	5		30
Ref. Index n _D 20°C	1.4122	2	d' 25 to	85.11	5		40
25	1.4100	2	e' 70 °C	0.1037	5	Parachor [P] 20°C	
30	1.4077	4	d _c g/ml	0.244	5		30
"C"	0.7489	4	v _c ml/g	4.098	5		40
MR (Obs.)	48.34	2	t _c °C	333.	5		Sugd. 424.2
MR (Calc.)	48.38	5	P _c mm	16015.	5	Exp. L. l. %/wt. u.	
(n _D -d/2)	1.0459	2	PV/RT 25°C	1.0000	5	Dispersion	98.
Dielectric	1.994	5	30 mm	1.0000	5	Flash Point °C	
A 55 to	6.9871	5	BP	0.9542	5	Fire Point	
B 222 °C	1499.	5	t _e	0.9421	5	M Spec. Ultra V.	
C	200.	5	t _c	0.247	5	X-Ray Dif.	
A* 55 to	1.4783	5	ΔHc kcal/m			Infrared	
B* 190 °C	1409.5	5	ΔHf			Solubility in +	
K			ΔFf			Acetone	
c			Viscosity centistokes			Carbon tet.	
t _k to			η °C			Benzene	
t _x °C			BV to			Ether	
A' 10 to	7.3517	5	AV °C			n-Heptane	
B' 55 °C	1703.9	5	(B ^v) to			Ethanol	
C'	218.	5	(A ^v) °C			Water	
A'* 10 to	1.8431	5	c _p liq. °K			Water in	
B'* 55 °C	1608.6	5	c _p vap. °K				
Ac 222 to	7.7813	5	c _v vap. °K				
Bc t _c °C	2244.	5					
Cc t _c °C	294.	5					
Cryos. A° const. B°							
t _e °C	183.47	5					
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:							

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NAME		3-Ethyloctane			STRUCTURAL FORMULA		
					CH ₃ CH ₂ CH (CH ₂) ₄ CH ₃ C ₂ H ₅		
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276		
F.P. °C						f	to
F.P. 100%						g	°K
B.P. °C						h	
760 mm	168.	2		7.8654	5		
100	103.2	4		0.05101	5		
30	74.52	4		0.0356	5	f'	to
10	52.60	5		0.7192	5	g'	°K
1	15.86	5				h'	
Pressure mm 25°C						m	to
t _e	1.8929	5		83.42	5	n	°K
	1202.5	5		78.27	5	o	
Density g/ml 20°C						m'	to
t	0.740	2		66.42	5	n'	°K
d ^t 25	0.736	2		64.16	5	o'	
d ^t 30	0.732	4		64.05	5		
				19.85	5		
a	0.756	4		d 75 to	5	Surface tension dynes/cm. 20°C	
b	-0.0380	4		e 185 °C	5	23.70	5
				d' 10 to	5	30	5
				e' 75 °C	5	40	5
Ref. Index n _D 20°C				d _e g/ml	5	Parachor [P]	
25	1.416	2		v _c ml/g	5	20°C	
30	1.414	2		t _c °C	5	30	
	1.411	4		P _c mm	5	40	
"C"	0.7479	4				Sugd.	424.2
MR (Obs.)	48.3	2		PV/RT			
MR (Calc.)	48.38	5		25°C	1.0000	5	Exp. L. l. %/wt.
(n _D -d/2)	1.046	2		30 mm	1.0000	5	u.
Dielectric	2.005	5		BP	0.9535	5	Dispersion
A 75 to	7.0031	5		t _e	0.9398	5	96.
B 227 °C	1517.	5		t _c	0.247	5	Flash Point °C
C	200.	5					Fire Point
A* 75 to	1.4945	5		ΔH _c kcal/m			M. Spec.
B* 200 °C	1427.6	5		ΔH _f			Ultra V.
K				ΔF _f			X-Ray Dif.
c				Viscosity centistokes			Infrared
t _k to				η			Solubility in +
t _x °C							Acetone
A' 10 to	7.3654	5		B ^v to			Carbon tet.
B' 75 °C	1722.5	5		A ^v °C			Benzene
C'	218.	5		(B ^v) to			Ether
A'* 10 to	1.8550	5		(A ^v) °C			n-Heptane
B'* 75 °C	1626.7	5		c _p liq. °K			Ethanol
Ac 227 to	7.8210	5		c _p vap. °K			Water
Bc t _c °C	2294.9	5					Water in
Cc t _c °C	298.1	5					
Cryos. A° const. B°							
t _e °C	186.69	5					
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:							

NAME		4-Ethyloctane			STRUCTURAL FORMULA	
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{C}_2\text{H}_5}{\text{CH}}(\text{CH}_2)_3\text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
F. P. °C		Ref.		Ref.		
F. P. 100%						
B. P. °C						
760 mm	168.	2		7.8654	5	f to
100	103.2	4		0.05101	5	g °K
30	74.52	4		0.03560	5	h
10	52.60	5		0.7192	5	f' to
1	15.86	5				g' °K
Pressure mm 25°C		Ref.		Ref.		
t_e	1.8929	5				h'
	1202.5	5				m to
Density g/ml 20°C						
d_4^{25}	0.740	2				n °K
	0.736	2				o
	0.732	4				m' to
		4				n' °K
		4				o'
"a"						
b	0.756	4				Surface tension dynes/cm. 20°C
	-0.0380	4				30 23.70 5
						40 22.69 5
						40 21.71 5
Ref. Index n_D 20°C						
25	1.416	2				Parachor [P] 20°C
30	1.414	2				30
	1.411	4				40
"C"						Sugd. 424.2 5
MR (Obs.)	48.3	2				Exp. L.l. %/wt. u.
MR (Calc.) (nD-d/2)	48.38	2				Dispersion 96. 2
	1.046	5				Flash Point °C
Dielectric						Fire Point
A 75 to	7.0031	5				M Spec. Ultra V. X-Ray Dif. Infrared
B 227 °C	1517.	5				Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
C	200.	5				
A* 75 to	1.4945	5				
B* 200 °C	1427.6	5				
K						
t_x to						
t_x °C						
A' 10 to	7.3654	5				
B' 75 °C	1722.5	5				
C'	218.	5				
A'* 10 to	1.8550	5				
B'* 75 °C	1626.7	5				
Ac 227 to	7.8210	5				
Bc t_c °C	2294.9	5				
Cc	298.1	5				
Cryos. A° const. B°						
t_e °C	186.69	5				
$T_R = 0.82 T_c$						
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula						
SOURCE: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		2, 2-Dimethyloctane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - (\text{CH}_2)_5\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276					
		Ref.			Ref.					
F.P. °C			dt/dP °C/mm			f		to		
F.P. 100%			25°C	3.864	5	g		°K		
B.P. °C			BP	0.05104	5	h				
760 mm	155.	2	t_e	0.0366	5	f'		to		
100	90.3	4	30 mm	0.7159	5	g'		°K		
30	61.71	4	ΔH_m cal/g			h'				
10	39.9	5				m		to		
1	3.4	5	ΔH_v cal/g			n		°K		
Pressure mm 25°C	4.237	5	25°C	75.85	5	o				
t_e	1161.	5	30 mm	72.94	5					
Density g/ml 20°C	0.7245	2	BP	62.29	4	m'		to		
25	0.7208	2	t_e	60.38	5	n'		°K		
d_4^{25}	0.7171	4	t_e (d, e)	60.32	5	o'				
			$\Delta H_v/T_e$	19.29	5					
a	0.7393	4	d 60 to	79.98	5	Surface tension dynes/cm. 20°C				
b	-0.0374	4	e 170 °C	0.1142	5	γ	30	21.77	5	
Ref. Index n_D^{20}	1.4082	2	d' 10 to	77.84	5		40	20.89	5	
25	1.4060	2	e' 60 °C	0.0794	5			20.04	5	
30	1.4038	4	d			Parachor [P] 20°C				
"C"	0.7504	4	e				30			
MR (Obs.)	48.47	2	c				40			
MR (Calc.)	48.38	5	v_c ml/g	4.170	5		Sugd.	424.2	5	
($n_D - d/2$)	1.0460	2	t_c °C	318.5	5					
Dielectric	1.983	5	P_c mm	14927.	5	Exp. L. l. %/wt. u.				
A 60 to	6.9621	5	PV/RT			Dispersion 100.				
B 205 °C	1488.	5	25°C	1.0000	5	Flash Point °C				
C	210.	5	30 mm	1.0000	5	Fire Point				
A*	1.46537	5	BP	0.9500	5	M. Spec. Ultra V. X-Ray Dif. Infrared				
B*	1398.3	5	t_e	0.9369	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
K			t_c	0.24	5					
t_k to °C			ΔH_c kcal/m							
t_x to °C			ΔH_f							
A' 0 to	7.32603	5	ΔF_f							
B' 60 °C	1691.8	5	Viscosity centistokes							
C'	228.	5	η °C							
A'*	1.81246	5	B ^v to °C							
B'*	1591.5	5	A ^v to °C							
Acl 205 to	7.7110	5	(B ^v) to °C							
Bc t_c °C	2175.	5	(A ^v) °C							
Cc t_c °C	296.	5	c _p liq. °K							
Cryos. A° const. B°			c _p vap. °K							
t_e °C	172.21	5	c _v vap.							
$T_R = 0.81 T_c$ + 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:										

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NAME		2, 3-Dimethyloctane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} (\text{CH}_2)_4\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	5.5982	5	g	
B. P. °C			BP	0.0519	5	h	
760 mm	163.8	2	t_e	0.0367	5	f'	to °K
100	98.0	4	30 mm	0.7287	5	g'	
30	68.9	4	ΔH_m cal/g			h'	
10	46.7	5	ΔH_v cal/g			m	to °K
1	9.6	5	25°C	78.46	5	n	
Pressure mm 25°C	2.828	5	30 mm	74.79	5	o	
t_e	1183.	5	BP	63.73	5		
Density g/ml 20°C	0.7376	2	t_e	61.68	5	m'	to °K
d_t 25	0.7337	2	t_e (d, e)	61.60	5	n'	
d_4 30	0.7298	4	$\Delta H_v/T_e$	19.27	5	o'	
a	0.7532	4	d 70 to	82.83	5	Surface tension dynes/cm. 20°C	
b	-0.0378	4	e 180 °C	0.1166	5	30	23.39
Ref. Index n_D 20°C	1.4148	2	d' 25 to	80.54	5	40	22.41
25	1.4125	2	e' 70 °C	0.0834	5		21.47
30	1.4102	4	d c g/ml	0.241	5	Parachor [P] 20°C	
"C"	0.7483	4	v c ml/g	4.154	5	30	
MR (Obs.)	48.28	2	t_c °C	331.8	5	40	
MR (Calc.)	48.38	5	P c mm	15320.	5	Sugd.	424.2
(nD-d/2)	1.0460	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	2.002	5	30 mm	1.0000	5	Dispersion	
A 70 to	6.9766	5	BP	0.9480	5	97.	
B 220°C	1522.	5	t_e	0.9340	5	Flash Point °C	
C	208.	5	t_c	0.24	5	Fire Point	
A* 70 to	1.47511	5	ΔH_c kcal/m			M Spec. Ultra V.	
B* 190°C	1432.2	5	ΔH_f			X-Ray Dif.	
K			ΔF_f			Infrared	
c			Viscosity centistokes °C			Solubility in +	
t_k to °C						Acetone	
t_x						Carbon tet.	
A' 25 to	7.33426	5	B ^v to °C			Benzene	
B' 70°C	1726.8	5	A ^v to °C			Ether	
C'	226.	5	(B ^v) to °C			n-Heptane	
A'* 25 to	1.81744	5	(A ^v) to °C			Ethanol	
B'* 70°C	1626.3	5	c_p liq. °K			Water	
Ac 220 to	7.7920	5	c_p vap. °K			Water in	
Bc t_c °C	2301.	5	c_v vap.				
Cc t_c °C	306.	5					
Cryos. A° const. B°							
t_e °C	182.10	5					
$T_R = 0.82 T_c$			+ 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:							

NAME		2,4-Dimethyloctane			STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula	$C_{10}H_{22}$	Molecular Weight	142, 276	$CH_3CH-CH_2CH(CH_2)_3CH_3$ $CH_3 \quad CH_3$
		Ref.				Ref.	
F. P. °C			dt/dP °C/mm				f to
F. P. 100%			25°C	3.5488	5		g °K
B. P. °C			BP	0.05088	5		h
760 mm	153.	2	t_e	0.0367	5		f' to
100	88.51	4	30 mm	0.7132	5		g' °K
30	60.03	4	ΔHm cal/g				h'
10	38.3	5	ΔHv cal/g				m to
1	1.9	5	25°C	75.24	5		n °K
Pressure mm 25°C	4.6514	5	30 mm	72.49	5		o
t_e	1155.	5	BP	61.90	5		m' to
Density g/ml 20°C	0.7264	2	t_e	60.02	5		n' °K
d ^t 25	0.7224	2	t_e (d, e)	59.97	5		o'
d ⁴ 30	0.7184	4	ΔHv/T _e	19.27	5		Surface tension dynes/cm. 20°C
a	0.7424	4	d 60 to	79.33	5		30
b	-0.0380	4	e 170 °C	0.1139	5		40
Ref. Index n _D 20°C	1.4093	2	d' 25 to	77.20	5		22.00
25	1.4069	2	e' 60 °C	0.0785	5		21.04
30	1.4045	4	d _c g/ml	0.237	5		20.12
"C"	0.7503	4	v _c ml/g	4.214	5		Parachor [P] 20°C
MR (Obs.)	48.45	2	t_c °C	314.7	5		30
MR (Calc.)	48.38	5	P _c mm	14677.	5		40
(n _D -d/2)	1.0461	2	PV/RT 25°C	1.0000	5		Sugd. 424.2
Dielectric	1.986	5	30 mm	1.0000	5		Exp. L. l. %/wt. u.
A 60 to	6.9568	5	BP	0.9500	5		Dispersion
B 200 °C	1479.	5	t_e	0.9370	5		Flash Point °C
C	210.	5	t_c	0.24	5		Fire Point
A* 60 to	1.46205	5	ΔHc kcal/m				M. Spec. Ultra V.
B* 180 °C	1390.2	5	ΔHf				X-Ray Dif.
K			ΔFf				Infrared
c			Viscosity centistokes				Solubility in +
t _k to			η				Acetone
t _x °C							Carbon tet.
A' 25 to	7.32217	5	B ^v to				Benzene
B' 60 °C	1683.2	5	A ^v °C				Ether
C'	228.	5	(B ^v) to				n-Heptane
A** 25 to	1.80936	5	(A ^v) °C				Ethanol
B** 60 °C	1582.9	5	c _p liq. °K				Water
Ac 200 to	7.6878	5	c _p vap. °K				Water in
Bc t _c °C	2142.	5	c _v vap.				
Cc t _c °C	294.	5					
Cryos. A° const. B°							
t _e °C	169.95	5					
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:							

NAME		2, 5-Dimethyloctane		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}(\text{CH}_3)_2\text{CH}(\text{CH}_3)_2\text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276
F. P. °C		Ref.		Ref.	
F. P. 100%					
B. P. °C				dt/dP	
760 mm	158.	2		°C/mm	
100	92.9	4		25°C	4.3755
30	64.15	4		BP	0.05134
10	42.2	5		t_e	0.0365
1	5.5	5		30 mm	0.7204
Pressure mm 25°C				$\Delta\text{Hm cal/g}$	
t_e	3.7001	5		$\Delta\text{Hv cal/g}$	
	1170.	5		25°C	76.71
Density g/ml 20°C	0.736	2		30 mm	73.55
d_t	0.732	2		BP	62.81
d_4	0.728	4		t_e	60.85
		2		t_e (d, e)	60.79
		4		$\Delta\text{Hv}/T_e$	19.29
a	0.752	4		d 65 to	80.89
b	-0.038	4		e 175 °C	0.1145
Ref. Index				d' 25 to	78.73
n_D	1.414	2		e' 65 °C	0.0808
25	1.412	2		d	g/ml
30	1.409	4		v_c	ml/g
"C"	0.7486	4		t_c	°C
MR (Obs.)	48.3	2		P_c	mm
MR (Calc.)	48.38	5			15080.
($n_D-d/2$)	1.046	2		PV/RT	
Dielectric	2.000	5		25°C	1.0000
A 65 to	6.9658	5		30 mm	1.0000
B 210 °C	1499.	5		BP	0.9500
C	209.	5		t_e	0.9366
				t_c	0.24
A* 65 to	1.46620	5		$\Delta\text{Hc kcal/m}$	
B* 185 °C	1409.0	5		ΔHf	
K				ΔFf	
t_x to				Viscosity	
t_x °C				centistokes	
A' 25 to	7.32751	5		η	°C
B' 65 °C	1703.2	5			
C'	227.	5		B ^v to	
A'* 25 to	1.81284	5		A ^v °C	
B'* 65 °C	1602.8	5		(B ^v) to	
Ac 210 to	7.7373	5		(A ^v) °C	
Bc t_c °C	2217.	5		c_p liq.	°K
Cc	299.7	5		c_p vap.	°K
Cryos. A°				c_v vap.	
consta. B°					
t_e °C	175.63	5			
$T_R = 0.81 T_c$		+ 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:					

NAME		2, 6-Dimethyloctane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_2)_3\text{CH}(\text{CH}_2)\text{CH}_3$ $\text{CH}_3 \qquad \qquad \qquad \text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	4.4828	5	g	°K
B. P. °C			BP	0.05137	5	h	
760 mm	158.54	2	t _e	0.0366	5	f'	to
100	93.4	4	t _e (d, e)	0.7210	5	g'	°K
30	64.62	4	ΔHm cal/g			h'	
10	42.6	5	ΔHv cal/g			m	to
1	5.9	5	25°C	76.90	5	n	°K
Pressure mm 25°C	3.6029	5	30 mm	73.69	5	o	
t _e	1171.	5	BP	62.92	5	m'	to
Density g/ml 20°C	0.7285	2	t _e	60.95	5	n'	°K
t	0.7245	2	t _e (d, e)	60.89	5	o'	
d ₄ 30	0.7205	4	ΔHv/T _e	19.30	5	Surface tension dynes/cm. 20°C	
a	0.7449	4	d 70 to	81.09	5	γ	22.26
b	-0.0380	4	e 175 °C	0.1146	5		30
Ref. Index n _D 20°C	1.4113	2	d' 25 to	78.92	5		21.29
25	1.4089	2	e' 70 °C	0.0810	5		40
30	1.4065	4	d _c g/ml	0.237	5	Parachor [P] 20°C	
"C"	0.7516	4	v _c ml/g	4.217	5		30
MR (Obs.)	48.52	2	t _c °C	322.7	5		40
MR (Calc.)	48.38	2	P _c mm	14866.	5		Sugd. 424.2
(n _D -d/2)	1.0471	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	1.992	5	30 mm	1.0000	5	Dispersion 99.	
A 70 to	6.9681	5	BP	0.9500	5	Flash Point °C	
B 210 °C	1502.	5	t _e	0.9366	5	Fire Point	
C	209.	5	t _c	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 70 to	1.46804	5	ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 185 °C	1411.6	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes η °C				
t _k to °C			B ^v to °C				
t _x to °C			A ^v to °C				
A' 25 to	7.32953	5	(B ^v) to °C				
B' 70 °C	1705.9	5	(A ^v) °C				
C'	227.	5	c _p liq. °K				
A'* 25 to	1.81464	5	c _p vap. °K				
B'* 70 °C	1605.5	5	c _v vap.				
Ac 210 to	7.7359	5					
Bc t _c °C	2214.	5					
Cc t _c °C	299.	5					
Cryos. A° const. B°							
t _e °C	176.23	5					
$T_R = 0.81 T_c$						+ 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:							

NAME		2, 7-Dimethyloctane			STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula	$C_{10}H_{22}$	Molecular Weight	142.276	$CH_3CH-(CH_2)_4CH-CH_3$ $CH_3 \quad CH_3$
		Ref.			Ref.		
F. P. °C	-54.	2	dt/dP °C/mm			f	to
F. P. 100%			25°C	4.7380	5	g	°K
B. P. °C			BP	0.05150	5	h	
760 mm	159.87	2	t_e	0.0367	5	f'	to
100	94.6	4	30 mm	0.7230	5	g'	°K
30	65.7	4	ΔH_m cal/g			h'	
10	43.7	5	ΔH_v cal/g			m	to
1	6.8	5	25°C	77.28	5	n	°K
Pressure mm 25°C	3.3920	5	30 mm	73.96	5	o	
t_e	1173.	5	BP	63.08	5	m'	to
Density g/ml 20°C	0.7242	2	t_e	61.09	5	n'	°K
d_t 25	0.7202	2	t_e (d, e)	61.02	5	o'	
d_4 30	0.7162	4	$\Delta H_v/T_e$	19.27	5	Surface tension dynes/cm. 20°C	
a	0.7402	4	d 70 to	81.55	5	30	21.73
b	-0.0380	4	e 175 °C	0.1155	5	40	20.79
Ref. Index n_D 20°C	1.4086	2	d' 25 to	79.32	5	40	19.87
25	1.4062	2	e' 70 °C	0.0816	5	Parachor [P] 20°C	
30	1.4038	4	d_c g/ml	0.235	5	30	
"C"	0.7514	4	v_c ml/g	4.261	5	40	
MR (Obs.)	48.53	2	t_c °C	323.6	5	Sugd.	424.2
MR (Calc.)	48.38	5	P mm	14735.	5	Exp. L. l. %/wt. u.	
(nD-d/2)	1.0465	2	PV/RT 25°C	1.0000	5	Dispersion	98.6
Dielectric	1.984	5	30 mm	1.0000	5	Flash Point °C	
A 70 to	6.9697	5	BP	0.9490	5	Fire Point	
B 210 °C	1507.	5	t_e	0.9354	5	M Spec. Ultra V. X-Ray Dif. Infrared	
C	209.	5	t_c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 70 to	1.47015	5	ΔH_c kcal/m				
B* 185 °C	1416.8	5	ΔH_f				
K			ΔF_f				
t_x to °C			Viscosity centistokes η °C				
A' 25 to	7.33015	5	B^v to °C				
B' 70 °C	1711.0	5	A' to °C				
C'	227.	5	(B ^v) to °C				
A'* 25 to	1.81478	5	(A ^v) to °C				
B'* 70 °C	1610.6	5	c_p liq. °K				
Ac 210 to	7.7416	5	c_p vap. °K				
Bc t_c °C	2225.	5	c_v vap.				
Cc t_c °C	299.	5					
Cryos. A° const. B°							
t_e °C	177.69	5					
$T_R = 0.81 T_c$ † 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:							

NAME		3, 3-Dimethyloctane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH}(\text{CH}_2)_4\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.			Ref.		
F. P. 100%							
B. P. °C				dt/dP °C/mm		f	to
760 mm	161.2	2		25°C	5.0083	g	°K
100	95.7	4		BP	0.05163	h	
30	66.78	4		t_e	0.0367	g'	to
10	44.7	5		30 mm	0.7250	h'	°K
1	7.7	5		$\Delta\text{Hm cal/g}$		m	to
Pressure mm 25°C	3.1931	5		$\Delta\text{Hv cal/g}$	77.66	n	°K
t_e	1176.	5		25°C	74.23	o	
Density g/ml 20°C	0.7390	2		30 mm	63.25		
25	0.7351	2		BP	61.24	m'	to
d_4^t	0.7312	4		t_e	61.16	n'	°K
				t_e (d, e)	19.26	o'	
				$\Delta\text{Hv}/T_e$			
a	0.7546	4		d 70 to	81.99		
b	-0.0378	4		e 180 °C	0.1162		Surface tension dynes/cm. 20°C
Ref. Index				d' 25 to	79.72		30
n_D 20°C	1.4165	2		e' 70 °C	0.0822		40
25	1.4142	2					23.57
30	1.4114	4					22.59
"C"	0.7498	4					21.63
MR (Obs.)	48.36	2		d	0.242		
MR (Calc.)	48.38	5		e	4.136		Parachor [P] 20°C
($n_D - d/2$)	1.0470	2		c	328.5		30
Dielectric	2.007	5		t_c	15304.		40
A 70 to	6.9713	5		P_c mm			Sugd. 424.2
B 215 °C	1512.	5		PV/RT			
C	208.	5		25°C	1.0000		Exp. L. l. %/wt. u.
A* 70 to	1.4723	5		30 mm	1.0000		Dispersion
B* 190 °C	1422.1	5		BP	0.9480		97.
K				t_e	0.9342		Flash Point °C
c				t_c	0.24		Fire Point
t_k to °C				$\Delta\text{Hc kcal/m}$			M. Spec. Ultra V. X-Ray Dif. Infrared
t_x to °C				ΔHf			
A' 25 to	7.3308	5		ΔFf			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
B' 70 °C	1716.0	5		Viscosity centistokes °C			
C'	226.	5		η			
A'* 25 to	1.81491	5		B^v to °C			
B'* 70 °C	1615.6	5		A^v to °C			
Ac 215 to	7.7697	5		(B^v) to °C			
Bc t_c °C	2267.	5		(A^v) °C			
Cc t_c °C	304.	5		c_p liq. °K			
Cryos. A° const. B°				c_p vap. °K			
t_e °C	179.15	5		c_v vap.			
$T_R = 0.81 T_c$				+ 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:							

NAME		3, 4-Dimethyloctane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH} \begin{array}{c} \text{CH}_3 \\ \\ \text{CH} \end{array} (\text{CH}_2)_3\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.				Ref.	Ref.
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	6.1341	5	g	to °K
B. P. °C			BP	0.05208	5	h	to °K
760 mm	166.	2	t_e	0.0367	5	f'	to °K
100	99.9	4	30 mm	0.7320	5	g'	to °K
30	70.7	4				h'	to °K
10	48.4	5				m	to °K
1	11.1	5				n	to °K
Pressure mm 25°C	2.5603	5	ΔHm cal/g			o	to °K
t_e	1190.	5	25°C	79.08	5	m'	to °K
Density g/ml 20°C	0.746	2	30 mm	75.22	5	n'	to °K
d_4^{25}	0.742	2	BP	64.10	5	o'	to °K
d_4^{30}	0.738	4	t_e	62.01	5	Surface tension dynes/cm. 20°C	
a	0.762	4	t_e (d, e)	61.92	5	30	24.47
b	-0.038	4	$\Delta\text{Hv}/T_e$	19.27	5	40	23.44
Ref. Index n_D^{20}	1.4182	2	d 70 to	83.48	5	40	22.44
25	1.4159	2	e 185 °C	0.1167	5	Parachor [P] 20°C	
30	1.4135	4	d' 25 to	81.19	5	30	424.2
"C"	0.7456	4	e' 70 °C	0.0844	5	40	
MR (Obs.)	48.1	2	d c g/ml	0.242	5	Sugd.	
MR (Calc.)	48.38	5	v c ml/g	4.128	5	Exp. L.l. %/wt. u.	
(nD-d/2)	1.045	2	t c °C	335.8	5	Dispersion	97.
Dielectric	2.011	5	P c mm	15521.	5	Flash Point °C	
A 70 to	6.9782	5	PV/RT 25°C	1.0000	5	Fire Point	
B 225 °C	1530.	5	30 mm	1.0000	5	M Spec. Ultra V.	
C	208.	5	BP	0.9480	5	X-Ray Dif.	
A* 70 to	1.47457	5	t_e	0.9339	5	Infrared	
B* 195 °C	1439.7	5	t_c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
K			ΔHc kcal/m				
c			ΔHf				
t_x^k to °C			ΔHf				
A' 25 to	7.33417	5	Viscosity centistokes °C				
B' 70 °C	1734.7	5	η				
C'	226.	5					
A'* 25 to	1.81657	5					
B'* 70 °C	1634.1	5					
Ac 225 to	7.8161	5					
Bc t_c °C	2341.	5					
Cc t_c °C	310.	5					
Cryos. A° const. B°							
t_e °C	184.62	5					
$T_R = 0.82 T_c$						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:							

NAME		3, 5-Dimethyloctane			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\underset{\text{CH}_3}{\text{CH}}(\text{CH}_2)_2\text{CH}_3$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
F. P. °C				dt/dP				
F. P. 100%				°C/mm			f	
B. P. °C				25°C	9.4812	5	g	
760 mm	160.	2		BP	0.05150	5	h	
100	94.7	4		t_e	0.0367	5	f'	
30	65.82	4		30 mm	0.7231	5	g'	
10	43.8	5					h'	
1	6.9	5		$\Delta\text{Hm cal/g}$			m	
Pressure				$\Delta\text{Hv cal/g}$			n	
mm 25°C	3.3674	5		25°C	77.33	5	o	
t_e	1172.	5		30 mm	74.00	5		
Density				BP	63.06	5	m'	
g/ml 20°C	0.736	2		t_e	61.07	5	n'	
25	0.732	2		t_e (d, e)	60.99	5	o'	
d_4^t	0.728	4		$\Delta\text{Hv}/T_e$	19.27	5		
30								
a	0.752	4		d 70 to	81.65	5	Surface tension	
b	-0.038	4		e 175 °C	0.1162	5	dynes/cm. 20°C	
Ref. Index				d' 25 to	79.38	5	23.19	5
n_D				e' 70 °C	0.0817	5	30	5
20°C	1.413	2					40	5
25	1.411	2		d_c g/ml	0.240	5	Parachor [P]	
30	1.408	4		v_c ml/g	4.170	5	20°C	
"C"	0.7468	4		t_c °C	325.8	5	30	
MR (Obs.)	48.2	2		P_c mm	15110.	5	40	
MR (Calc.)	48.38	5					Sugd. 424.2	
MR (Calc.)	1.045	2		PV/RT			Exp. L. l. %/wt.	
(nD-d/2)				25°C	1.0000	5	u.	
Dielectric	2.039	5		30 mm	1.0000	5	Dispersion	
A 70 to	6.9710	5		BP	0.9480	5	97.	
B 215 °C	1508.	5		t_e	0.9343	5	Flash Point °C	
C	209.	5		t_c	0.24	5	Fire Point	
A* 70 to	1.47305	5		$\Delta\text{Hc kcal/m}$			M. Spec.	
B* 185 °C	1418.2	5		ΔHf			Ultra V.	
K				ΔFf			X-Ray Dif.	
c				Viscosity			Infrared	
t_k to				centistokes			Solubility in +	
t_x °C				η			Acetone	
A' 25 to	7.33132	5					Carbon tet.	
B' 70 °C	1711.9	5		B^v to			Benzene	
C'	227.	5		A^v °C			Ether	
A** 25 to	1.81589	5		(B^v) to			n-Heptane	
B** 70 °C	1611.5	5		(A^v) °C			Ethanol	
Ac 215 to	7.7550	5		c_p liq. °K			Water	
Bc t_c °C	2243.	5		c_p vap. °K			Water in	
Cc	301.	5		c_v vap.				
Cryos. A°								
const. B°								
t_e °C	177.78	5						
$T_R = 0.81 T_c$				+ 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:								

NAME		3, 6-Dimethyloctane			STRUCTURAL FORMULA		
					CH ₃ CH ₂ CH(CH ₃)(CH ₂) ₂ CH(CH ₃)CH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	4.7691	5	g	
B.P. °C			BP	0.05150	5	h	
760 mm	160.	2	t _e	0.0367	5	f'	to °K
100	94.7	4	30 mm	0.7231	5	g'	
30	65.8	4	ΔHm cal/g			h'	
10	43.8	5	ΔHv cal/g			m	to °K
1	6.9	5	25°C	77.33	5	n	
Pressure mm 25°C	3.3674	5	30 mm	74.00	5	o	
t _e	1172.	5	BP	63.06	5		
Density g/ml 20°C	0.7363	2	t _e	61.07	5	m'	to °K
d _t 25	0.7324	2	t _e (d, e)	60.99	5	n'	
d ₄ 30	0.7285	4	ΔHv/T _e	19.27	5	o'	
a	0.7519	4	d 70 to	81.65	5	Surface tension dynes/cm. 20°C	
b	-0.0378	4	e 175 °C	0.1162	5	30	23.22
Ref. Index n _D 20°C	1.4145	2	d' 25 to	79.38	5	40	22.25
25	1.4122	2	e' 70 °C	0.0817	5		21.31
30	1.4099	4	d _c g/ml	0.241	5	Parachor [P] 20°C	
"C"	0.7491	4	v _c ml/g	4.147	5	30	
MR (Obs.)	48.337	2	t _c °C	326.4	5	40	
MR (Calc.)	48.36	5	P _c mm	15209.	5	Sugd.	424.2
(nD-d/2)	1.0463	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	2.001	5	30 mm	1.0000	5	Dispersion 97.	
A 70 to	6.9710	5	BP	0.9480	5	Flash Point °C	
B 215 °C	1508.	5	t _e	0.9343	5	Fire Point	
C	209.	5	t _c	0.24	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 70 to	1.47305	5	ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 185 °C	1418.2	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes °C				
t _k to °C			B ^v to °C				
t _x °C			A ^v °C				
A' 25 to	7.33132	5	(B ^v) to °C				
B' 70 °C	1711.89	5	(A ^v) °C				
C' 227.	227.	5	c _p liq. °K				
A'* 25 to	1.81589	5	c _p vap. °K				
B'* 70 °C	1611.5	5	c _v vap.				
Ac 215 to	7.7581	5					
Bc t _c °C	2247.	5					
Cc 302.	302.	5					
Cryos. A° const. B°							
t _e °C	177.78	5					
TR = 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:							

NAME		4,4-Dimethyloctane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_2\text{C} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.			Ref.		Ref.
F. P. 100%							
B. P. °C							
760 mm	161.	2		dt/dP °C/mm		f	to
100	95.6	4		25°C	4.9725	g	°K
30	66.64	4		BP	0.05160	h	
10	44.6	5		t_e	0.0367		
1	7.6	5		30 mm	0.7246	g'	to
				ΔH_m cal/g		h'	°K
Pressure mm 25°C				ΔH_v cal/g		m	to
t_e	3.2176	5		25°C	77.62	n	°K
	1175.	5		30 mm	74.20	o	
Density g/ml 20°C				BP	63.23		
d_4^{25}	0.737	2		t_e	61.22	m'	to
d_4^{30}	0.733	2		t_e (d, e)	61.15	n'	°K
	0.729	4		$\Delta H_v/T_e$	19.27	o'	
a	0.753	4		d	70 to	Surface tension dynes/cm. 20°C	
b	-0.038	4		e	180 °C	23.31	5
Ref. Index				e'	25 to	22.31	5
n_D^{20}	1.414	2		e'	70 °C	21.35	5
25	1.412	2		d _c g/ml	0.240	Parachor [P]	
30	1.409	4		v _c ml/g	4.168	20°C	
"C"	0.7475	4		t _c °C	327.4	30	
MR (Obs.)	48.2	2		P _c mm	15157.	40	Sugd. 424.2
MR (Calc.)	48.38	5		PV/RT		20°C	
(n _D -d/2)	1.046	2		25°C	1.0000	30	
Dielectric	2.000	5		30 mm	1.0000	40	
A 70 to	6.9720	5		BP	0.9480	Exp. L. l. %/wt.	
B 215 °C	1511.	5		t_e	0.9342	u.	
C	208.	5		t_c	0.24	Dispersion	97.
A* 70 to	1.47331	5		ΔH_c kcal/m		Flash Point °C	
B* 190 °C	1421.8	5		ΔH_f		Fire Point	
K				ΔF_f		M. Spec.	
c				Viscosity		Ultra V.	
t_k to				centistokes		X-Ray Dif.	
t_x °C				η		Infrared	
A' 25 to	7.33180	5				Solubility in +	
B' 70 °C	1715.69	5		B ^v to		Acetone	
C'	226.	5		A ^v °C		Carbon tet.	
A'* 25 to	1.81600	5		(B ^v) to		Benzene	
B'* 70 °C	1615.2	5		(A ^v) °C		Ether	
Ac 215 to	7.7641	5		c _p liq. °K		n-Heptane	
Bc t _c °C	2257.	5		c _p vap. °K		Ethanol	
Cc t _c °C	303.	5		c _v vap.		Water	
Cryos. A° const. B°						Water in	
t_e °C	178.92	5					
$T_R = 0.81 T_c$				+ 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:							

NAME		4, 5-Dimethyloctane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_2\text{CH}-\text{CH}(\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f		to
F. P. 100%			25°C	5.2038	g		°K
B. P. °C			BP	0.05173	h		
760 mm	162.13	2	t_e	0.0367	f'		to
100	96.5	4	30 mm	0.7264	g'		°K
30	67.5	4	$\Delta\text{Hm cal/g}$		h'		
10	45.4	5	$\Delta\text{Hv cal/g}$		m		to
1	8.3	5	25°C	77.92	n		°K
Pressure mm 25°C	3.0629	5	30 mm	74.41	o		
t_e	1178.	5	BP	63.41	m'		to
Density g/ml 20°C	0.7470	2	t_e	61.39	n'		°K
d^t 25	0.7432	2	t_e (d, e)	61.31	o'		
d^t 30	0.7394	4	$\Delta\text{Hv}/T_e$	19.26	Surface tension dynes/cm. 20°C		
a	0.7622	4	d 70 to	82.26	5	24.60	5
b	-0.0376	4	e 180 °C	0.1162	5	30	5
Ref. Index n_D 20°C	1.4190	2	d' 25 to	79.99	5	40	5
25	1.4167	2	e' 70 °C	0.0826	5	22.66	5
30	1.4145	4	d c g/ml	0.246	5	Parachor [P] 20°C	
"C"	0.7459	4	v c ml/g	4.062	5	30	
MR (Obs.)	48.10	2	t c °C	331.6	5	40	
MR (Calc.)	48.38	5	P c mm	15661.	5	Sugd.	424.2
(nD-d/2)	1.0455	2	PV/RT		5	Exp. L.l. %/wt. u.	
Dielectric	2.013	5	25°C	1.0000	5	Dispersion	95.8
A 70 to	6.9719	5	30 mm	1.0000	5	Flash Point °C	
B 220 °C	1515.	5	BP	0.9480	5	Fire Point	
C	208.	5	t_e	0.9341	5	M Spec. Ultra V.	
A* 70 to	1.47193	5	t_c	0.24	5	X-Ray Dif.	
B* 190 °C	1425.2	5	$\Delta\text{Hc kcal/m}$			Infrared	
K			ΔHf			Solubility in +	
c			ΔFf			Acetone	
t_x to			Viscosity centistokes			Carbon tet.	
t_x °C			η °C			Benzene	
A' 25 to	7.33061	5	B ^v to			Ether	
B' 70 °C	1719.3	5	A ^v °C			n-Heptane	
C'	226.	5	(B ^v) to			Ethanol	
A'* 25 to	1.81443	5	(A ^v) °C			Water	
B'* 70 °C	1618.8	5	c _p liq. °K			Water in	
Ac 220 to	7.7883	5	c _p vap. °K				
Bc t _c °C	2295.	5	c _v vap.				
Cc t _c °C	307.	5					
Cryos. A° const. B°							
t _e °C	180.22	5					
TR = 0.81 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		4-Propylheptane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂ CH(CH ₂) ₂ CH ₃ C ₁₀ H ₂₂		
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP		f	to	
F.P. 100%			°C/mm		g	°K	
B.P. °C			25°C	5.1849	h		
760 mm	162.	2	BP	0.05169			
100	96.4	4	t _e	0.0367	f'	to	
30	67.5	4	30 mm	0.7261	g'	°K	
10	45.3	5	ΔHm cal/g		h'		
1	8.3	5			m	to	
Pressure mm 25°C	3.0744	5	ΔHv cal/g		n	°K	
t _e	1178.	5	25°C	77.91	o		
			30 mm	74.41			
Density g/ml 20°C	0.7364	2	BP	63.41			
d ₄ 25	0.7326	2	t _e	61.38	m'	to	
d ₄ 30	0.7288	4	t _e (d, e)	61.30	n'	°K	
			ΔHv/T _e	19.27	o'		
a	0.7516	4	d 65 to	82.26	Surface tension dynes/cm. 20°C		
b	-0.0376	4	e 180 °C	0.1164	γ	23.24	5
Ref. Index n _D 20°C	1.4150	2	d' 25 to	79.98		30	5
25	1.4127	2	e' 65 °C	0.0826		40	5
30	1.4105	4	d _c g/ml	0.242	Parachor [P] 20°C		
"C"	0.7498	4	v _c ml/g	4.135		30	
MR (Obs.)	48.38	2	t _c °C	329.6		40	
MR (Calc.)	48.38	5	P _c mm	15334.		Sugd. 424.2	5
(n _D -d/2)	1.0468	2	PV/RT		Exp. L.l.%wt. u.		
Dielectric	2.002	5	25°C	1.0000		Dispersion	96.
A 65 to	6.9734	5	30 mm	1.0000	Flash Point °C		
B 220 °C	1515.	5	BP	0.9480	Fire Point		
C	208.	5	t _e	0.9342	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 65 to	1.47356	5	t _c	0.24	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 190 °C	1425.4	5	ΔHc kcal/m				
K			ΔHf				
c			ΔFf				
t _k to °C			Viscosity centistokes				
t _x to °C			η °C				
A' 25 to	7.33227	5	B ^v to °C				
B' 65 °C	1719.5	5	A ^v to °C				
C'	226.	5	(B ^v) to °C				
A** 25 to	1.81612	5	(A ^v) °C				
B** 65 °C	1619.0	5	c _p liq. °K				
Ac 220 to	7.7776	5	c _p vap. °K				
Bc t _c °C	2278.	5	c _v vap.				
Cc t _c °C	305.	5					
Cryos. A° const. B°							
t _e °C	180.06	5					
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:							

NAME		4-Isopropylheptane			STRUCTURAL FORMULA	
					$\text{CH}_3(\text{CH}_2)_2\text{CH} - (\text{CH}_2)_2\text{CH}_3$ C_9H_{18}	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
		Ref.				Ref.
F.P. °C			dt/dP °C/mm			f to
F.P. 100%			25°C	4.7691	5	g °K
B.P. °C			BP	0.05150	5	h
760 mm	160.	2	t _e	0.0367	5	f' to
100	94.7	4	30 mm	0.7231	5	g' °K
30	65.8	4	ΔHm cal/g			h'
10	43.8	5	ΔHv cal/g			m to
1	6.9	5	25°C	77.33	5	n °K
Pressure mm 25°C	3.3674	5	30 mm	74.00	5	o
t _e	1172.	5	BP	63.06	5	m' to
Density g/ml 20°C	0.741	2	t _e	61.07	5	n' °K
d ₄ ^t 25	0.737	2	t _e (d, e)	61.00	5	o'
d ₄ ^t 30	0.733	4	ΔHv/T _e	19.27	5	
a	0.757	4	d 70 to	81.65	5	Surface tension
b	-0.038	4	e 175 °C	0.1161	5	dynes/cm. 20°C
Ref. Index			d' 25 to	79.38	5	30
n _D 20°C	1.417	2	e' 70 °C	0.0817	5	40
25	1.415	2	d _c g/ml	0.242	5	23.82
30	1.412	4	v _c ml/g	4.133	5	22.81
"C"	0.7486	4	t _c °C	326.7	5	21.82
MR (Obs.)	48.3	2	P _c mm	15270.	5	Parachor [P]
MR (Calc.)	48.38	5	PV/RT			20°C
(nD-d/2)	1.047	2	25°C	1.0000	5	30
Dielectric	2.008	5	30 mm	1.0000	5	40
A 70 to	6.9710	5	BP	0.9480	5	Sugd. 424.2
B 215°C	1508.	5	t _e	0.9343	5	Exp. L.l. %/wt.
C	209.	5	t _c	0.24	5	u.
A* 70 to	1.47305	5	ΔHc kcal/m			Dispersion
B* 187°C	1418.2	5	ΔHf			97.
K			ΔFf			Flash Point °C
c			Viscosity			Fire Point
t _k to			centistokes			M Spec.
t _x °C			η			Ultra V.
A' 25 to	7.33132	5				X-Ray Dif.
B' 70°C	1711.9	5				Infrared
C'	227.	5				Solubility in +
A** 25 to	1.81589	5	B ^v to			Acetone
B** 70°C	1611.5	5	A ^v °C			Carbon tet.
Ac 215 to	7.7600	5	(B ^v) to			Benzene
Bc t _c °C	2250.	5	(A ^v) °C			Ether
Cc t _c °C	302.	5	c _p liq. °K			n-Heptane
Cryos. A°			c _p vap. °K			Ethanol
const. B°			c _v vap.			Water
t _e °C	177.78	5				Water in
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. 97

NAME		3-Ethyl-2-methylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₁₀ H ₂₂	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	6.1341	5	g	°K
B.P. °C			BP	0.05208	5	h	
760 mm	166.	2	t _e	0.0367	5	f'	to
100	99.9	4	30 mm	0.7320	5	g'	°K
30	70.7	4	ΔHm cal/g			h'	
10	48.4	5				m	to
1	11.1	5	ΔHv cal/g			n	°K
Pressure mm 25°C	2.5603	5	25°C	79.08	5	o	
t _e	1189.	5	30 mm	75.22	5		
Density g/ml 20°C	0.746	2	BP	64.06	5	m'	to
d ₄ 25	0.742	2	t _e (d, e)	61.97	5	n'	°K
d ₄ 30	0.738	4	ΔHv/T _e	19.26	5	o'	
a	0.762	4	d 75 to	83.50	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 185 °C	0.1171	5	γ	24.47
Ref. Index n _D 20°C	1.418	2	d' 25 to	81.19	5		23.44
25	1.416	2	e' 75 °C	0.0844	5		22.43
30	1.413	4	d _c g/ml	0.242	5	Parachor [P] 20°C	
"C"	0.7452	4	v _c ml/g	4.129	5		30
MR (Obs.)	48.1	2	t _c °C	335.8	5		40
MR (Calc.)	48.38	5	P _c mm	15514.	5		Sugd. 424.2
(n _D -d/2)	1.045	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	2.011	5	30 mm	1.0000	5	Dispersion	96.
A 75 to	6.9782	5	BP	0.9475	5	Flash Point °C	
B 225 °C	1530.	5	t _e	0.9333	5	Fire Point	
C	208.	5	t _c	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 75 to	1.47547	5	ΔHc kcal/m			Solubility in ⁺ Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 195 °C	1439.9	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k to °C			η °C				
t _x to °C			B ^v to °C				
A' 25 to	7.33417	5	A ^v to °C				
B' 75 °C	1734.7	5	(B ^v) to °C				
C'	226.	5	(A ^v) to °C				
A'* 25 to	1.81657	5	c _p liq. °K				
B'* 75 °C	1634.1	5	c _p vap. °K				
Ac ₁ 225 to	7.8159	5	c _v vap.				
Bc ₁ t _c °C	2340.	5					
Cc	310.	5					
Cryos. A° const. B°							
t _e °C	184.59	5					
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:							

NAME		4-Ethyl-2-methylheptane			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}-\text{CH}_2\text{CH}-\text{(CH}_2\text{)}_2\text{CH}_3$ $\text{CH}_3 \quad \text{C}_2\text{H}_5$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F.P. °C				dt/dP °C/mm		f	to °K
F.P. 100%				25°C	5.4812	g	to °K
B.P. °C				BP	0.05146	h	
760 mm	160.	2		t_e	0.0367	f'	to °K
100	94.7	4		30 mm	0.7229	g'	to °K
30	65.9	4		ΔH_m cal/g		h'	
10	43.8	5		ΔH_v cal/g		m	to °K
1	7.0	5		25°C	77.38	n	to °K
Pressure mm 25°C	3.3554	5		30 mm	74.04	o	
t_e	1172.	5		BP	63.10		
Density g/ml 20°C	0.736	2		t_e	61.11	m'	to °K
d_t 25	0.732	2		t_e (d, e)	61.03	n'	to °K
d_4 30	0.728	4		$\Delta H_v/T_e$	19.28	o'	
a	0.752	4		d 70 to °C	81.70	Surface tension dynes/cm. 20°C	
b	-0.038	4		e 175 to °C	0.1163	23.19	5
Ref. Index n_D 20°C	1.413	2		d' 25 to °C	79.43	30	5
25	1.411	2		e' 70 °C	0.0817	40	5
30	1.408	4		d_c g/ml	0.240	Parachor [P] 20°C	
"C"	0.7468	4		v_c ml/g	4.163	30	
MR (Obs.)	48.2	2		t_c °C	325.8	40	
MR (Calc.)	48.38	5		P_c mm	15136.	Sugd.	424.2 5
(nD-d/2)	1.045	2		PV/RT 25°C	1.0000	Exp. L. l. %/wt. u.	
Dielectric	1.996	5		30 mm	1.0000	Dispersion	
A 70 to °C	6.9737	5		BP	0.9480	96. 2	
B 215 °C	1509.	5		t_e	0.9343	Flash Point °C	
C	209.	5		t_c	0.24	Fire Point	
A* 70 to °C	1.47578	5		ΔH_c kcal/m		M Spec. Ultra V.	
B* 185 °C	1419.2	5		ΔH_f		X-Ray Dif.	
K				ΔF_f		Infrared	
t_c to °C				Viscosity centistokes °C		Solubility in +	
t_x to °C				η		Acetone	
A' 25 to °C	7.33416	5		B^v to °C		Carbon tet.	
B' 70 °C	1713.	5		A'v to °C		Benzene	
C'	227.	5		(B'v) to °C		Ether	
A'* 25 to °C	1.81869	5		(A'v) to °C		n-Heptane	
B'* 70 °C	1612.6	5		c_p liq. °K		Ethanol	
Ac 215 to °C	7.7575	5		c_p vap. °K		Water	
Bc t_c °C	2243.	5		c_v vap.		Water in	
Cc t_c °C	301.	5					
Cryos. A° const. B°							
t_e °C	177.77	5					
$T_R = 0.81 T_c$		+ 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:							

NAME		5-Ethyl-2-methylheptane			STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula	$C_{10}H_{22}$	Molecular Weight	142.276	$CH_3CH(CH_3)(CH_2)_2CH(CH_2CH_3)CH_3$
F.P. °C		Ref.					
F.P. 100%							
B.P. °C							
760 mm	159.7	2		dt/dP °C/mm			f to
100	94.4	4		25°C	4.6975	5	g °K
30	65.5	4		BP	0.05150	5	h
10	43.5	5		t_e	0.0367	5	f' to
1	6.6	5		30 mm	0.7229	5	g' °K
				ΔH_m cal/g			h'
Pressure mm 25°C	3.42450	5		ΔH_v cal/g			m to
t_e	1171.	5		25°C	77.20	5	n °K
				30 mm	73.90	5	o
Density g/ml 20°C	0.736	2		BP	62.97	5	m' to
d_4^{25}	0.732	2		t_e	60.98	5	n' °K
d_4^{30}	0.728	4		t_e (d, e)	60.91	5	o'
				$\Delta H_v/T_e$	19.25	5	
a	0.752	4		d 70 to	81.51	5	Surface tension dynes/cm. 20°C
b	-0.038	4		e 175 °C	0.1161	5	30
Ref. Index				d' 25 to	79.24	5	40
n_D 20°C	1.4134	2		e' 70 °C	0.0815	5	23.19
25	1.4109	2					22.19
30	1.4086	4		d c g/ml	0.240	5	21.23
				v c ml/g	4.175	5	
"C"	0.7475	4		t c °C	325.4	5	Parachor [P] 20°C
MR (Obs.)	48.2	2		P c mm	15082.	5	30
MR (Calc.)	48.38	5					40
(nD-d/2)	1.045	2		PV/RT			Sugd. 424.2
Dielectric	1.998	5		25°C	1.0000	5	Exp. L.l.%wt. u.
A 70 to	6.9681	5		30 mm	1.0000	5	Dispersion
B 215 °C	1506.	5		BP	0.9480	5	96.
C	209.	5		t_e	0.9343	5	Flash Point °C
				t_c	0.24	5	Fire Point
A* 70 to	1.47051	5		ΔH_c kcal/m			M. Spec. Ultra V. X-Ray Dif. Infrared
B* 185 °C	1416.2	5		ΔH_f			
K				ΔF_f			
c				Viscosity centistokes			
t_k to °C				η °C			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
A' 25 to	7.32861	5					
B' 70 °C	1709.8	5		B ^v to °C			
C'	227.	5		A ^v to °C			
A'* 25 to	1.81332	5		(B ^v) to °C			
B'* 70 °C	1609.4	5		(A ^v) to °C			
Ac1 215 to	7.7503	5		c _p liq. °K			
Bc t _c °C	2238.	5		c _p vap. °K			
Cc t _c °C	301.	5		c _v vap.			
Cryos. A° const. B°							
t_e °C	177.45	5					
$T_R = 0.81 T_c$							+ 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:							

NAME		3-Ethyl-3-methylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{C} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	5.5814	5	h	
760 mm	163.8	2	BP	0.05189	5	f'	to
100	97.98	4	t _e	0.03670	5	g'	°K
30	68.89	4	30 mm	0.7289	5	h'	
10	46.67	5	ΔHm cal/g			m	to
1	9.50	5	ΔHv cal/g			n	°K
Pressure mm 25°C	2.838	5	25°C	78.41	5	o	
t _e	1183.2	5	30 mm	74.75	5	m'	to
Density g/ml 20°C	0.7501	2	BP	63.70	5	n'	°K
d ₄ ^t 25	0.7463	2	t _e	61.65	5	o'	
d ₄ ^t 30	0.7425	5	t _e (d, e)	61.57	5	Surface tension dynes/cm. 20°C	
a	0.7653	5	ΔHv/T _e	19.26	5	30	25.01
b	-0.0376	5	d 68 to	82.77	5	40	24.01
Ref. Index n _D 25	1.4208	2	e 182 °C	0.1164	5	40	23.04
25	1.4190	2	d' 20 to	80.49	5	Parachor [P] 20°C	
30	1.4163	4	e' 68 °C	0.0834	5	30	
"C"	0.7459	4	d c g/ml	0.247	5	40	
MR (Obs.)	48.08	2	v c ml/g	4.045	5	Sugd.	424.2
MR (Calc.)	48.38	5	t c °C	334.	5	Exp. L.l. %/wt. u.	
(nD-d/2)	1.0458	2	P c mm	15790.	5	Dispersion	97.
Dielectric	2.019	5	PV/RT 25°C	1.0000	5	Flash Point °C	
A 68 to	6.9739	5	30 mm	1.0000	5	Fire Point	
B 223 °C	1521.3	5	BP	0.9480	5	M Spec.	
C	208.	5	t _e	0.9340	5	Ultra V.	
A* 68 to	1.4724	5	t _c	0.24	5	X-Ray Dif.	
B* 200 °C	1431.2	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' 20 to	7.3314	5	B ^v to			Ether	
B' 68 °C	1725.6	5	A ^v °C			n-Heptane	
C'	226.0	5	(B ^v) to			Ethanol	
A** 20 to	1.8147	5	(A ^v) °C			Water	
B** 68 °C	1625.2	5	c _p liq. °K			Water in	
Ac 223 to	7.8061	5	c _p vap. °K				
Bc t _c °C	2323.9	5	c _v vap.				
Cc t _c °C	309.6	5					
Cryos. A° const. B°							
t _e °C	182.12	5					
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:							

NAME		4-Ethyl-3-methylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{CH}_3 \end{array} (\text{CH}_2)_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP		f	to	
F. P. 100%			°C/mm		g	°K	
B. P. °C			25°C	6.3987	5		
760 mm	167.	2	BP	0.05218	5		
100	100.8	4	t_e	0.0367	5	f'	to
30	71.5	4	30 mm	0.7335	5	g'	°K
10	49.2	5	$\Delta\text{Hm cal/g}$			h'	
1	11.7	5					
Pressure mm 25°C	2.4454	5	$\Delta\text{Hv cal/g}$			m	to
t_e	1192.	5	25°C	79.37	5	n	°K
			30 mm	75.43	5	o	
Density g/ml 20°C	0.753	2	BP	64.27	5		
d_4^{25}	0.749	2	t_e	62.17	5	m'	to
d_4^{30}	0.745	4	t_e (d, e)	62.08	5	n'	°K
			$\Delta\text{Hv}/T_e$	19.27	5	o'	
a	0.769	4	d 75 to	83.78	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 185 °C	0.1168	5	γ	25.40
			d' 25 to	81.49	5		30
Ref. Index n_D 20°C	1.422	2	e' 75 °C	0.0848	5		40
25	1.419	2				Parachor [P]	
30	1.417	4	d_c g/ml	0.245	5		20°C
			v_c ml/g	4.081	5		30
"C"	0.7450	4	t_c °C	338.4	5		40
MR (Obs.)	48.0	2	P_c mm	15764.	5		Sugd. 424.2
MR (Calc.)	48.38	5				Exp. L. l. %/wt. u.	
(nD-d/2)	1.046	2	PV/RT				Dispersion
Dielectric	2.022	5	25°C	1.0000	5		96.
A 75 to	6.9794	5	30 mm	1.0000	5	Flash Point °C	
B 230 °C	1534.	5	BP	0.9480	5	Fire Point	
C	207.	5	t_e	0.9338	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 75 to	1.47482	5	t_c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 195 °C	1443.3	5	$\Delta\text{Hc kcal/m}$				
K			ΔHf				
t_c to °C			ΔFf				
A' 25 to	7.33464	5	Viscosity centistokes				
B' 75 °C	1738.4	5	η				
C'	225.	5					
A'* 25 to	1.81669	5	B^v to °C				
B'* 75 °C	1637.9	5	A^v to °C				
Ac 230 to	7.8330	5	(B ^v) to °C				
Bc t_c °C	2367.	5	(A ^v) °C				
Cc t_c °C	313.	5	c_p liq. °K				
Cryos. A° const. B°			c_p vap. °K				
t_e °C	185.76	5	c_v vap.				
$T_R = 0.82 T_c$					+ 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:							

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

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NAME		5-Ethyl-3-methylheptane				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH} \quad \text{CH}_2\text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{C}_2\text{H}_5 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276					
		Ref.			Ref.					
F.P. °C			dt/dP °C/mm			f		to		
F.P. 100%			25°C	4.9880	5	g		°K		
B.P. °C			BP	0.05160	5	h				
760 mm	161.	2	t_e	0.0367	5	f'		to		
100	95.6	4	30 mm	0.7246	5	g'		°K		
30	66.6	4				h'				
10	44.6	5								
1	7.6	5								
Pressure mm 25°C	3.2076	5	$\Delta\text{Hm cal/g}$			m		to		
t_e	1175.	5	25°C	77.62	5	n		°K		
Density g/ml 20°C	0.743	2	30 mm	74.20	5	o				
25	0.739	2	BP	63.23	5					
d_4^{25}	0.735	4	t_e	61.23	5	m'		to		
			t_e (d,e)	61.15	5	n'		°K		
			$\Delta\text{Hv}/T_e$	19.27	5	o'				
a	0.759	4	d 67 to	81.95	5	Surface tension dynes/cm. 20°C				
b	-0.038	4	e 179 °C	0.1162	5	y		30	24.08	5
Ref. Index n_D 25°C	1.416	2	d' 25 to	79.68	5			40	23.06	5
25	1.414	2	e' 67 °C	0.0821	5				22.07	5
30	1.411	4	d c g/ml	0.243	5	Parachor [P]				
"C"	0.7449	4	v c ml/g	4.120	5					
MR (Obs.)	48.1	2	t c °C	328.	5					
MR (Calc.) (nD-d/2)	48.38	2	P c mm	15349.	5				424.2	5
	1.044	2	PV/RT			Exp. L.l. %/wt. u.				
Dielectric	2.005	5	25°C	1.0000	5	Dispersion				
A 67 to	6.9722	5	30 mm	1.0000	5	Flash Point °C				
B 214 °C	1511.	5	BP	0.9480	5	Fire Point				
C	208.	5	t_e	0.9342	5	M Spec. Ultra V. X-Ray Dif. Infrared				
A* 67 to	1.47331	5	t_c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
B* 189 °C	1421.8	5	$\Delta\text{Hc kcal/m}$							
K			ΔHf							
c			ΔFf							
t_x --- to			Viscosity centistokes							
t_x --- °C			η °C							
A' 25 to	7.33180	5	B ^v to							
B' 67 °C	1715.7	5	A ^v --- °C							
C'	226.	5	(B ^v) to							
A'* 25 to	1.82417	5	(A ^v) °C							
B'* 67 °C	1617.6	5	c_p liq. °K							
Ac 214 to	7.7702	5	c_p vap. °K							
Bc t_c °C	2266.	5	c_v vap.							
Cc t_c °C	304.	5								
Cryos. A° const. B°										
t_e °C	178.92	5								
$T_R = 0.81 T_c$						+ 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:										

NAME		3-Ethyl-4-methylheptane				STRUCTURAL FORMULA		
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{C}_2\text{H}_5 \end{array}$ $\text{CH}(\text{CH}_2)_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
F. P. °C			Ref.					Ref.
F. P. 100%						f	to	
B. P. °C						g	to	
760 mm	167.		2			h	to	
100	100.8		4			f'	to	
30	71.5		4			g'	to	
10	49.2		5			h'	to	
1	11.7		5			m	to	
						n	to	
						o	to	
Pressure mm 25°C	2.4454		5			m'	to	
t_e	1191.		5			n'	to	
Density g/ml 20°C	0.753		2			o'	to	
d_t	0.749		2					
d_4	0.745		4					
a	0.769		4					
b	-0.038		4					
Ref. Index n_D 20°C	1.422		2					
25	1.419		2					
30	1.417		4					
"C"	0.7450		4					
MR (Obs.)	48.0		2					
MR (Calc.)	48.38		5					
(nD-d/2)	1.046		2					
Dielectric	2.022		5					
A 75 to	6.9794		5					
B 230 °C	1534.		5					
C	207.		5					
A* 75 to	1.47661		5					
B* 195 °C	1443.8		5					
K								
c								
t_k to								
t_x °C								
A' 25 to	7.33464		5					
B' 75 °C	1738.4		5					
C'	225.		5					
A'* 25 to	1.81669		5					
B'* 75 °C	1637.9		5					
Ac 230 to	7.8325		5					
Bc t_c °C	2366.		5					
Cc t_c °C	313.		5					
Cryos. A° const. B°								
t_e °C	185.70		5					
$T_R = 0.82 T_c$						+ 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. 104

NAME		4-Ethyl-4-methylheptane				STRUCTURAL FORMULA		
						$\text{CH}_3(\text{CH}_2)_2\overset{\text{C}_2\text{H}_5}{\underset{\text{CH}_3}{\text{C}}} - (\text{CH}_2)_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.			Ref.			
F. P. °C			dt/dP °C/mm			f		to
F. P. 100%			25°C	6.3987	5	g		°K
B. P. °C			BP	0.05218	5	h		
760 mm	167.	2	t_e	0.0367	5	f'		to
100	100.8	4	30 mm	0.7335	5	g'		°K
30	71.5	4				h'		
10	49.2	5				m		to
1	11.7	5				n		°K
			ΔHm cal/g			o		
Pressure mm 25°C	2.4454	5	ΔHv cal/g	79.37	5	m'		to
t_e	1191.	5	25°C	75.43	5	n'		°K
			30 mm	64.20	5	o'		
			BP	62.10	5	Surface tension dynes/cm. 20°C		
Density g/ml 20°C	0.752	2	t_e (d, e)	62.01	5	30		25.27
25	0.748	2	$\Delta\text{Hv}/T_e$	19.25	5	40		24.21
d ₄ 30	0.744	4	d 72 to	83.83	5	40		23.18
			e 186 °C	0.1175	5	Parachor [P] 20°C		
			d' 25 to	81.49	5	30		
			e' 72 °C	0.0848	5	40		
a	0.768	4	d _c g/ml	0.244	5	Sugd. 424.2		
b	-0.038	4	v _c ml/g	4.091	5	Exp. L.l. %/wt. u.		
			t _c °C	338.	5	Dispersion 97.		
			P _c mm	15717.	5	Flash Point °C		
Ref. Index n _D 20°C	1.421	2				Fire Point		
25	1.419	2				M Spec. Ultra V. X-Ray Dif. Infrared		
30	1.416	4				Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
"C"	0.7443	4						
MR (Obs.)	48.0	2						
MR (Calc.)	48.38	2						
(n _D -d/2)	1.045	2						
Dielectric	2.019	5						
A 72 to	6.9794	5						
B 228 °C	1534.	5						
C	207.	5						
A* 72 to	1.47661	5						
B* 196 °C	1443.8	5						
K								
c								
t _k to								
t _x °C								
A' 25 to	7.33464	5						
B' 72 °C	1738.4	5						
C'	225.	5						
A'* 25 to	1.81669	5						
B'* 72 °C	1637.9	5						
Ac 228 to	7.8314	5						
Bc t _c °C	2364.	5						
Cc t _c °C	312.	5						
Cryos. A° const. B°								
t _e °C	185.70	5						
$T_R = 0.82 T_c$						+ 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:								

NAME		2, 2, 3-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH} - (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.				Ref.	
F. P. 100%							
B. P. °C							
760 mm	158.	2		dt/dP °C/mm			
100	92.9	4		25°C	4.37554	5	
30	64.2	4		BP	0.05134	5	
10	42.2	5		t_e	0.0367	5	
1	5.5	5		30 mm	0.7204	5	
				ΔHm cal/g			
Pressure mm 25°C	3.7001	5		ΔHv cal/g			
t_e	1167.	5		25°C	76.71	5	
				30 mm	73.55	5	
Density g/ml 20°C	0.742	2		BP	62.68	5	
d_4^{25}	0.738	2		t_e	60.72	5	
d_4^{30}	0.734	4		t_e (d, e)	60.65	5	
				$\Delta\text{Hv}/T_e$	19.25	5	
a	0.758	4		d 65 to	80.98	5	
b	-0.038	4		e 175 °C	0.1158	5	
Ref. Index $n_D^{20°C}$	1.417	2		d_4^{25}	78.73	5	
25	1.414	2		e' 65 °C	0.0808	5	
30	1.412	4		d_c g/ml	0.243	5	
"C"	0.7476	4		v_c ml/g	4.122	5	
MR (Obs.)	48.2	2		t_c °C	324.1	5	
MR (Calc.)	48.38	5		P_c mm	15244.	5	
(nD-d/2)	1.046	2		PV/RT			
Dielectric	2.008	5		25°C	1.0000	5	
A 65 to	6.9658	5		30 mm	1.0000	5	
B 210 °C	1499.	5		BP	0.9480	5	
C	209.	5		t_e	0.9345	5	
A* 65 to	1.46977	5		t_c	0.24	5	
B* 185 °C	1410.0	5		ΔHc kcal/m			
K				ΔHf			
t_k to °C				ΔFf			
A' 25 to	7.32751	5		Viscosity centistokes			
B' 65 °C	1703.2	5		η			
C'	227.	5					
A* 25 to	1.81284	5		B v to °C			
B* 65 °C	1602.8	5		A v to °C			
Ac 210 to	7.7423	5		(B v) to °C			
Bc t_c °C	2224.	5		(A v) °C			
Cc	301.	5		c_p liq. °K			
Cryos. A° const. B°				c_p vap. °K			
t_e °C	175.52	5		c_v vap.			
$T_R = 0.81 T_c$							
							⁺ 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:							

NAME		2, 2, 4-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH}_2\text{CH} (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula $\text{C}_{10}\text{H}_{22}$	Molecular Weight 142.276				
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	2.6734	5	°K	
B. P. °C			BP	0.05125	5		
760 mm	147.7	2	t_e	0.03733	5	f'	to
100	82.96	4	30 mm	0.7113	5	g'	to
30	54.52	4	$\Delta\text{Hm cal/g}$			h'	to
10	32.86	5	$\Delta\text{Hv cal/g}$			m	to
1	-3.27	5	25°C	72.51	5	n	to
			30 mm	70.29	5	o	to
Pressure mm 25°C	6.4065	5	BP	60.0	5	m'	to
t_e	1142.1	5	t_e	58.21	5	n'	to
Density g/ml 20°C	0.7275	2	t_e (d, e)	58.16	5	o'	to
100	0.7237	2	$\Delta\text{Hv}/T_e$	18.93	5	Surface tension dynes/cm. 20°C	
30	0.7199	4	d 54 to	76.32	5	y	22.13
a	0.7427	4	e 164 °C	0.1105	5		30
b	-0.0376	4	d' 25 to	74.39	5		40
Ref. Index			e' 54 °C	0.0752	5	Parachor [P]	
n_D 20°C	1.4092	2	d c g/ml	0.231	5		20°C
25	1.4070	2	v c ml/g	4.329	5		30
30	1.4046	4	t c °C	309.	5		40
"C"	0.7490	4	P_c mm	14147.	5		Sugd. 424.2
MR (Obs.)	48.37	2	PV/RT			Exp. L. l. %/wt.	
MR (Calc.)	48.38	5	25°C	1.0000	5	u.	
(nD-d/2)	1.0454	2	30 mm	1.0000	5	Dispersion	100.
Dielectric	1.986	5	BP	0.9510	5	Flash Point °C	
A 54 to	6.8795	5	t_e	0.9383	5	Fire Point	
B 195°C	1434.1	5	t_c	0.24	5	M Spec.	
C	211.	5	$\Delta\text{Hc kcal/m}$			Ultra V.	
A* 54 to	1.3879	5	ΔHf			X-Ray Dif.	
B* 174°C	1345.3	5	ΔFf			Infrared	
K			Viscosity centistokes			Solubility in +	
c			η °C			Acetone	
t_x to			B^v to			Carbon tet.	
t_x °C			A^v °C			Benzene	
A' 25 to	7.2458	5	(B ^v) to			Ether	
B' 54°C	1635.1	5	(A ^v) °C			n-Heptane	
C'	229.	5	c_p liq. °K			Ethanol	
A'* 25 to	1.7359	5	c_p vap. °K			Water	
B'* 54°C	1535.2	5	c_v vap.			Water in	
Ac 195 to	7.5887	5	$T_R = 0.80 T_C$			+ grams/100 grams solvent	
Bc t_c °C	2068.0	5	REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula				
Cc t_c °C	292.5	5	SOURCE: API				
Cryos. A° const. B°			PURIFICATION: API				
t_e °C	164.30	5	LITERATURE REFERENCES:				

NAME		2, 2, 5-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - (\text{CH}_2)_2\text{CH} \text{CH}_2\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.			Ref.		
F. P. 100%							
B. P. °C							
760 mm	148.	2		dt/dP °C/mm		f	to
100	84.2	4		25°C	2.900	g	°K
30	56.0	4		BP	0.05036	h	
10	34.5	5		t_e	0.0366	f'	to
1	-1.5	5		30 mm	0.7055	g'	°K
		5		ΔH_m cal/g		h'	
Pressure mm 25°C	5.7968	5		ΔH_v cal/g		m	to
t_e	1144.	5		25°C	73.88	n	°K
Density g/ml 20°C	0.726	2		30 mm	71.52	o	
d_4^{25}	0.722	2		BP	61.21	m'	to
d_4^{30}	0.718	4		t_e	59.42	n'	°K
		2		t_e (d, e)	59.38	o'	
		4		$\Delta H_v/T_e$	19.32		
a	0.742	4		d	56 to		Surface tension
b	-0.038	4		d'	164 °C		dynes/cm. 20°C
Ref. Index				e'	25 to		30
n_D^{20}	1.409	2		e'	56 °C		40
25	1.407	2		d_c g/ml			21.95
30	1.404	4		v_c ml/g	0.239		20.99
"C"	0.7502	4		v_c °C	4.176		20.07
MR (Obs.)	48.5	2		t_c	308.		20.07
MR (Calc.)	48.38	5		P_c mm	14639.		5
(nD-d/2)	1.046	2		PV/RT			Parachor [P]
Dielectric	1.985	5		25°C	1.0000		20°C
A 56 to	6.9532	5		30 mm	1.0000		30
B 192 °C	1462.	5		BP	0.9520		40
C	211.	5		t_e	0.9395		Sugd. 424.2
		5		t_c	0.24		5
A* 56 to	1.45980	5		ΔH_c kcal/m			Exp. L. l. %/wt.
B* 174 °C	1372.3	5		ΔH_f			u.
K				ΔF_f			Dispersion
c				Viscosity			100.
t_k to				centistokes			Flash Point °C
t_x °C				η			Fire Point
A' 25 to	7.32254	5					M. Spec.
B' 56 °C	1665.3	5					Ultra V.
C'	229.	5					X-Ray Dif.
							Infrared
A** 25 to	1.81153	5					Solubility in +
B** 56 °C	1565.1	5					Acetone
							Carbon tet.
							Benzene
							Ether
							n-Heptane
							Ethanol
							Water
							Water in
Ac 192 to	7.6549	5					
Bc t_c °C	2085.	5					
Cc t_c °C	290.	5					
Cryos. A°							
const. B°							
t_e °C	164.36	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. 108

NAME		2, 2, 6-Trimethylheptane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - (\text{CH}_2)_3\text{CH} - \text{CH}_3 \\ \qquad \\ \text{CH}_3 \qquad \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.			Ref.	Ref.		
F. P. °C			dt/dP °C/mm			f to		
F. P. 100%			25°C			g °K		
B. P. °C			BP	2.9204	5	h		
760 mm	148.2	2	t_e	0.05039	5	f' to		
100	84.3	4	t_e (d, e)	0.0366	5	g' °K		
30	56.2	4	$\Delta\text{Hm cal/g}$	0.7059	5	h'		
10	34.6	5	$\Delta\text{Hv cal/g}$			m to		
1	-1.3	5	25°C	73.92	5	n °K		
Pressure mm 25°C	5.7529	5	30 mm	71.54	5	o		
t_e	1144.	5	BP	61.22	5	m' to		
Density g/ml 20°C	0.7195	2	t_e	59.43	5	n' °K		
25	0.7156	2	t_e (d, e)	59.39	5	o'		
d ₄ 30	0.7117	4	$\Delta\text{Hv}/T_e$	19.31	5	Surface tension dynes/cm. 20°C		
a	0.7351	4	d 56 to	77.83	5	30	21.17	5
b	-0.0378	4	e 165 °C	0.1121	5	40	20.27	5
Ref. Index n_D 20°C	1.4059	2	d' 25 to	75.83	5	40	19.39	5
25	1.4036	2	e' 56 °C	0.0764	5	Parachor [P] 20°C		
30	1.4012	4	d _c g/ml	0.237	5	30		
"C"	0.7516	4	v _c ml/g	4.214	5	40		
MR (Obs.)	48.56	2	t _c °C	308.	5	Sugd.	424.2	5
MR (Calc.)	48.38	5	P _c mm	14510.	5	Exp. L.l. %/wt. u.		
(nD-d/2)	1.0461	2	PV/RT 25°C	1.0000	5	Dispersion 98.		2
Dielectric	1.976	5	30 mm	1.0000	5	Flash Point °C		
A 56 to	6.9524	5	BP	0.9520	5	Fire Point		
B 182 °C	1462.	5	t_e	0.9395	5	M Spec. Ultra V.		
C	211.	5	t_c	0.24	5	X-Ray Dif. Infrared		
A* 56 to	1.45874	5	$\Delta\text{Hc kcal/m}$			Solubility in +		
B* 175 °C	1372.6	5	ΔHf			Acetone		
K			ΔFf			Carbon tet.		
t_x to			Viscosity centistokes			Benzene		
t_x °C			η °C			Ether		
A' 25 to	7.32148	5	B ^v to			n-Heptane		
B' 56 °C	1665.6	5	A ^v °C			Ethanol		
C'	229.	5	(B ^v) to			Water		
A'* 25 to	1.81041	5	(A ^v) °C			Water in		
B'* 56 °C	1565.4	5	c _p liq. °K					
Ac 182 to	7.6521	5	c _p vap. °K					
Bc t _c °C	2083.	5	c _v vap.					
Cc t _c °C	289.	5						
Cryos. A° const. B°								
t _e °C	164.59	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. 109

NAME		2, 3, 3-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}-\text{C}-(\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	4.76914	g	°K	
B. P. °C			BP	0.05150	h		
760 mm	160.	2	t_e	0.0367	f'	to	
100	94.7	4	30 mm	0.7231	g'	°K	
30	65.8	4			h'		
10	43.8	5	ΔH_m cal/g		m	to	
1	6.9	5			n	°K	
Pressure mm 25°C	3.3674	5	ΔH_v cal/g		o		
t_e	1172.	5	25°C	77.33			
			30 mm	74.00			
Density g/ml 20°C	0.7488	2	BP	63.07			
t 25	0.7448	2	t_e	61.08	m'	to	
d_4 30	0.7408	4	t_e (d, e)	61.00	n'	°K	
			$\Delta H_v/T_e$	19.27	o'		
a	0.7648	4	d 66 to	81.64			
b	-0.0380	4	e 178 °C	0.1161			
Ref. Index			d' 25 to	79.38			
n_D 20°C	1.4202	2	e' 66 °C	0.0817			
25	1.4178	2	d_c g/ml	0.245			
30	1.4153	4	v_c ml/g	4.075			
"C"	0.7461	4	t_c °C	328.			
MR (Obs.)	48.10	2	P_c mm	15519.			
MR (Calc.)	48.38	5					
(nD-d/2)	1.0458	2	PV/RT				
Dielectric	2.017	5	25°C	1.0000			
A 66 to	6.9710	5	30 mm	1.0000			
B 214 °C	1508.	5	BP	0.9480			
C	209.	5	t_e	0.9343			
			t_c	0.24			
A* 66 to	1.47305	5	ΔH_c kcal/m				
B* 188 °C	1418.2	5	ΔH_f				
K			ΔF_f				
c			Viscosity				
t_k to			centistokes				
t_x °C			η				
A' 25 to	7.33132	5					
B' 66 °C	1711.9	5	B^v to				
C'	227.	5	A^v °C				
A'* 25 to	1.81589	5	(B ^v) to				
B'* 66 °C	1611.5	5	(A ^v) °C				
Ac 214 to	7.7679	5	c_p liq. °K				
Bc t_c °C	2261.	5	c_p vap. °K				
Cc	304.	5	c_v vap.				
Cryos. A°							
consts. B°							
t_e °C	177.78	5					
$T_R = 0.81 T_c$				+ 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:							

NAME		2, 3, 4-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} \text{CH} \text{---} (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.				Ref.	Ref.
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	5.4068	5	g	to °K
B.P. °C			BP	0.05179	5	h	to °K
760 mm	163.	2	t _e	0.0367	5	f'	to °K
100	97.3	4	30 mm	0.7276	5	g'	to °K
30	68.3	4	ΔHm cal/g			h'	to °K
10	46.1	5	ΔHv cal/g			m	to °K
1	9.0	5	25°C	78.20	5	n	to °K
Pressure mm 25°C	2.9372	5	30 mm	74.61	5	o	to °K
t _e	1181.	5	BP	63.58	5	n'	to °K
Density g/ml 20°C	0.751	2	t _e	61.55	5	o'	to °K
d _t 25	0.747	2	t _e (d, e)	61.47	5	Surface tension dynes/cm. 20°C	
d ₄ 30	0.743	4	ΔHv/T _e	19.27	5	30	24.08
a	0.767	4	d 68 to	82.56	5	40	23.05
b	-0.038	4	e 181 °C	0.1164	5	Parachor, [P] 20°C	
Ref. Index n _D 20°C	1.421	2	d' 25 to	80.28	5	30	
25	1.418	2	e' 68 °C	0.0830	5	40	
30	1.416	4	d _c g/ml	0.245	5	Sugd.	424.2
"C"	0.7453	4	v _c ml/g	4.078	5	Exp. L. l. %/wt. u.	
MR (Obs.)	48.0	2	t _c °C	333.	5	Dispersion	
MR (Calc.)	48.38	5	P _c mm	15637.	5	Flash Point °C	
(n _D -d/2)	1.045	2	PV/RT 25°C	1.0000	5	Fire Point	
Dielectric	2.019	5	30 mm	1.0000	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A 68 to	6.9746	5	BP	0.9480	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water	
B 224 °C	1519.	5	t _e	0.9341	5	Water in	
C	208.	5	t _c	0.24	5		
A* 68 to	1.47382	5	ΔHc kcal/m				
B* 191 °C	1428.9	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes °C				
t _k to °C			η				
t _x to °C			B ^v to °C				
A' 25 to	7.33275	5	A ^v to °C				
B' 68 °C	1723.3	5	(B ^v) to °C				
C'	226.	5	(A ^v) to °C				
A'* 25 to	1.81623	5	c _p liq. °K				
B'* 68 °C	1622.8	5	c _p vap. °K				
Ac 224 to	7.7955	5	c _v vap.				
Bc t _c °C	2305.	5					
Cc t _c °C	308.	5					
Cryos. A° const. B°							
t _e °C	181.20	5					
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:							

NAME		2, 3, 5-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{ccccccc} & & & \text{CH}_3 & & & \\ & & & & & & \\ \text{CH}_3 & \text{CH} & \text{CH} & \text{CH}_2 & \text{CH} & \text{CH}_2 & \text{CH}_3 \\ & & & & & & \\ & \text{CH}_3 & & & \text{CH}_3 & & \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	3.8869	5	h	
760 mm	157.	2	BP	0.05219	5	f'	to
100	91.05	4	t _e	0.03744	5	g'	to °K
30	62.05	4	30 mm	0.7253	5	h'	
10	39.97	5	ΔHm cal/g			m	to
1	3.12	5				n	to °K
Pressure mm 25°C	4.2557	5	ΔHv cal/g			o	
t _e	1164.4	5	25°C	75.08	5	m'	to
Density g/ml 20°C	0.741	2	30 mm	72.14	5	n'	to °K
t	0.737	2	BP	61.37	5	o'	
d ₄	0.733	4	t _e	59.43	5	Surface tension dynes/cm. 20°C	
a	0.757	4	t _e (d, e)	59.36	5	30	22.81
b	-0.038	4	ΔHv/T _e	18.88	5	40	21.82
Ref. Index n _D 20°C	1.416	2	d 62 to	79.19	5	δ	
25	1.414	2	e 175 °C	0.1135	5	30	22.81
30	1.411	4	d' 25 to	77.06	5	40	21.82
"C"	0.7469	4	e' 62 °C	0.0793	5	Parachor [P] 20°C	
MR (Obs.)	48.2	2	d _c g/ml	0.231	5	30	
MR (Calc.)	48.38	5	v _c ml/g	4.327	5	40	
(n _D -d/2)	1.046	2	t _c °C	323.	5	Sugd.	424.2
Dielectric	2.005	5	P _c mm	14494.	5	Exp. L. l. %/wt. u.	
A 62 to	6.89044	5	PV/RT			Dispersion	
B 210 °C	1468.2	5	25°C	1.0000	5	Flash Point °C	
C	209.2	5	30 mm	1.0000	5	Fire Point	
A* 62 to	1.39506	5	BP	0.9480	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 185 °C	1379.2	5	t _e	0.9343	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
K			ΔHc kcal/m				
t _c to °C			ΔHf				
A' 25 to	7.24970	5	ΔFf				
B' 62 °C	1669.6	5	Viscosity centistokes				
C'	227.2	5	η °C				
A** 25 to	1.73638	5	B _v to °C				
B** 62 °C	1569.4	5	A _v to °C				
Ac 210 to	7.66447	5	(B _v) to °C				
Bc t _c °C	2190.1	5	(A _v) °C				
Cc	302.1	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	174.74	5	c _v vap.				
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. 112

NAME		2, 3, 6-Trimethylheptane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} - \text{CH}(\text{CH}_2)_2\text{CH}-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
		Ref.		Ref.		Ref.
F.P. °C			dt/dP °C/mm			f to
F.P. 100%			25°C	3.6863	5	g °K
B.P. °C			BP	0.05206	5	h
760 mm	155.7	2	t_e	0.03743	5	f' to
100	89.92	4	30 mm	0.7234	5	g' °K
30	60.99	4				h'
10	38.97	5	$\Delta\text{Hm cal/g}$			m to
1	2.22	5	$\Delta\text{Hv cal/g}$			n °K
Pressure mm 25°C	4.5093	5	25°C	74.71	5	o
t_e	1161.4	5	30 mm	71.88	5	m' to
Density g/ml 20°C	0.7345	2	BP	61.18	5	n' °K
d_4^{25}	0.7305	2	t_e	59.26	5	o'
d_4^{30}	0.7265	4	t_e (d,e)	59.19	5	
			$\Delta\text{Hv}/T_e$	18.88	5	
a	0.7505	4	d 60 to	78.77	5	Surface tension
b	-0.0380	4	e 73 °C	0.1130	5	dynes/cm. 20°C
Ref. Index			d' 25 to	76.68	5	30
n_D^{20}	1.4125	2	e' 60 °C	0.0787	5	40
25	1.4101	2				23.00
30	1.4077	4	d c g/ml	0.229	5	22.01
"C"	0.7475	4	v_c ml/g	4.368	5	21.05
MR (Obs.)	48.25	2	t_c °C	320.	5	40
MR (Calc.)	48.38	5	P c mm	14287.	5	Sugd. 424.2
($n_D-d/2$)	1.0453	2	PV/RT			
Dielectric	1.995	5	25°C	1.0000	5	Exp. L.l.%/wt. u.
A 60 to	6.88867	5	30 mm	1.0000	5	Dispersion
B 207 °C	1463.3	5	BP	0.9485	5	97.
C	209.4	5	t_e	0.9349	5	Flash Point °C
A* 60 to	1.39367	5	t_c	0.24	5	Fire Point
B* 183 °C	1374.3	5	$\Delta\text{Hc kcal/m}$			M Spec.
K			ΔHf			Ultra V.
c			ΔFf			X-Ray Dif.
t_x to			Viscosity centistokes			Infrared
t_x °C			η °C			Solubility in +
A' 25 to	7.24889	5	B ^v to			Acetone
B' 60 °C	1664.6	5	A ^v °C			Carbon tet.
C'	227.4	5	(B ^v) to			Benzene
A'* 25 to	1.73605	5	(A ^v) °C			Ether
B'* 60 °C	1564.5	5	c_p liq. °K			n-Heptane
Ac 207 to	7.64810	5	c_p vap. °K			Ethanol
Bc t_c °C	2165.1	5	c_v vap.			Water
Cc t_c °C	299.6	5				Water in
Cryos. A°						
const. B°						
t_e °C	173.29	5				
$T_R = 0.81 T_c$						+ 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:						

NAME		2, 4, 4-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}-\text{CH}_2-\text{C}(\text{CH}_3)_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	3.3037	5	g	°K
B. P. °C			BP	0.05179	5	h	
760 mm	153.	2	t _e	0.03743	5	f'	to
100	87.56	4	t _e (d, e)	0.7194	5	g'	°K
30	58.80	4	ΔHm cal/g			h'	
10	36.90	5				m	to
1	0.3555	5	ΔHv cal/g			n	°K
Pressure mm 25°C	5.0832	5	25°C	73.95	5	o	
t _e	1108.	5	30 mm	71.33	5		
Density g/ml 20°C	0.733	2	BP	60.68	5	m'	to
d ₄ ^t 25	0.729	2	t _e	58.77	5	n'	°K
d ₄ ^t 30	0.723	4	t _e (d, e)	58.73	5	o'	
			ΔHv/T _e	18.85	5		
a	0.7590	4	d 59 to	77.99	5	Surface tension dynes/cm. 20°C	
b	-0.0012	4	e 168 °C	0.1133	5	γ	23.06
Ref. Index n _D 20°C	1.412	2	d' 20 to	75.89	5		21.59
25	1.410	2	e' 59 °C	0.0775	5		20.18
30	1.407	4	d _c g/ml	0.208	5	Parachor [P] 20°C	
"C"	0.7462	4	v _c ml/g	4.804	5		30
MR (Obs.)	48.3	2	t _c °C	307.	5		40
MR (Calc.)	48.38	5	P _c mm	12706.	5		Sugd. 424.2
nD-d/2)	1.046	2	PV/RT 25°C	1.0000	5	Exp. L.l. %/wt. u.	
Dielectric	1.994	5	30 mm	1.0000	5	Dispersion	97.
A 59 to	6.88497	5	BP	0.9485	5	Flash Point °C	
B 197 °C	1453.2	5	t _e	0.9352	5	Fire Point	
C	209.9	5	t _c	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 59 to	1.39259	5	ΔHc kcal/m			Solubility in ⁺ Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 178 °C	1364.7	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k to °C			η °C				
t _x to °C							
A' 20 to	7.24720	5	B ^v to °C				
B' 59 °C	1654.4	5	A ^v to °C				
C'	228.	5	(B ^v) to °C				
A'* 20 to	1.73534	5	(A ^v) to °C				
B'* 59 °C	1554.4	5	c _p liq. °K				
Ac 197 to	7.58044	5	c _p vap. °K				
Bc t _c °C	2068.0	5	c _v vap.				
Cc t _c °C	287.7	5					
Cryos. A° const. B°							
t _e °C	167.81	5					
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:							

NAME		2, 4, 5-Trimethylheptane				STRUCTURAL FORMULA	
						$\begin{array}{ccccccc} & & & \text{CH}_3 & & & \\ & & & & & & \\ \text{CH}_3 & \text{CH} & \text{CH}_2 & \text{CH} & \text{CH} & \text{CH}_2 & \text{CH}_3 \\ & & & & & & \\ & \text{CH}_3 & & \text{CH}_3 & & & \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.				Ref.	Ref.
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	3.8869	5	g	
B. P. °C			BP	0.05219	5	h	
760 mm	157.	2	t _e	0.0374	5	f'	to °K
100	91.05	4	t _e (d, e)			g'	
30	62.05	4	ΔHm cal/g			h'	
10	39.97	5	ΔHv cal/g			m	to °K
1	3.12	5	25°C	75.08	5	n	
			30 mm	72.14	5	o	
Pressure mm 25°C	4.2557	5	BP	61.40	5	m'	to °K
t _e	1165.1	5	t _e	59.48	5	n'	
Density g/ml 20°C	0.741	2	t _e	59.39	5	o'	
d ₄ ^t 25	0.737	2	ΔHv/T _e	18.89	5	Surface tension dynes/cm. 20°C	
d ₄ ^t 30	0.733	4	d 62 to	79.16	5	y	23.82 5
a	0.757	4	e 175 °C	0.1131	5		30 22.81 5
b	-0.038	4	d' 20 to	77.06	5		40 21.82 5
			e' 62 °C	0.0793	5	Parachor [P] 20°C	
Ref. Index n _D 20°C	1.4160	2	d _c g/ml	0.231	5		30
25	1.4137	2	v _c ml/g	4.325	5		40
30	1.4113	4	t _c °C	323.	5		Sugd. 424.2 5
"C"	0.7469	4	F _c mm	14500.	5	Exp. L. l. %/wt. u.	
MR (Obs.)	48.2	2	PV/RT			Dispersion	
MR (Calc.)	48.38	5	25°C	1.0000	5	Flash Point °C	
(nD-d/2)	1.046	2	30 mm	1.0000	5	Fire Point	
Dielectric	2.005	5	BP	0.9485	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A 62 to	6.89044	5	t _e	0.9348	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B 210 °C	1468.2	5	t _c	0.24	5		
C	209.	5	ΔHc kcal/m				
A* 62 to	1.39418	5	ΔHf				
B* 185 °C	1378.9	5	ΔFf				
K			Viscosity centistokes				
c			η				
t _k							
t _x							
A' 20 to	7.24970	5	B ^v to °C				
B' 62 °C	1669.6	5	A ^v to °C				
C'	227.	5	(B ^v) to °C				
A* 20 to	1.73638	5	(A ^v) to °C				
B* 62 °C	1569.4	5	c _p liq. °K				
Ac 210 to	7.6647	5	c _p vap. °K				
Bc t _c °C	2190.	5					
Cc	302.	5					
Cryos. A° const. B°							
t _e °C	174.74	5					
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:							

NAME		2, 4, 6-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{cccc} \text{CH}_3 & \text{CH} & \text{CH}_2 & \text{CH} & \text{CH}_3 \\ & & & & \\ \text{CH}_3 & & \text{CH}_3 & & \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	2.3773	5	h	
760 mm	144.8	2	BP	0.05099	5	f'	to
100	80.41	4	t _e	0.0373	5	g'	°K
30	52.13	4	30 mm	0.7071	5	h'	
10	30.6	5	ΔHm cal/g			m	to
1	-5.3	5	ΔHv cal/g			n	°K
Pressure mm 25°C	7.2873	5	25°C	71.69	5	o	
t _e	1133.7	5	30 mm	69.68	5	m'	to
Density g/ml 20°C	0.7225	2	BP	59.47	5	n'	°K
d _t 25	0.7184	2	t _e	57.73	5	o'	
d ₄ 30	0.7143	4	t _e (d, e)	57.68	5	Surface tension dynes/cm. 20°C	
			ΔHv/T _e	18.92	5	30	21.53
a	0.7389	4	d	52 to	5	40	20.57
b	-0.0382	4	e	161 °C	5		19.63
Ref. Index n _D 20°C	1.4071	2	d'	15 to	5	Parachor [P] 20°C	
25	1.4046	2	e'	52 °C	5	30	
30	1.4022	4	P _c mm	13721.	5	40	
"C"	0.7505	4	d _c g/ml	0.226	5	Sugd.	424.2
MR (Obs.)	48.48	2	v _c ml/g	4.418	5	Exp. L. l. %/wt. u.	
MR (Calc.)	48.38	5	t _c °C	303.	5	Dispersion	
(n _D -d/2)	1.0459	2	PV/RT			97.	
Dielectric	1.980	5	25°C	1.0000	5	Flash Point °C	
A 52 to	6.87377	5	30 mm	1.0000	5	Fire Point	
B 188 °C	1422.6	5	BP	0.9510	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	211.5	5	t _e	0.9385	5	Solubility in +	
A* 52 to	1.38504	5	t _c	0.24	5	Acetone	
B* 171 °C	1334.4	5	ΔHc kcal/m			Carbon tet.	
K			ΔHf			Benzene	
t _k to			ΔFf			Ether	
t _k °C			Viscosity centistokes			n-Heptane	
A' 5 to	7.24226	5	η			Ethanol	
B' 52 °C	1623.5	5	B ^v to			Water	
C'	229.	5	A ^v °C			Water in	
A'* 15 to	1.73344	5	(B ^v) to				
B'* 52 °C	1523.7	5	(A ^v) °C				
Ac 188 to	7.55659	5	c _p liq. °K				
Bc t _c °C	2021.3	5	c _p vap. °K				
Cc t _c °C	288.3	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	161.00	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. 116

NAME		2, 5, 5-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}(\text{CH}_2)_2\overset{ }{\text{C}}\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	3.2598	5	g	°K
B.P. °C			BP	0.05184	5	h	
760 mm	152.80	2	t_e	0.0375	5	f'	to
100	87.3	4	30 mm	0.7195	5	g'	°K
30	58.5	4				h'	
10	36.6	5					
1	0.1	5					
			ΔH_m cal/g				
Pressure mm 25°C			ΔH_v cal/g			m	to
t_e	5.1621	5	25°C	73.80	5	n	°K
	1153.	5	30 mm	71.21	5	o	
Density g/ml 20°C			BP	60.60	5		
25	0.7368	2	t_e	58.74	5	m'	to
d_4^{25}	0.7328	2	t_e (d, e)	58.67	5	n'	°K
30	0.7288	4	$\Delta H_v/T_e$	18.86	5	o'	
a	0.7528	4	d 59 to	77.80	5	Surface tension dynes/cm. 20°C	
b	-0.0380	4	e 170 °C	0.1125	5	30	23.29
Ref. Index			d' 15 to	75.74	5	40	22.29
n_D 20°C			e' 59 °C	0.0773	5		21.32
25	1.4136	2	d	g/ml	5	Parachor [P] 20°C	
30	1.4112	2	v	ml/g	5	30	
30	1.4088	4	c	°C	5	40	
"C"	0.7471	4	t_c	317.	5	Sugd.	424.2
MR (Obs.)	48.21	2	P	mm	5		
MR (Calc.)	48.38	2	PV/RT			Exp. L.l.%/wt. u.	
($n_D-d/2$)	1.0452	5	25°C	1.0000	5	Dispersion	97.
			30 mm	1.0000	5		
			BP	0.9485	5	Flash Point °C	
			t_e	0.9351	5	Fire Point	
			t_c	0.24	5		
			ΔH_c kcal/m			M Spec. Ultra V. X-Ray Dif. Infrared	
A* 59 to	6.8794	5	ΔH_f			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B 205 °C	1451.	5	ΔF_f				
C	210.	5	Viscosity centistokes °C				
A* 59 to	1.38718	5	η				
B* 180 °C	1362.	5					
K							
c							
t_x --- to							
t_x --- °C							
A' 10 to	7.24154	5	B ^v --- to				
B' 59 °C	1651.6	5	A ^v --- °C				
C'	228.	5	(B ^v) --- to				
A'* 20 to	1.72983	5	(A ^v) --- °C				
B'* 59 °C	1551.5	5	c_p liq. °K				
Ac 205 to	7.6227	5	c_p vap. °K				
Bc t_c -	2130.	5					
Cc	298.	5					
Cryos. A° const. B°							
t_e °C	170.01	5					
$T_R = 0.81 T_c$		+ 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:							

NAME		3, 3, 4-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}(\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	5.1760	5	g	°K
B.P. °C			BP	0.05288	5	h	
760 mm	164.	2	t _e	0.0374	5	g'	to
100	97.1	4	30 mm	0.7358	5	h'	°K
30	67.7	4	ΔHm cal/g			m	to
10	45.3	5	ΔHv cal/g			n	°K
1	7.9	5	25°C	77.06	5	o	
Pressure mm 25°C	3.1136	5	30 mm	73.54	5	m'	to
t _e	1184.	5	BP	62.56	5	n'	°K
Density g/ml 20°C	0.757	2	t _e	60.51	5	o'	
25	0.753	2	t _e (d, e)	60.42	5	Surface tension dynes/cm. 20°C	
d ₄ 30	0.749	4	ΔHv/T _e	18.88	5	30	25.95
a	0.773	4	d 68 to	81.27	5	40	24.87
b	-0.038	4	e 183 °C	0.1141	5	30	23.82
Ref. Index n _D 20°C	1.424	2	d' 20 to	79.12	5	40	
25	1.422	2	e' 68 °C	0.0824	5	Parachor [P] 20°C	
30	1.420	4	d _c g/ml	0.236	5	30	
"C"	0.7444	4	v _c ml/g	4.246	5	40	
MR (Obs.)	47.9	2	t _c °C	336.	5	Sugd.	424.2
MR (Calc.)	48.38	5	P _c mm	15079.	5	Exp. L.l. %/wt. u.	
(n _D -d/2)	1.046	2	PV/RT 25°C	1.0000	5	Dispersion 97.	
Dielectric	2.028	5	30 mm	1.0000	5	Flash Point °C	
A 68 to	6.8988	5	BP	0.9480	5	Fire Point	
B 227 °C	1494.	5	t _e	0.9337	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	208.	5	t _c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 68 to	1.39669	5	ΔHc kcal/m				
B* 193 °C	1403.7	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k to °C			η °C				
t _x to °C			B ^v to °C				
A' 20 to	7.25291	5	A ^v to °C				
B' 68 °C	1695.6	5	(B ^v) to °C				
C'	226.	5	(A ^v) °C				
A'* 20 to	1.73706	5	c _p liq. °K				
B'* 68 °C	1595.4	5	c _p vap. °K				
Ac 227 to	7.7400	5	c _v vap.				
Bc t _c °C	2310.	5					
Cc t _c °C	313.	5					
Cryos. A° const. B°							
t _e °C	182.73	5					
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:							

NAME		3, 3, 5-Trimethylheptane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array} \text{CH}_2\text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	3.6798	5	h	
760 mm	155.68	2	BP	0.05207	5	f'	to
100	89.9	4	t_e	0.0374	5	g'	°K
30	60.96	4	30 mm	0.7234	5	h'	
10	38.9	5	ΔH_m cal/g			m	to
1	2.2	5	ΔH_v cal/g			n	°K
Pressure mm 25°C	4.5187	5	25°C	74.69	5	o	
t_e	1164.	5	30 mm	71.86	5	m'	to
Density g/ml 20°C	0.7428	2	BP	61.26	5	n'	°K
d_4^{25}	0.7388	2	t_e	59.35	5	o'	
d_4^{30}	0.7348	4	t_e (d, e)	59.28	5	Surface tension dynes/cm. 20°C	
		2	$\Delta H_v/T_e$	18.91	5	30	24.05
a	0.7588	4	d 61 to	78.68	5	40	23.03
b	-0.0380	4	e 173 °C	0.1119	5		22.04
Ref. Index n_D 25	1.4170	2	d' 20 to	76.66	5	Parachor [P] 20°C	
25	1.4146	2	e' 61 °C	0.0787	5	30	424.2
30	1.4128	4	d c g/ml	0.232	5	40	Sugd.
"C"	0.7468	4	v_c ml/g	4.303	5	Exp. L. l. %/wt. u.	
MR (Obs.)	48.17	2	t_c °C	322.	5	Dispersion 97.	
MR (Calc.)	48.38	5	P_c mm	14542.	5	Flash Point °C	
(nD-d/2)	1.0456	2	PV/RT 25°C	1.0000	5	Fire Point	
Dielectric	2.008	5	30 mm	1.0000	5	M Spec. Ultra V.	
A 61 to	6.8877	5	BP	0.9500	5	X-Ray Dif.	
B 209 °C	1463.	5	t_e	0.9365	5	Infrared	
C	209.	5	t_c	0.24	5	Solubility in +	
A* 61 to	1.39006	5	ΔH_c kcal/m			Acetone	
B* 183 °C	1373.2	5	ΔH_f			Carbon tet.	
K			ΔF_f			Benzene	
c			Viscosity centistokes			Ether	
t_x to			η °C			n-Heptane	
t_x °C						Ethanol	
A' 20 to	7.24789	5	B^v to			Water	
B' 61 °C	1664.2	5	A'v °C			Water in	
C'	227.	5	(B'v) to				
A** 20 to	1.73506	5	(A'v) °C				
B** 61 °C	1564.1	5	c_p liq. °K				
Ac 209 to	7.6555	5	c_p vap. °K				
Bc t_c °C	2176.	5	c_v vap.				
Cc	301.	5					
Cryos. A° const. B°							
t_e °C	173.35	5					
$T_R = 0.81 T_c$		+ 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. 119

NAME		3, 4, 4-Trimethylheptane				STRUCTURAL FORMULA			
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH} - \text{C} - (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$		Molecular Weight	142.276			
		Ref.			Ref.				Ref.
F. P. °C			dt/dP			f	to		
F. P. 100%			°C/mm			g	°K		
B. P. °C			25°C		5.1760	h			
760 mm	164.	2	BP		0.05288	f'	to		
100	97.1	4	t_e		0.0374	g'	°K		
30	67.7	4	30 mm		0.7358	h'			
10	45.3	5	ΔH_m cal/g			m	to		
1	7.9	5	25°C			n	°K		
Pressure mm 25°C	3.1136	5	30 mm		77.06	o			
t_e	1184.	5	BP		73.54	m'	to		
Density g/ml 20°C	0.757	2	t_e (d, e)		62.56	n'	°K		
d ⁴ ₂₅	0.753	2	$\Delta H_v/T_e$		60.51	o'			
d ⁴ ₃₀	0.749	4	25°C		60.42	Surface tension dynes/cm. 20°C			
a	0.773	4	30 mm		18.88	25.95			5
b	-0.038	4	BP			30			5
Ref. Index n _D 20°C	1.424	2	d 68 to		81.27	40			5
25	1.422	2	e 183 °C		0.1141	30			5
30	1.420	4	d' 20 to		79.12	23.82			5
"C"	0.7444	4	e' 68 °C		0.0824	Sugd. 424.2			5
MR (Obs.)	47.9	2	d _c g/ml		0.236	Parachor [P] 20°C			
MR (Calc.)	48.38	5	v _c ml/g		4.246	30			
(n _D -d/2)	1.046	2	t _c °C		336.	40			
Dielectric	2.028	5	P _c mm		15079.	Sugd. 424.2			5
A 68 to	6.8988	5	PV/RT			Exp. L.l. %/wt. u.			
B 227 °C	1494.	5	25°C		1.0000	Dispersion			97.
C	208.	5	30 mm		1.0000	Flash Point °C			
A* 68 to	1.39669	5	BP		0.9480	Fire Point			
B* 193 °C	1403.7	5	t_e		0.9337	M. Spec. Ultra V. X-Ray Dif. Infrared			
K			t_c		0.24	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in			
t _k to °C			ΔH_c kcal/m						
A' 20 to	7.25291	5	ΔH_f						
B' 68 °C	1695.6	5	ΔF_f						
C'	226.	5	Viscosity centistokes η °C						
A' * 20 to	1.73706	5	B ^v to °C						
B' * 68 °C	1595.4	5	A ^v to °C						
Ac 227 to	7.7400	5	(B ^v) to °C						
Bc t _c °C	2310.	5	(A ^v) °C						
Cc t _c °C	313.	5	c _p liq. °K						
Cryos. A° const. B°			c _p vap. °K						
t _e °C	182.73	5	c _v vap.						
$T_R = 0.82 T_c$ + 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:									

NAME		3, 4, 5-Trimethylheptane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CHCHCH}_2\text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
F.P. °C		Ref.		dt/dP °C/mm		f to °K
F.P. 100%				25°C	5.1294	5
B.P. °C				BP	0.05288	5
760 mm	164.	2		t_e	0.03729	5
100	96.97	4		30 mm	0.7358	5
30	67.56	4		ΔH_m cal/g		f' to °K
10	45.16	5				5
1	7.77	5		ΔH_v cal/g		h' to °K
Pressure mm 25°C	3.146	5		25°C	76.96	5
t_e	1190.3	5		30 mm	73.47	5
Density g/ml 20°C	0.759	2		BP	62.56	5
d_t 25	0.755	2		t_e	60.76	5
d_4 30	0.751	4		t_e (d, e)	60.44	5
				$\Delta H_v/T_e$	18.96	5
a	0.775	4		d 68 to °C	81.12	5
b	-0.038	4		e 183 °C	0.1131	5
Ref. Index n_D 20°C	1.424	2		d' 20 to °C	79.01	5
25	1.422	2		e' 68 °C	0.0820	5
30	1.419	4		d_c g/ml	0.245	5
"C"	0.7424	4		v_c ml/g	4.080	5
MR (Obs.)	47.832	4		t_c °C	335.9	5
MR (Calc.)	48.380	5		P_c mm	15182.	5
(nD-d/2)	1.044	2		PV/RT		
Dielectric	2.028	5		25°C	1.0000	5
A 68 to °C	6.89880	5		30 mm	1.0000	5
B 225 °C	1494.	5		BP	0.9480	5
C	208.	5		t_e	0.9383	5
A* 68 to °C	1.38938	5		t_c	0.232	5
B* 193 °C	1401.63	5		ΔH_c kcal/m		
K				ΔH_f		
c				ΔF_f		
t_k to °C				Viscosity centistokes		
t_x °C				η °C		
A' 15 to °C	7.25295	5		B ^v to °C		
B' 68 °C	1695.56	5		A ^v °C		
C'	226.	5		(B ^v) to °C		
A* 20 to °C	1.73702	5		(A ^v) °C		
B* 68 °C	1595.25	5		c_p liq. °K		
Ac 225 to °C	7.74352	5		c_p vap. °K		
Bc t_c °C	2315.88	5		c_v vap.		
Cc t_c °C	314.01	5				
Cryos. A° const. B°						
t_e °C	182.78	5				
$T_R = 0.82 T_c$						
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		3-isopropyl-2-methylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_3\text{H}_7 \\ \text{CH}_3\text{CH} \text{ CH} (\text{CH}_2)_2\text{CH}_3 \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F.P. °C				dt/dP °C/mm		f	to
F.P. 100%				25°C	5.4068	g	°K
B.P. °C				BP	0.05179	h	
760 mm	163.	2		t_e	0.0367	f'	to
100	97.3	4		30 mm	0.7276	g'	°K
30	68.3	4		ΔH_m cal/g		h'	
10	46.1	5		ΔH_v cal/g		m	to
1	9.0	5		25°C	78.20	n	°K
Pressure mm 25°C	2.9372	5		30 mm	74.61	o	
t_e	1181.	5		BP	63.58		
Density g/ml 20°C	0.751	2		t_e	61.55	m'	to
25	0.747	2		t_e (d, e)	61.47	n'	°K
d_4^{25}	0.743	4		$\Delta H_v/T_e$	19.27	o'	
a	0.767	4		d 68 to	82.56	Surface tension dynes/cm. 20°C	
b	-0.038	4		e 81 °C	0.1164	25.13	5
Ref. Index				d' 20 to	80.28	30	24.08
n_D 20°C	1.421	2		e' 68 °C	0.0830	40	23.05
25	1.418	2		d		Parachor [P]	
30	1.416	4		d_c g/ml	0.245	20°C	
"C"	0.7453	4		v_c ml/g	4.075	30	
MR (Obs.)	48.0	2		t_c °C	333.	40	
MR (Calc.)	48.38	5		P_c mm	15637.	Sugd.	424.2
($n_D - d/2$)	1.045	2		PV/RT		Exp. L. l. %/wt. u.	
Dielectric	2.019	5		25°C	1.0000	98.	2
A 68 to	6.9746	5		30 mm	1.0000	Dispersion	
B 224 °C	1519.	5		BP	0.9480	Flash Point °C	
C	208.	5		t_e	0.9341	Fire Point	
				t_c	0.24	M. Spec.	
A* 68 to	1.47382	5		ΔH_c kcal/m		Ultra V.	
B* 191 °C	1428.9	5		ΔH_f		X-Ray Dif.	
K				ΔF_f		Infrared	
t_k to				Viscosity centistokes		Solubility in +	
t_x °C				η °C		Acetone	
A' 20 to	7.33275	5				Carbon tet.	
B' 68 °C	1723.3	5		B ^v to		Benzene	
C'	226.	5		A ^v °C		Ether	
A'* 20 to	1.81623	5		(B ^v) to		n-Heptane	
B'* 68 °C	1622.8	5		(A ^v) °C		Ethanol	
Acl 224 to	7.7955	5		c_p liq. °K		Water	
Bc t_c °C	2305.	5		c_p vap. °K		Water in	
Cc t_c °C	308.	5		c_v vap.			
Cryos. A° const. B°							
t_e °C	181.20	5					
$T_R = 0.82 T_c$						+ 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. 122

NAME		3, 3-Diethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{C}(\text{CH}_2)_2\text{CH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.			Ref.			
F. P. °C			dt/dP °C/mm			f	to	
F. P. 100%			25°C	6.2085	5	g	°K	
B. P. °C			BP	0.05212	5	h		
760 mm	166.3	2	t_e	0.0367	5	f'	to	
100	100.2	4	30 mm	0.7325	5	g'	°K	
30	70.9	4				h'		
10	48.6	5				m	to	
1	11.3	5				n	°K	
Pressure mm 25°C	2.5272	5	ΔHm cal/g			o		
t_e	1190.	5	ΔHv cal/g			m'	to	
Density g/ml 20°C	0.767	2	25°C	79.16	5	n	°K	
d_4^{25}	0.763	2	30 mm	75.27	5	o'		
30	0.759	4	BP	64.12	5			
		2	t_e	62.03	5			
		4	t_e (d, e)	61.94	5			
		2	$\Delta\text{Hv}/T_e$	19.26	5			
a	0.783	4	d 71 to	83.57	5	Surface tension dynes/cm. 20°C		
b	-0.038	4	e 185 to	0.1170	5	y	27.35	
Ref. Index n_D^{20}	1.428	2	d' 20 to	81.27	5	30	26.22	
25	1.426	2	e' 71 °C	0.0845	5	40	25.13	
30	1.424	4	d	g/ml	0.251	5	Parachor [P]	
"C"	0.7412	4	v_c	ml/g	3.981	5	20°C	
MR (Obs.)	47.7	2	t_c	°C	340.	5	30	
MR (Calc.)	48.38	2	P_c	mm	16196.	5	40	
(nD-d/2)	1.044	5				5	Sugd.	424.2
Dielectric	2.039	5	PV/RT			5	Exp. L. l. %/wt. u.	
A 71 to	6.9780	5	25°C	1.0000	5	Dispersion		95.
B 230 °C	1531.	5	30 mm	1.0000	5	Flash Point °C		
C	207.	5	BP	0.9475	5	Fire Point		
A* 71 to	1.4750	5	t_e	0.9333	5	M Spec.		
B* 195 °C	1440.8	5	t_c	0.24	5	Ultra V.		
K			ΔHc kcal/m			X-Ray Dif.		
c			ΔHf			Infrared		
t_x — to			ΔFf			Solubility in +		
t_x — °C			Viscosity centistokes			Acetone		
A' 20 to	7.33375	5	η °C			Carbon tet.		
B' 71 °C	1735.6	5				Benzene		
C' — °C	225.	5				Ether		
A** 20 to	1.81605	5				n-Heptane		
B** 71 °C	1635.1	5				Ethanol		
Ac 230 to	7.8419	5				Water		
Bc t_c —	2379.	5				Water in		
Cc — °C	315.	5						
Cryos. A° const. B°								
t_e °C	184.93	5						
$T_R = 0.82 T_c$		+ 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:								

NAME		3,4-Diethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{C}_2\text{H}_5 \\ \\ \text{CH}_2\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C				dt/dP °C/mm		f	to
F. P. 100%				25°C		g	°K
B. P. °C				BP	5.1849	5	
760 mm	162.	2		t _e	0.05169	5	
100	96.4	4		30 mm	0.0367	5	
30	67.5	4		ΔHm cal/g	0.7261	5	
10	45.3	5					
1	8.3	5		ΔHv cal/g			
Pressure mm 25°C	3.0744	5		25°C	77.91	5	
t _e	1178.	5		30 mm	74.41	5	
Density g/ml 20°C	0.754	2		BP	63.41	5	
d ₄ ^t 25	0.750	2		t _e	61.40	5	
d ₄ ^t 30	0.746	4		t _e (d, e)	61.31	5	
				ΔHv/T _e	19.27	5	
a	0.770	4		d 67 to	82.25	5	
b	-0.08	4		e 180 °C	0.1163	5	
Ref. Index n _D 20°C	1.420	2		d' 25 to	79.98	5	
25	1.418	2		e' 67 °C	0.0826	5	
30	1.415	4		d _c g/ml	0.247	5	
"C"	0.7407	4		v _c ml/g	4.050	5	
MR (Obs.)	47.8	2		t _c °C	332.	5	
MR (Calc.) (nD-d/2)	48.38	5		P _c mm	15718.	5	
	1.043	2		PV/RT 25°C	1.0000	5	
Dielectric	2.016	5		30 mm	1.0000	5	
A 67 to	6.9734	5		BP	0.9480	5	
B 223 °C	1515.	5		t _e	0.9342	5	
C	208.	5		t _c	0.24	5	
A* 67 to	1.47356	5		ΔHc kcal/m			
B* 190 °C	1425.4	5		ΔHf			
K				ΔFi			
t _k to °C				Viscosity centistokes			
t _x to °C				η °C			
A' 25 to	7.33227	5					
B' 67 °C	1719.5	5		B ^v to °C			
C'	226.	5		A ^v to °C			
A** 25 to	1.81612	5		(B ^v) to °C			
B** 67 °C	1619.0	5		(A ^v) °C			
Ac 223 to	7.7900	5		c _p liq. °K			
Bc t _c °C	2296.	5		c _p vap. °K			
Cc	307.	5		c _v vap.			
Cryos. A° const. B°							
t _e °C	180.06	5					
$T_R = 0.82 T_c$				+ 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:							

NAME		3-Ethyl-2,2-dimethylhexane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH} (\text{CH}_2)_2\text{CH}_3 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
F. P. °C		Ref.		dt/dP °C/mm		Ref.
F. P. 100%				25°C	4.2134	5
B. P. °C	159.	2		BP	0.05239	5
760 mm	92.8	4		t_e	0.0375	5
100	63.7	4		30 mm	0.7284	5
30	41.5	5		ΔH_m cal/g		
10	4.5	5		ΔH_v cal/g		
1				25°C	75.63	5
Pressure mm 25°C	3.8974	5		30 mm	72.53	5
t_e	1170.	5		BP	61.67	5
Density g/ml 20°C	0.749	2		t_e	59.70	5
d_t 25	0.745	2		t_e (d, e)	59.62	5
d_4 30	0.741	4		$\Delta H_v/T_e$	18.87	5
a	0.765	4		d 64 to	79.79	5
b	-0.038	4		e 177 °C	0.1139	5
Ref. Index n_D 20°C	1.420	2		d' 25 to	77.63	5
25	1.418	2		e' 64 °C	0.0801	5
30	1.415	4		d_c g/ml	0.234	5
"C"	0.7456	4		v_c ml/g	4.281	5
MR (Obs.)	48.1	2		t_c °C	327.	5
MR (Calc.)	48.38	5		P_c mm	14748.	5
(nD-d/2)	1.046	2		PV/RT		
Dielectric	2.016	5		25°C	1.0000	5
A 64 to	6.8921	5		30 mm	1.0000	5
B 113 °C	1475.	5		BP	0.9475	5
C	209.	5		t_e	0.9336	5
A* 64 to	1.39567	5		t_c	0.24	5
B* 187 °C	1386.2	5		ΔH_c kcal/m		
K				ΔH_f		
c				ΔF_f		
t_k to				Viscosity centistokes		
t_x °C				η °C		
A' 25 to	7.24984	5		B^v to		
B' 64 °C	1676.7	5		A'v °C		
C'	227.	5		(B ^v) to		
A* 25 to	1.73581	5		(A ^v) °C		
B* 64 °C	1576.5	5		c_p liq. °K		
Ac 213 to	7.6877	5		c_p vap. °K		
Bc t_c -	2227.	5		c_v vap.		
Cc t_c -	306.	5				
Cryos. A°						
const. B°						
t_e °C	177.00	5				
$T_R = 0.81 T_c$						
REFERENCES:	1-Dow	2-API	3-Lit.	4-Calc. from det. data	5-Calc. by formula	
SOURCE:	API					
PURIFICATION:	API					
LITERATURE REFERENCES:						

NAME		4-Ethyl-2, 2-dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{CH} \quad \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \quad \quad \quad \text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		Ref.
F.P. °C				dt/dP °C/mm		f	to
F.P. 100%				25°C	2.6651	g	°K
B.P. °C				BP	0.05084	h	
760 mm	147.	2		t_e	0.0371	5	
100	82.7	4		30 mm	0.7080	5	to
30	54.4	4		$\Delta\text{Hm cal/g}$		5	°K
10	32.8	5				h'	
1	-3.2	5				m	to
Pressure mm 25°C	6.4021	5		$\Delta\text{Hv cal/g}$	72.79	5	°K
t_e	1140.	5		25°C	70.57	5	
Density g/ml 20°C	0.733	2		30 mm	60.28	5	
25	0.729	2		BP	58.50	5	
d ₄ 30	0.725	4		t_e	58.46	5	
				t_e (d, e)	19.07	5	
a	0.749	4		$\Delta\text{Hv}/T_e$		5	
b	-0.038	4		d 54 to	76.62	5	
Ref. Index				e 163 °C	0.1112	5	
n_D 20°C	1.4131	2		d' 25 to	74.67	5	
25	1.4107	2		e' 54 °C	0.0752	5	
30	1.4083	4		d _c g/ml	0.235	5	
"C"	0.7501	4		v _c ml/g	4.249	5	
MR (Obs.)	48.4	2		t_c °C	308.	5	
MR (Calc.)	48.38	5		P _c mm	14390.	5	
(nD-d/2)	1.0466	2		PV/RT			
Dielectric	1.997	5		25°C	1.0000	5	
A 54 to	6.9052	5		30 mm	1.0000	5	
B 192 °C	1441.	5		BP	0.9510	5	
C	211.	5		t_e	0.9384	5	
A* 54 to	1.41441	5		t_c	0.24	5	
B* 173 °C	1352.4	5		$\Delta\text{Hc kcal/m}$			
K				ΔHf			
c				ΔFf			
t_k to				Viscosity			
t_x °C				centistokes			
A' 25 to	7.27326	5		η			
B' 54 °C	1643.1	5					
C'	229.	5		B ^v to			
A ⁺ 25 to	1.76324	5		A ^v °C			
B ⁺ 54 °C	1543.0	5		(B ^v) to			
Ac 192 to	7.6092	5		(A ^v) °C			
Bc t_c °C	2068.	5		c _p liq. °K			
Cc	291.	5		c _p vap. °K			
Cryos. A° const. B°				c _v vap.			
t_e °C	163.38	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:							

NAME		3-Ethyl-2, 3-dimethylhexane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} \text{---} (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
		Ref.			Ref.	
F.P. °C			dt/dP °C/mm			f to
F.P. 100%			25°C	6.3714	5	g °K
B.P. °C			BP	0.05337	5	h
760 mm	169.	2	t_e	0.0375	5	f' to
100	101.5	4	30 mm	0.7432	5	g' °K
30	71.8	4	ΔH_m cal/g			h'
10	49.2	5				
1	11.4	5	ΔH_v cal/g			m to
Pressure mm 25°C	2.4826	5	25°C	78.52	5	n °K
t_e	1197.	5	30 mm	74.56	5	o
Density g/ml 20°C	0.765	2	BP	63.33	5	m' to
d_4^{25}	0.760	2	t_e	61.19	5	n' °K
d_4^{30}	0.755	4	t_e (d, e)	61.09	5	o'
a	0.785	4	$\Delta H_v/T_e$	18.86	5	
b	-0.021	4	d 72 to	82.85	5	Surface tension dynes/cm. 20°C
Ref. Index $n_D^{20°C}$	1.427	2	e 188 °C	0.1155	5	30
25	1.424	2	d' 25 to	80.63	5	40
30	1.421	4	e' 72 °C	0.0846	5	27.06
"C"	0.7415	4	d c g/ml	0.225	5	25.67
MR (Obs.)	47.8	2	v c ml/g	4.447	5	24.34
MR (Calc.) (nD-d/2)	48.38	5	t c °C	339.	5	5
	1.045	2	P c mm	14482.	5	5
Dielectric	2.036	5	PV/RT 25°C	1.0000	5	Parachor [P] 20°C
A 72 to	6.9053	5	30 mm	1.0000	5	30
B 229 °C	1513.	5	BP	0.9470	5	40
C	207.	5	t_e	0.9323	5	Sugd. 424.2
A* 72 to	1.40029	5	t_c	0.24	5	Exp. L.l. %/wt. u.
B* 198 °C	1422.1	5	ΔH_c kcal/m			Dispersion
K			ΔH_f			Flash Point °C
c			ΔF_f			Fire Point
t_k to			Viscosity centistokes			M Spec. Ultra V. X-Ray Dif. Infrared
t_x °C			η			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
A' 25 to	7.25592	5	B' v to			
B' 72 °C	1714.5	5	A' v °C			
C' 225.	225.	5	(B' v) to			
A** 25 to	1.73827	5	(A' v) °C			
B** 72 °C	1614.2	5	c_p liq. °K			
Ac 229 to	7.7601	5	c_p vap. °K			
Bc t_c °C	2347.	5	c_v vap.			
Cc t_c °C	314.	5				
Cryos. A° const. B°						
t_e °C	188.39	5				
$T_R = 0.82 T_c$						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. 127

NAME		4-Ethyl-2, 3-dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{ccccccc} & & & \text{CH}_3 & & & \\ & & & & & & \\ \text{CH}_3 & \text{CH} & \text{CH} & \text{CH} & \text{CH}_2 & \text{CH}_3 & \\ & & & & & & \\ & \text{CH}_3 & & \text{C}_2\text{H}_5 & & & \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F.P. °C		Ref.					
F.P. 100%							
B.P. °C							
760 mm	164.	2		dt/dP °C/mm			
100	97.1	4		25°C	5.1760	5	
30	67.7	4		BP	0.05288	5	
10	45.3	5		t_e	0.0374	5	
1	7.9	5		30 mm	0.7358	5	
				ΔH_m cal/g			
Pressure mm 25°C	3.1136	5		ΔH_v cal/g			
t_e	1184.	5		25°C	77.06	5	
				30 mm	73.54	5	
Density g/ml 20°C	0.759	2		BP	62.56	5	
d_4^{25}	0.755	2		t_e	60.51	5	
d_4^{30}	0.751	4		t_e (d, e)	60.42	5	
				$\Delta H_v/T_e$	18.88	5	
a	0.775	4		d 68 to	81.27	5	
b	-0.038	4		e 183 °C	0.1141	5	
Ref. Index				d' 25 to	79.12	5	
n_D^{20}	1.424	2		e' 68 °C	0.0824	5	
25	1.422	2		d_e g/ml	0.236	2	
30	1.419	4		v_c ml/g	4.233	5	
"C"	0.7424	4		t_c °C	336.	5	
MR (Obs.)	47.8	2		P_c mm	15139.	5	
MR (Calc.)	48.38	5		PV/RT			
($n_D-d/2$)	1.044	2		25°C	1.0000	5	
Dielectric	2.028	5		30 mm	1.0000	5	
A 68 to	6.8988	5		BP	0.9480	5	
B 227 °C	1494.	5		t_e	0.9337	5	
C	208.	5		t_c	0.24	5	
A* 68 to	1.39669	5		ΔH_c kcal/m			
B* 193 °C	1403.7	5		ΔH_f			
K				ΔF_f			
t_k to				Viscosity			
t_x °C				centistokes			
A' 25 to	7.25291	5		η			
B' 68 °C	1695.6	5					
C'	226.	5		B v to			
A'* 25 to	1.73705	5		A v °C			
B'* 68 °C	1595.4	5		(B v) to			
Ac 227 to	7.7423	5		(A v) °C			
Bc t_c °C	2313.	5		c_p liq. °K			
Cc t_c °C	314.	5		c_p vap. °K			
Cryos. A° const.				c_v vap.			
B°							
t_e °C	182.73	5					
$T_R = 0.82 T_c$							
							+ 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. 128

NAME		3-Ethyl-2,4-dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} \text{CH} \text{CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.		Ref.			Ref.
F. P. °C			dt/dP °C/mm			f to	
F. P. 100%			25°C			g °K	
B. P. °C			BP	5.1760	5	h	
760 mm	164.	2	t_e	0.05288	5	f' to	
100	97.1	4	t_e 30 mm	0.0374	5	g' °K	
30	67.7	4	ΔHm cal/g	0.7358	5	h'	
10	45.3	5	ΔHv cal/g			m to	
1	7.9	5	25°C			n °K	
Pressure mm 25°C	3.1136	5	30 mm	77.06	5	o	
t_e	1184.	5	BP	73.54	5	m' to	
Density g/ml 20°C	0.759	2	t_e	62.56	5	n' °K	
d_4^{25}	0.755	2	t_e (d, e)	60.51	5	o'	
d_4^{30}	0.751	4	$\Delta\text{Hv}/T_e$	60.42	5		
				18.88	5		
a.	0.775	4	d 68 to	81.27	5	Surface tension dynes/cm. 20°C	
b.	-0.038	4	e 183 °C	0.1141	5	26.22	5
Ref. Index n_D^{20}	1.424	2	d' 25 to	79.12	5	30	25.13
25	1.422	2	e' 68 °C	0.0824	5	40	24.07
30	1.419	4	d g/ml	0.236	5	Parachor [P]	
"C"	0.7424	4	v_c ml/g	4.233	5	20°C	
MR (Obs.)	47.8	2	t_c °C	336.	5	30	
MR (Calc.) (nD-d/2)	48.38	5	P_c mm	15139.	5	40	
n_D^{20}	1.044	2				Sugd.	424.2
Dielectric	2.028	5	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
A 68 to	6.8988	5	30 mm	1.0000	5	Dispersion	
B 227 °C	1494.	5	BP	0.9480	5	97.	
C	208.	5	t_e	0.9337	5	Flash Point °C	
A* 68 to	1.39669	5	t_c	0.24	5	Fire Point	
B* 193 °C	1403.7	5	ΔHc kcal/m			M Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHf			Solubility in +	
t_x to			ΔFf			Acetone	
t_x °C			Viscosity centistokes η °C			Carbon tet.	
A' 25 to	7.25291	5				Benzene	
B' 68 °C	1695.6	5	B ^v to			Ether	
C'	226.	5	A ^v °C			n-Heptane	
A'* 25 to	1.73706	5	(B ^v) to			Ethanol	
B'* 68 °C	1595.4	5	(A ^v) °C			Water	
Ac 227 to	7.7423	5	c_p liq. °K			Water in	
Bc t_c °C	2313.	5	c_p vap. °K				
Cc t_c °C	314.	5	c_v vap.				
Cryos. A° const. B°							
t_e °C	182.73	5					
$T_R = 0.82 T_c$		+ 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:							

NAME		4-Ethyl-2, 4-dimethylhexane				STRUCTURAL FORMULA	
						$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH}_2\text{C} \text{---} \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	4.0445	5	h	
760 mm	158.	2	BP	0.05230	5	ft	to
100	91.9	4	t _e	0.0374	5	g'	°K
30	62.9	4	30 mm	0.7269	5	h'	
10	40.7	5	ΔHm cal/g			m	to
1	3.8	5	ΔHv cal/g			n	°K
Pressure mm 25°C	4.0755	5	25°C	75.35	5	o	
t _e	1168.	5	30 mm	72.33	5	m'	to
Density g/ml 20°C	0.747	2	BP	61.56	5	n'	°K
d ₄ ²⁵	0.743	2	t _e (d, e)	59.61	5	o'	
d ₄ ³⁰	0.739	4	t _e	59.53	5	Surface tension dynes/cm. 20°C	
			ΔHv/T _e	18.88	5	24.60	5
a	0.763	4	d 63 to	79.44	5	30	5
b	-0.038	4	e 176 °C	0.1132	5	40	5
Ref. Index n _D 20°C	1.419	2	d' 25 to	77.34	5		
25	1.417	2	e' 63 °C	0.0797	5	Parachor [P] 20°C	
30	1.414	4	d _c g/ml	0.233	5	30	
"C"	0.7459	4	v _c ml/g	4.292	5	40	
MR (Obs.)	48.1	2	t _c °C	326.	5	Sugd.	424.2
MR (Calc.) (nD-d/2)	48.38	5	P _c mm	14685.	5	Exp. L. l. %/wt. u.	
Dielectric	2.013	5	PV/RT 25°C	1.0000	5	Dispersion 97.	
A 63 to	6.8907	5	30 mm	1.0000	5	Flash Point °C	
B 212 °C	1472.	5	BP	0.9485	5	Fire Point	
C	209.	5	t _e	0.9347	5	M. Spec. Ultra V.	
A* 63 to	1.39351	5	t _c	0.24	5	X-Ray Dif.	
B* 186 °C	1382.1	5	ΔHc kcal/m			Infrared	
K			ΔHf			Solubility in +	
t _k to °C			ΔFf			Acetone	
t _x to °C			Viscosity centistokes η °C			Carbon tet.	
A' 25 to	7.24922	5				Benzene	
B' 63 °C	1672.9	5	B _v to °C			Ether	
C'	227.	5	A _v to °C			n-Heptane	
A'* 25 to	1.73555	5	(B _v) to °C			Ethanol	
B'* 63 °C	1572.8	5	(A _v) °C			Water	
Ac 212 to	7.6778	5	c _p liq. °K			Water in	
Bc t _c °C	2211.	5	c _p vap. °K				
Cc	304.	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	175.91	5					
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:							

NAME		3-Ethyl-2,5-dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} \text{CH}_2\text{CH} \text{---} \text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f		to
F. P. 100%			25°C	3.8827	g		°K
B. P. °C			BP	0.05220	h		
760 mm	157.	2	t_e	0.0374	f'		to
100	91.0	4	30 mm	0.7254	g'		°K
30	62.0	4			h'		
10	39.9	5					
1	3.1	5					
Pressure mm 25°C	4.2614	5	ΔH_m cal/g		m		to
t_e	1165.	5	ΔH_v cal/g		n		°K
Density g/ml 20°C	0.741	2	25°C	75.06	o		
d_4^{25}	0.737	2	30 mm	72.13			
d_4^{30}	0.733	4	BP	61.39	m'		to
a	0.757	4	t_e	59.5	n'		°K
b	-0.038	4	t_e (d, e)	59.38	o'		
Ref. Index n_D^{20}	1.416	2	$\Delta H_v/T_e$	18.88			
25	1.414	2	d 62 to	79.14	Surface tension dynes/cm. 20°C		
30	1.411	4	e 175 °C	0.1131	30 22.81		
"C"	0.7469	4	d' 25 to	77.04	40 21.82		
MR (Obs.)	48.2	2	e' 62 °C	0.0792	5		
MR (Calc.)	48.38	5	d c g/ml	0.231	Parachor [P] 20°C		
(nD-d/2)	1.046	2	v c ml/g	4.328	30		
Dielectric	2.005	5	t c °C	323.	40		
A 62 to	6.8894	5	P mm	14490.	Sugd. 424.2		
B 210 °C	1468.	5	PV/RT		Exp. L.l./wt. u.		
C	209.	5	25°C	1.0000	Dispersion 97.		
A*	1.39312	5	30 mm	1.0000	Flash Point °C		
B*	1378.6	5	BP	0.9485	Fire Point		
K			t_e	0.9348	M Spec. Ultra V. X-Ray Dif. Infrared		
c			t_c	0.24	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
t_k			ΔH_c kcal/m				
t_x			ΔH_f				
A' 25 to	7.24860	5	ΔF_f				
B' 62 °C	1669.1	5	Viscosity centistokes °C				
C'	227.	5	η				
A'*	1.73529	5					
B'*	1569.0	5					
Ac 210 to	7.6637	5					
Bc t_c °C	2190.	5					
Cc	302.	5					
Cryos. A° const. B°							
t_e °C	174.77	5					
$T_R = 0.81 T_c$		+ 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:							

NAME		4-Ethyl-3,3-dimethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.					
F. P. 100%					f	to	
B. P. °C					g	°K	
760 mm	165.	2		5.3948	h		
100	98.0	4		0.05298	f'	to	
30	68.5	4		0.0374	g'	°K	
10	46.1	5		0.7373	h'		
1	8.6	5			m	to	
Pressure mm 25°C	2.9762	5			n	°K	
t_e	1187.	5			o		
Density g/ml 20°C	0.764	2			m'	to	
d_t 25	0.760	2			n'	°K	
d_4 30	0.756	4			o'		
a	0.780	4			Surface tension dynes/cm. 20°C		
b	-0.038	4			δ	26.92	5
Ref. Index n_D 20°C	1.427	2				30	25.81
25	1.425	2				40	24.73
30	1.422	4			Parachor [P] 20°C		
"C"	0.7424	4				30	
MR (Obs.)	47.8	2				40	
MR (Calc.)	48.38	5				Sugd.	424.2
(nD-d/2)	1.045	2			Exp. L. l. %/wt. u.		
Dielectric	2.036	5			Dispersion		
A 69 to	6,9001	5			Flash Point °C		
B 228 °C	1498.	5			Fire Point		
C	208.	5			M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 69 to	1.39706	5			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 194 °C	1407.3	5					
K							
t_k to							
t_x °C							
A' 25 to	7.25351	5					
B' 69 °C	1699.4	5					
C'	226.	5					
A** 25 to	1.73730	5					
B** 69 °C	1599.1	5					
Ac 228 to	7.7571	5					
Bc t_c °C	2336.	5					
Cc	316.	5					
Cryos. A° const. B°							
t_e °C	183.87	5					
$T_R = 0.82 T_c$					+ 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:							

NAME		3-Ethyl-3,4-dimethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{C} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.			Ref.			
F.P. °C			dt/dP °C/mm			f to		
F.P. 100%			25°C	6.6033	5	g °K		
B.P. °C			BP	0.05354	5	h		
760 mm	170.	2	t _e	0.0375	5	f' to		
100	102.3	4	t _e (d, e)	0.7452	5	g' °K		
30	72.5	4	ΔHm cal/g			h'		
10	49.8	5	ΔHv cal/g			m to		
1	12.0	5	25°C	78.71	5	n °K		
			30 mm	74.67	5	o		
			BP	63.45	5			
			t _e	61.30	5	m' to		
			t _e (d, e)	61.19	5	n' °K		
			ΔHv/T _e	18.85	5	o'		
Pressure mm 25°C	2.3895	5	d 73 to	83.03	5	Surface tension dynes/cm. 20°C		
t _e	1200.2	5	e' 190 °C	0.1152	5	30	28.07	
Density g/ml 20°C	0.772	2	d' 25 to	80.84	5	40	26.92	
d ₄ ^t 25	0.768	2	e' 73 °C	0.0850	5		25.81	
d ₄ 30	0.764	4	d _c g/ml	0.239	5	Parachor [P]		
			v _c ml/g	4.183	5	20°C		
			t _c °C	346.	5	30		
			P _c mm	15572.	5	40		
						Sugd.	424.2	
a	0.788	4	PV/RT			Exp. L.I. %/wt.		
b	-0.038	4	25°C	1.0000	5	u.		
			30 mm	1.0000	5	Dispersion	97.	
			BP	0.9470	5	Flash Point °C		
			t _e	0.9322	5	Fire Point		
			t _c	0.24	5	M Spec.		
						Ultra V.		
						X-Ray Dif.		
						Infrared		
Ref. Index n _D 20°C	1.431	2	ΔHc kcal/m			Solubility in +		
25	1.429	2	ΔHf			Acetone		
30	1.426	4	ΔFf			Carbon tet.		
"C"	0.7412	4	Viscosity centistokes			Benzene		
			η °C			Ether		
MR (Obs.)	47.7	2				n-Heptane		
MR (Calc.)	48.38	5	B ^v to			Ethanol		
(n _D -d/2)	1.045	2	A ^v °C			Water		
Dielectric	2.048	5	(B ^v) to			Water in		
A 73 to	6.9015	5	(A ^v) °C					
B 235 °C	1515.	5						
C	207.	5	c _p liq. °K					
A* 73 to	1.39547	5	c _p vap. °K					
B* 200 °C	1423.7	5	c _v vap.					
K								
c								
t _k to								
t _k °C								
A' 25 to	7.25114	5						
B' 73 °C	1716.1	5						
C'	225.	5						
A'* 25 to	1.73320	5						
B'* 73 °C	1615.9	5						
Ac 235 to	7.8101	5						
Bc t _c °C	2428.	5						
Gc t _c °C	325.	5						
Cryos. A° const. B°								
t _e °C	189.56	5						
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:								

NAME		2, 2, 3, 3-Tetramethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{C} \quad (\text{CH}_2)_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C	-54.00	2	dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	4.3468	5	h	
760 mm	160.31	2	BP	0.05280	5	f'	to
100	93.6	4	t _e	0.0376	5	g'	to °K
30	64.4	4	30 mm	0.7322	5	h'	
10	42.1	5	ΔHm cal/g			m	to
1	4.9	5	ΔHv cal/g			n	to °K
Pressure mm 25°C	3.7784	5	25°C	75.62	5	o	
t _e	1175.	5	30 mm	72.45	5	m'	to
Density g/ml 20°C	0.76446	2	BP	61.65	5	n'	to °K
d _t 25	0.76089	2	t _e	59.67	5	o'	
d ₄ 30	0.75732	4	t _e (d, e)	59.58	5	Surface tension dynes/cm. 20°C	
			ΔHv/T _e	18.79	5	30	26.99
a	0.77873	4	d	64 to	5	40	25.99
b	-0.03713	4	e	179 °C	5		5
Ref. Index n _D 20°C	1.42818	2	d'	25 to	5		5
25	1.42600	2	e'	64 °C	5	Parachor [P] 20°C	
30	1.42390	4	d _c g/ml	0.241	5	30	
"C"	0.7439	4	v _c ml/g	4.150	5	40	
MR (Obs.)	47.900	5	t _c °C	334.	5	Sugd.	424.2
MR (Calc.)	48.38	5	P _c mm	15392.	5	Exp. L. l. %/wt. u.	
(n _D -d/2)	1.04595	2	PV/RT			Dispersion	
Dielectric	2.040	5	25°C	1.0000	5	Flash Point °C	
A 64 to	6.8728	5	30 mm	1.0000	5	Fire Point	
B 225 °C	1472.	5	BP	0.9485	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	209.	5	t _e	0.9345	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 64 to	1.37326	5	c	0.24	5		
B* 189 °C	1382.5	5	ΔHc kcal/m				
K			ΔHf				
t _k to °C			ΔFf				
t _x to °C			Viscosity centistokes η °C				
A' 25 to	7.22868	5	B ^v to °C				
B' 64 °C	1673.1	5	A ^v to °C				
C'	227.	5	(B ^v) to °C				
A* 25 to	1.71446	5	(A ^v) °C				
B* 64 °C	1573.0	5	c _p liq. °K				
Ac 225 to	7.7086	5	c _p vap. °K				
Bc t _c °C	2282.	5	c _v vap.				
Cc	314.	5					
Cryos. A° const. B°							
t _e °C	178.66	5					
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:							

NAME		2, 2, 3, 4-Tetramethylhexane			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{CH} \quad \text{CH} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
		Ref.		Ref.		Ref.
F. P. °C			dt/dP °C/mm			f to
F. P. 100%			25°C	3.4772	5	g °K
B. P. °C			BP	0.05231	5	h
760 mm	154.9	2	t_e	0.0377	5	f' to
100	88.9	4				g' °K
30	59.9	4				h'
10	37.8	5	ΔH_m cal/g	0.7244	5	
1	1.1	5				m to
Pressure mm 25°C	4.8247	5	ΔH_v cal/g	74.03	5	n °K
t_e	1157.	5	25°C	71.31	5	o
Density g/ml 20°C	0.7548	2	30 mm	60.57	5	m' to
d_4^{25}	0.7508	2	BP	58.67	5	n' °K
d_4^{30}	0.7468	4	t_e	58.59	5	o'
			t_e (d, e)			
			$\Delta H_v/T_e$	18.73	5	
a	0.771	4	d 60 to	78.08	5	Surface tension dynes/cm. 20°C
b	-0.038	4	e 172 °C	0.1130	5	y 30 25.65 5
Ref. Index n_D^{20}	1.4226	2	d' 25 to	75.98	5	40 24.57 5
25	1.4202	2	e' 60 °C	0.0780	5	23.53 5
30	1.4178	4	d c g/ml	0.233	5	Parachor [P]
"C"	0.7442	4	v_c ml/g	4.293	5	20°C
MR (Obs.)	47.96	2	t_c °C	323.	5	30
MR (Calc.)	48.38	5	P c mm	14608.	5	40
(nD-d/2)	1.0452	2	PV/RT			Sugd. 424.2 5
Dielectric	2.024	5	25°C	1.0000	5	Exp. L. l. %/wt. u.
A 60 to	6.8621	5	30 mm	1.0000	5	Dispersion
B 210 °C	1451.	5	BP	0.9470	5	98. 2
C	210.	5	t_e	0.9333	5	Flash Point °C
A* 60 to	1.37036	5	t_c	0.24	5	Fire Point
B* 182 °C	1362.8	5	ΔH_c kcal/m			M Spec. Ultra V.
K			ΔH_f			X-Ray Dif.
c			ΔF_f			Infrared
t_x to			Viscosity centistokes			Solubility in +
t_x °C			η °C			Acetone
A' 25 to	7.22177	5				Carbon tet.
B' 60 °C	1651.4	5	B ^v to			Benzene
C'	228.	5	A ^v °C			Ether
A'* 25 to	1.70956	5	(B ^v) to			n-Heptane
B'* 60 °C	1551.4	5	(A ^v) °C			Ethanol
Ac 210 to	7.6365	5	c_p liq. °K			Water
Bc t_c °C	2174.	5	c_p vap. °K			Water in
Cc t_c °C	304.	5	c_v vap.			
Cryos. A° const. B°						
t_e °C	172.42	5				
TR = 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:						

NAME		2, 2, 3, 5-Tetramethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH} \quad \text{CH}_2\text{CH} \quad \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	2.6618	5	h	
760 mm	148.4	2	BP	0.05176	5	f'	to
100	83.11	4	t_e	0.03783	5	g'	°K
30	54.49	4	30 mm	0.7153	5	h'	
10	32.73	5	ΔHm cal/g			m	to
1	-3.54	5	ΔHv cal/g			n	°K
Pressure mm 25°C	6.4707	5	25°C	72.10	5	o	
t_e	1138.6	5	30 mm	69.89	5	m'	to
Density g/ml 20°C	0.7378	2	BP	59.34	5	n'	°K
d_4^{25}	0.7336	2	t_e	57.55	5	o'	
d_4^{30}	0.7294	4	t_e (d, e)	57.48	5	Surface tension dynes/cm. 20°C	
a	0.755	4	$\Delta\text{Hv}/T_e$	18.69	5	30	22.36
b	-0.0384	4	d_c g/ml	76.01	5	40	21.34
Ref. Index n_D 20°C	1.4142	2	v_c ml/g	0.1123	5	Parachor [P] 20°C	
25	1.4117	2	t_c °C	73.98	5	30	
30	1.4092	4	P_c mm	0.0750	5	40	424.2
"C"	0.7471	4	PV/RT			Sugd.	5
MR (Obs.)	48.21	2	25°C	1.0000	5	Exp. L. l. %/wt. u.	
MR (Calc.)	48.38	5	30 mm	1.0000	5	Dispersion 98.	
(nD-d/2)	1.0453	2	BP	0.9470	5	Flash Point °C	
Dielectric	2.000	5	t_e	0.9338	5	Fire Point	
A 55 to	6.8462	5	t_c	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B 199 °C	1424.4	5	ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
C	211.	5	ΔHf				
A* 55 to	1.36082	5	ΔFf				
B* 175 °C	1337.3	5	Viscosity centistokes				
K			η				
t_k to °C			B^v to °C				
A' 25 to	7.21049	5	A^v to °C				
B' 55 °C	1624.23	5	(B') to °C				
C'	229.	5	(A') °C				
A* 25 to	1.70077	5	c_p liq. °K				
B* 55 °C	1524.4	5	c_p vap. °K				
Ac 199 to	7.56018	5	c_v vap.				
Bc t_c °C	2064.8	5					
Cc	293.8	5					
Cryos. A° const. B°							
t_e °C	165.04	5					
$T_R = 0.81 T_c$							
+ 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:							

NAME		2, 2, 4, 4-Tetramethylhexane			STRUCTURAL FORMULA		
					$ \begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{C} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array} $		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	3.2530	5	g	
B. P. °C			BP	0.05218	5	h	
760 mm	153.3	2	t_e	0.0378	5	f'	to °K
100	87.44	4	30 mm	0.7222	5	g'	
30	58.55	4	ΔH_m cal/g			h'	
10	36.58	5	ΔH_v cal/g			m	to °K
1	-0.06	5	25°C	73.54	5	n	
Pressure mm 25°C	5.1912	5	30 mm	70.95	5	o	
t_e	1152.6	5	BP	60.26	5		
Density g/ml 20°C	0.7470	2	t_e	58.38	5	m'	to °K
d ^t 25	0.7428	2	t_e (d, e)	58.30	5	n'	
d ^t 30	0.739	4	$\Delta H_v/T_e$	18.72	5	o'	
a	0.7638	4	d 59 to	77.56	5	Surface tension dynes/cm. 20°C	
b	-0.0384	4	e 171 °C	0.1129	5	30	24.60
Ref. Index			d' 25 to	75.47	5	40	23.51
n_D 20°C	1.4208	2	e' 59 °C	0.0772	5		22.45
25	1.4183	2	d _c g/ml	0.228	5	Parachor [P] 20°C	
30	1.4159	4	v _c ml/g	4.385	5	30	
"C"	0.7489	4	t _c °C	318.	5	40	
MR (Obs.)	48.28	2	P _c mm	14184.	5	Sugd.	424.2
MR (Calc.)	48.38	2	PV/RT			Exp. L. l. %/wt. u.	
(nD-d/2)	1.0473	5	25°C	1.0000	5	Dispersion	99.
Dielectric	2.019	5	30 mm	1.0000	5	Flash Point °C	
A 59 to	6.85770	5	BP	0.9470	5	Fire Point	
B 206 °C	1444.2	5	t_e	0.9334	5	M Spec. Ultra V.	
C	210.	5	t_c	0.24	5	X-Ray Dif. Infrared	
A* 59 to	1.36755	5	ΔH_c kcal/m			Solubility in + Acetone	
B* 181 °C	1356.4	5	ΔH_f			Carbon tet.	
K			ΔF_f			Benzene	
c			Viscosity centistokes			Ether	
t_k to			η °C			n-Heptane	
t_x °C						Ethanol	
A' 25 to	7.21851	5				Water	
B' 59 °C	1644.5	5				Water in	
C'	228.	5					
A'* 25 to	1.70692	5					
B'* 59 °C	1544.5	5					
Ac 206 to	7.60949	5					
Bc t _c °C	2135.9	5					
Cc	299.6	5					
Cryos. A° const. B°							
t_e °C	170.60	5					
$T_R = 0.81 T_c$						+ 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. 137

NAME		2, 2, 4, 5-Tetramethylhexane			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \qquad \qquad \text{CH}_3 \\ \qquad \qquad \quad \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{CH} \quad \text{CH} \quad \text{CH}_3 \\ \qquad \qquad \quad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.			Ref.	Ref.		
F.P. °C				dt/dP °C/mm		f		to
F.P. 100%				25°C	2.6050	g		°K
B.P. °C				BP	0.05173	h		
760 mm	147.88	2		t_e	0.03784	5		
100	82.64	4		30 mm	0.7146	5		
30	54.05	4		ΔH_m cal/g				
10	32.31	5						
1	-3.93	5						
Pressure mm 25°C	6.6267	5		ΔH_v cal/g	71.94	5		
t_e	1137.1	5		25°C	69.77	5		
Density g/ml 20°C	0.73546	2		30 mm	59.25	5		
d 25	0.73161	2		BP	57.47	5		
d 30	0.7278	4		t_e	57.39	5		
				t_e (d, e)	57.39	5		
				$\Delta H_v/T_e$	18.68	5		
a	0.7508	4		d 54 to	75.83	5		
b	-0.0377	4		e 165 °C	0.1121	5		
Ref. Index				d' 25 to	73.81	5		
n_D 20°C	1.41318	2		e' 54 °C	0.0748	5		
25	1.41095	2		d_c g/ml	0.228	5		
30	1.40861	4		v_c ml/g	4.391	5		
"C"	0.7477	4		t_c °C	310.	5		
MR (Obs.)	48.257	2		P_c mm	13973.	5		
MR (Calc.)	48.38	5		PV/RT				
($n_D-d/2$)	1.04545	2		25°C	1.0000	5		
Dielectric	1.997	5		30 mm	1.0000	5		
A 54 to	6.8445	5		BP	0.9470	5		
B 199 °C	1422.1	5		t_e	0.9339	5		
C	211.	5		t_c	0.24	5		
A* 54 to	1.35962	5		ΔH_c kcal/m				
B* 175 °C	1335.1	5		ΔH_f				
K				ΔF_f				
c				Viscosity				
t_k to				centistokes				
t_x °C				η				
A' 25 to	7.20914	5						
B' 54 °C	1621.9	5		B ^v to				
C'	229.	5		A ^v °C				
A'* 25 to	1.69963	5		(B ^v) to				
B'* 54 °C	1522.1	5		(A ^v) °C				
Ac 199 to	7.56096	5		c_p liq. °K				
Bc t_c °C	2065.9	5		c_p vap. °K				
Cc	294.6	5		c_v vap.				
Cryos. A° const.								
B°								
t_e °C	164.45	5						
$T_R = 0.81 T_c$								
						+ 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:								

NAME		2, 2, 5, 5-Tetramethylhexane			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad (\text{CH}_2)_2 \quad \text{C} \quad \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276				
F. P. °C	-12.60	2							
F. P. 100%									
B. P. °C									
760 mm	137.46	2		dt/dP °C/mm					
100	73.43	4		25°C	1.7150	5	f		
30	45.41	4		BP	0.05083	5	g		
10	24.12	5		t_e	0.03782	5	h		
1	-11.33	5		30 mm	0.6999	5	f'		
				ΔH_m cal/g			g'		
Pressure mm 25°C	10.5003	5		ΔH_v cal/g			m		
t_e	1113.0	5		25°C	68.95	5	n		
				30 mm	67.53	5	o		
Density g/ml 20°C	0.71875	2		BP	57.58	5			
d_t 25	0.71480	2		t_e	55.96	5	m'		
d_4 30	0.7108	4		t_e (d, e)	55.92	5	n'		
				$\Delta H_v/T_e$	18.68	5	o'		
a	0.7345	4		d 45 to	72.44	5	Surface tension dynes/cm. 20°C		
b	-0.0379	4		e 153 °C	0.1081	5	30	21.08	
				d' 25 to	70.71	5	40	20.17	
Ref. Index n_D 20°C	1.40550	2		e' 45 °C	0.0701	5	40	19.27	
25	1.40316	2		d_c g/ml	0.222	5	Parachor [P] 20°C		
30	1.40078	4		v_c ml/g	4.504	5	30		
"C"	0.7517	4		t_c °C	293.	5	40		
MR (Obs.)	48.570	2		P_c mm	13225.	5	Sugd.	424.2	
MR (Calc.)	48.38	5		PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.		
(nD-d/2)	1.04612	2		30 mm	1.0000	5	Dispersion		
Dielectric	1.975	5		BP	0.9510	5	102.		
A 45 to	6.81977	5		t_e	0.9389	5	Flash Point °C		
B 180 °C	1380.0	5		t_c	0.24	5	Fire Point		
C	213.	5		ΔH_c kcal/m			M Spec.		
A* 45 to	1.33826	5		ΔH_f			Ultra V.		
B* 163 °C	1293.1	5		ΔF_f			X-Ray Dif.		
K				Viscosity centistokes			Infrared		
c				η °C			Solubility in +		
t_k to							Acetone		
t_x °C							Carbon tet.		
A' 25 to	7.19208	5		B' to			Benzene		
B' 45 °C	1579.0	5		A'V °C			Ether		
C'	231.	5		(B'V) to			n-Heptane		
A'* 25 to	1.68745	5		(A'V) °C			Ethanol		
B'* 45 °C	1479.7	5		c_p liq. °K			Water		
Ac 180 to	7.46624	5		c_p vap. °K			Water in		
Bc t_c -	1931.3	5							
Cc t_c -	284.4	5							
Cryos. A°									
const. B°									
t_e °C	152.84	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:									

NAME		2, 3, 3, 4-Tetramethylhexane			STRUCTURAL FORMULA		
					$ \begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH} \text{---} \text{C} \text{---} \text{CH} \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \text{CH}_3 \end{array} $		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.					
F. P. 100%					f	to	
B. P. °C					g	°K	
760 mm	164.59	2		5.2091	5		
100	97.44	4		0.05316	5		
30	67.92	4		0.03760	5		
10	45.45	5		0.7381	5		
1	7.97	5					
Pressure mm 25°C	3.0990	5					
t_e	1186.1	5					
Density g/ml 20°C	0.7694	2					
d_4^{25}	0.7648	2					
d_4^{30}	0.7602	4					
a	0.7878	4					
b	-0.0392	4					
Ref. Index $n_D^{20^\circ\text{C}}$	1.4297	2					
25	1.4269	2					
30	1.4242	4					
"C"	0.7416	4					
MR (Obs.)	47.74	2					
MR (Calc.)	48.38	5					
(nD-d/2)	1.0450	2					
Dielectric	1.901	5					
A 68 to	6.88337	5					
B 226 °C	1490.2	5					
C	208.	5					
A* 68 to	1.38067	5					
B* 193 °C	1399.8	5					
K							
t_c to							
t_x °C							
A' 25 to	7.2364	5					
B' 68 °C	1691.2	5					
C'	226.	5					
A* 25 to	1.72056	5					
B* 68 °C	1591.0	5					
Ac 226 to	7.7251	5					
Bc t_c °C	2307.0	5					
Cc t_c °C	313.3	5					
Cryos. A° const. B°							
t_e °C	183.49	5					
$T_R = 0.82 T_c$				+ 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. 140

NAME		2, 3, 3, 5-Tetramethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} - \text{C} - \text{CH}_2\text{CH} - \text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.				Ref.	Ref.
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	3.2148	5	g	to °K
B. P. °C			BP	0.05215	5	h	to °K
760 mm	153.	2	t_e	0.03777	5	f'	to °K
100	87.19	4	30 mm	0.7217	5	g'	to °K
30	58.31	4	ΔH_m cal/g			h'	to °K
10	36.35	5				m	to °K
1	-0.26	5				n	to °K
Pressure mm 25°C	5.2585	5	ΔH_v cal/g	73.46	5	o	to °K
t_e	1151.7	5	25°C	70.89	5		
Density g/ml 20°C	0.746	2	30 mm	60.21	5		
d_t	0.742	2	BP	58.34	5		
d_4	0.738	4	t_e	58.26	5		
			t_e (d, e)	58.26	5		
			$\Delta H_v/T_e$	18.72	5		
a	0.762	4	d 58 to	77.47	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 170 °C	0.1128	5	30	24.47
Ref. Index n_D 20°C	1.4196	2	d' 25 to	75.39	5	40	23.43
25	1.4172	2	e' 58 °C	0.0771	5		22.43
30	1.4148	4	d c g/ml	0.230	5	Parachor [P] 20°C	
"C"	0.7479	4	v_c ml/g	4.347	5	30	
MR (Obs.)	48.223	2	t_c °C	318.	5	40	
MR (Calc.)	48.38	5	P c mm	14305.	5	Sugd.	424.2
(nD-d/2)	1.0466	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric	2.015	5	30 mm	1.0000	5	Dispersion	
A 58 to	6.85754	5	BP	0.9470	5	97.	
B 206 °C	1443.3	5	t_e	0.9334	5	Flash Point °C	
C	210.	5	t_c	0.24	5	Fire Point	
A* 58 to	1.36768	5	ΔH_c kcal/m			M Spec. Ultra V.	
B* 180 °C	1355.4	5	ΔH_f			X-Ray Dif.	
K			Δf			Infrared	
t_c to °C			Viscosity centistokes			Solubility in +	
t_x to °C			η °C			Acetone	
A' 25 to	7.21858	5	B ^v to °C			Carbon tet.	
B' 58 °C	1643.5	5	A ^v to °C			Benzene	
C'	228.	5	(B ^v) to °C			Ether	
A'* 25 to	1.70709	5	(A ^v) to °C			n-Heptane	
B'* 58 °C	1543.5	5	c _p liq. °K			Ethanol	
Ac 206 to	7.61131	5	c _p vap. °K			Water	
Bc t_c °C	2137.7	5	c _v vap.			Water in	
Cc t_c °C	300.1	5					
Cryos. A° const. B°							
t_e °C	170.26	5					
$T_R = 0.81 T_c$		+ 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:							

NAME		2, 3, 4, 4-Tetramethylhexane				STRUCTURAL FORMULA	
						$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} \text{C} \text{---} \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
F. P. °C		Ref.	dt/dP °C/mm		Ref.	f	to
F. P. 100%			25°C	4.7322	5	g	°K
B. P. °C			BP	0.05290	5	h	
760 mm	162.2	2	t_e	0.03758	5	f'	to
100	95.38	4	30 mm	0.7344	5	g'	°K
30	66.01	4	ΔHm cal/g			h'	
10	43.66	5	ΔHv cal/g			m	to
1	6.38	5	25°C	79.29	5	n	°K
Pressure mm 25°C	3.4403	5	30 mm	72.95	5	o	
t_e	1179.4	5	BP	62.03	5	m'	to
Density g/ml 20°C	0.7639	2	t_e (d, e)	60.01	5	n'	°K
t 25	0.7596	2	$\Delta\text{Hv}/T_e$	18.81	5	o'	
d_4 30	0.7553	4	d 66 to	80.44	5	Surface tension dynes/cm. 20°C	
a	0.7811	4	e 181 °C	0.1135	5	γ	26.91
b	-0.0386	4	d' 25 to	78.31	5		30
Ref. Index			e' 66 °C	0.0814	5		40
n_D 20°C	1.4270	2	d_c g/ml	0.233	5	Parachor [P] 20°C	
25	1.4244	2	v_c ml/g	4.290	5		30
30	1.4218	4	t_c °C	333.	5		40
"C"	0.7425	4	P_c mm	14863.	5		Sugd. 424.2
MR (Obs.)	47.82	2	PV/RT			Exp. L. l. %/wt. u.	
MR (Calc.)	48.38	2	25°C	1.0000	5	Dispersion	
($n_D - d/2$)	1.0451	2	30 mm	1.0000	5	97.	
Dielectric	2.036	5	BP	0.9480	5	Flash Point °C	
A 66 to	6.88230	5	t_e	0.9338	5	Fire Point	
B 224 °C	1482.1	5	t_c	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	208.	5	ΔHc kcal/m			Solubility in +	
A* 66 to	1.38187	5	ΔHf			Acetone	
B* 191 °C	1392.1	5	ΔFf			Carbon tet.	
K			Viscosity centistokes			Benzene	
t_k to °C			η °C			Ether	
t_x °C			B^v to °C			n-Heptane	
A' 25 to	7.23713	5	A^v to °C			Ethanol	
B' 66 °C	1683.1	5	(B ^v) to °C			Water	
C' 226.	226.	5	(A ^v) °C			Water in	
A' * 25 to	1.72212	5	c_p liq. °K				
B' * 66 °C	1582.9	5	c_p vap. °K				
Acl 224 to	7.70922	5	c_v vap.				
Bc t_c °C	2278.0	5					
Cc t_c °C	311.2	5					
Cryos. A° const. B°							
t_e °C	180.75	5					
$T_R = 0.82 T_c$		+ 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:							

NAME		2, 3, 4, 5-Tetramethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{ccccccc} & & \text{CH}_3 & & \text{CH}_3 & & \\ & & & & & & \\ \text{CH}_3 & \text{CH} & \text{CH} & \text{CH} & \text{CH} & \text{CH}_3 & \\ & & & & & & \\ & \text{CH}_3 & & & \text{CH}_3 & & \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.	Ref.	
F.P. °C			dt/dP °C/mm			f to	
F.P. 100%			25°C	4.4596	5	g °K	
B.P. °C			BP	0.05290	5	h	
760 mm	161.	2	t_e	0.03768	5	f' to	
100	94.20	4	t_e (d, e)	0.7334	5	g' °K	
30	64.87	4	ΔH_m cal/g			h'	
10	42.55	5	ΔH_v cal/g			m to	
1	5.33	5	25°C	75.77	5	n °K	
			30 mm	72.55	5	o	
			BP	61.69	5		
			t_e	59.69	5	m' to	
			$\Delta H_v/T_e$	59.60	5	n' °K	
				18.76	5	o'	
Pressure mm 25°C	3.6754	5	d 65 to	79.89	5	Surface tension dynes/cm. 20°C	
t_e	1176.1	5	e 180 °C	0.1131	5	y 30	25.95
			d' 25 to	77.79	5	y 40	24.87
			e' 65 °C	0.0807	5		23.81
Density g/ml 20°C	0.757	2	d c g/ml	0.233	5	Parachor [P] 20°C	
d_4^{25}	0.753	2	v_c ml/g	4.294	5	30	
d_4^{30}	0.749	4	t_c °C	331.	5	40	
			P_c mm	14801.	5	Sugd.	424.2
a	0.077	4	PV/RT 25°C	1.0000	5	Exp. L.l. %/wt. u.	
b	-0.038	4	30 mm	1.0000	5	Dispersion	
			BP	0.9480	5	98.	
			t_e	0.9339	5	Flash Point °C	
			t_c	0.24	5	Fire Point	
Ref. Index n_D 20°C	1.424	2	ΔH_c kcal/m			M Spec.	
25	1.422	2	ΔH_f			Ultra V.	
30	1.419	4	ΔF_f			X-Ray Dif.	
"C"	0.7444	4	Viscosity centistokes °C			Infrared	
MR (Obs.)	47.959	2	η			Solubility in +	
MR (Calc.)	48.38	5				Acetone	
($n_D-d/2$)	1.046	2				Carbon tet.	
						Benzene	
Dielectric	2.028	5				Ether	
A 65 to	6.87132	5				n-Heptane	
B 222 °C	1474.1	5				Ethanol	
C	208.	5				Water	
A* 65 to	1.3720	5				Water in	
B* 190 °C	1384.4	5					
K							
c							
t_x to							
t_x °C							
A' 25 to	7.22662	5					
B' 65 °C	1674.7	5					
C'	226.	5					
A'* 25 to	1.71217	5					
B'* 65 °C	1574.6	5					
Ac 222 to	7.69175	5					
Bc t_c °C	2261.0	5					
Cc	310.6	5					
Cryos. A° const. B°							
t_e °C	179.43	5					
$T_R = 0.82 T_c$						+ 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:							

NAME		3, 3, 4, 4-Tetramethylhexane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_2\text{C} \quad \text{C} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	6.5635	5	h	
760 mm	170.0	2	BP	0.05361	5	f'	to
100	102.23	4	t _e	0.03757	5	g'	°K
30	72.43	4	30 mm	0.7456	5	h'	
10	49.73	5	ΔHm cal/g			m	to
1	11.85	5	ΔHv cal/g			n	°K
Pressure mm 25°C	2.4070	5	25°C	78.61	5	o	
t _e	1200.2	5	30 mm	74.59	5	n'	to
Density g/ml 20°C	0.7824	2	BP	63.37	5	o'	°K
t _e 25	0.7783	2	t _e	61.23	5		
d ₄ 30	0.7742	4	t _e (d, e)	61.12	5		
a	0.7988	4	ΔHv/T _e	18.82	5		
b	-0.0382	4	d 72 to	82.91	5	Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C	1.4368	2	e 190 °C	0.1150	5	γ	29.61
25	1.4344	2	d' 25 to	80.74	5		28.39
30	1.4319	4	e' 72 °C	0.0849	5		27.20
"C"	0.7406	4	d c g/ml	0.241	5	Parachor [P] 20°C	
MR (Obs.)	47.622	2	v c ml/g	4.150	5		
MR (Calc.) (nD-d/2)	1.0456	2	t c °C	348.	5		
Dielectric	2.064	5	P c mm	15745.	5	Sugd.	424.2
A 72 to	6.89630	5	PV/RT			Exp. L. l. %/wt. u.	
B 236 °C	1512.6	5	25°C	1.0000	5	Dispersion	
C	207.	5	30 mm	1.0000	5	97.	
A* 72 to	1.39029	5	BP	0.9470	5	Flash Point °C	
B* 200 °C	1421.7	5	t _e	0.9322	5	Fire Point	
K			t _e	0.24	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
c			ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
t _k to °C			ΔHf				
t _x to °C			ΔFf				
A' 25 to	7.24577	5	Viscosity centistokes				
B' 72 °C	1714.0	5	η				
C'	225.	5					
A'* 25 to	1.72790	5	B' v to °C				
B'* 72 °C	1613.7	5	A' v to °C				
Ac 236 to	7.81479	5	(B' v) to °C				
Bc t c °C	2440.5	5	(A' v) °C				
Cc	326.9	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	189.58	5	c _v vap.				
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:							

NAME		3-Isopropyl-2,4-dimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_3\text{H}_7 \\ \text{CH}_3\text{CH} \text{---} \text{CH} \text{---} \text{CH} \text{---} \text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.				Ref.	Ref.
F.P. °C	-81.70	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	3.8935	5	h	
760 mm	157.04	2	BP	0.05219	5		
100	91.08	4	t _e	0.03742	5	f'	to
30	62.08	4				g'	°K
10	40.00	5	30 mm	0.7254	5	h'	
1	3.151	5	ΔHm cal/g				
Pressure mm 25°C	4.2478	5	ΔHv cal/g			m	to
t _e	1165.2	5	25°C	75.09	5	n	°K
Density g/ml 20°C	0.75830	2	30 mm	72.15	5	o	
d ₄ ^t 25	0.75457	2	BP	61.42	5		
d ₄ ^t 30	0.7508	4	t _e	59.50	5	m'	to
			t _e (d, e)	59.42	5	n'	°K
			ΔHv/T _e	18.90	5	o'	
a	0.7732	4	d 62 to	79.17	5	Surface tension dynes/cm. 20°C	
b	-0.0374	4	e 175 °C	0.1130	5	30	26.13
Ref. Index n _D 20°C	1.42463	2	d' 25 to	77.08	5	40	25.11
25	1.42248	2	e' 62 °C	0.0793	5		24.12
30	1.42017	4	d _c g/ml	0.241	5	Parachor [P] 20°C	
"C"	0.7441	4	v _c ml/g	4.145	5	30	
MR (Obs.)	47.939	2	t _c °C	327.	5	40	
MR (Calc.) (nD-d/2)	1.04548	2	P _c mm	15233.	5	Sugd.	424.2
Dielectric	2.029	5	PV/RT			Exp. L. l. %/wt. u.	
A 62 to	6.89055	5	25°C	1.0000	5	Dispersion	97.
B 213 °C	1468.4	5	30 mm	1.0000	5	Flash Point °C	
C	209.	5	BP	0.9485	5	Fire Point	
A* 62 to	1.3942	5	t _e	0.9348	5	M Spec.	
B* 185 °C	1379.1	5	t _c	0.24	5	Ultra V.	
K			ΔHc kcal/m			X-Ray Dif.	
c			ΔHf			Infrared	
t _k --- to			ΔFf			Solubility in +	
t _x --- °C			Viscosity centistokes			Acetone	
A' 25 to	7.2498	5	η °C			Carbon tet.	
B' 62 °C	1669.7	5				Benzene	
C' 227.	227.	5	B ^v to			Ether	
A* 25 to	1.7364	5	A ^v --- °C			n-Heptane	
B* 62 °C	1569.6	5	(B ^v) to			Ethanol	
Ac 213 to	7.68916	5	(A ^v) °C			Water	
Bc t _c °C	2224.8	5	c _p liq. °K			Water in	
Cc 307.2	307.2	5	c _p vap. °K				
Cryos. A° const. B°			c _v vap.				
t _e °C	174.81	5					
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:							

NAME		3, 3-Diethyl-2-methylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} - \text{C} - \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	7.8588	5	h	
760 mm	174.	2	BP	0.05386	5	f'	to
100	105.87	4	t _e	0.03746	5	g'	°K
30	75.87	4	30 mm	0.7507	5	h'	
10	53.01	5	ΔHm cal/g			m	to
1	14.86	5	ΔHv cal/g			n	°K
Pressure mm 25°C	1.9757	5	25°C	79.99	5	o	
t _e	1211.6	5	30 mm	75.57	5	m'	to
Density g/ml 20°C	0.780	2	BP	64.20	5	n'	°K
d ₄ ^t 25	0.775	2	t _e	61.97	5	o'	
d ₄ ^t 30	0.770	4	t _e (d, e)	61.87	5	Surface tension dynes/cm. 20°C	
a	0.800	4	ΔHv/T _e	18.87	5	γ	29.25
b	-0.001	4	d 76 to	84.36	5		30
Ref. Index n _D 20°C	1.435	2	e 194 °C	0.1159	5		40
25	1.432	2	d' 25 to	82.16	5	Parachor [P] 20°C	
30	1.429	4	e' 76 °C	0.0869	5		424.2
"C"	0.7400	4	d _c g/ml	0.229	5		5
MR (Obs.)	47.597	2	v _c ml/g	4.361	5	Exp. L. l. %/wt. u.	
MR (Calc.)	48.38	5	t _c °C	348.	5	Dispersion	
(nD-d/2)	1.045	2	P _c mm	14985.	5	97.	
Dielectric	2.059	5	PV/RT			Flash Point °C	
A 76 to	6.9118	5	25°C	1.0000	5	Fire Point	
B 236 °C	1531.5	5	30 mm	1.0000	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	206.	5	BP	0.9470	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 76 to	1.40206	5	t _e	0.9319	5		
B* 204 °C	1439.9	5	t _c	0.24	5		
K			ΔHc kcal/m				
c			ΔHf				
t _k to °C			ΔFf				
t _x to °C			Viscosity centistokes η °C				
A' 25 to	7.2589	5	B ^v to °C				
B' 76 °C	1733.4	5	A ^v to °C				
C'	224.	5	(B ^v) to °C				
A'* 25 to	1.7394	5	(A ^v) °C				
B'* 76 °C	1633.1	5	c _p liq. °K				
Ac 236 to	7.8257	5	c _p vap. °K				
Bc t _c °C	2451.7	5	c _v vap.				
Cc t _c °C	323.8	5					
Cryos. A° const. B°							
t _e °C	194.10	5					
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. 146

NAME		3-Ethyl-2, 2, 3-trimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{C}_2\text{H}_5 \\ \quad \\ \text{CH}_3\text{C} \quad \text{C} \quad \text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
					Ref.		
F. P. °C				dt/dP °C/mm		f to	
F. P. 100%				25°C	6.0208	5	g °K
B. P. °C				BP	0.05345	5	h
760 mm	168.	2		t_e	0.03756	5	f' to
100	100.45	4		30 mm	0.7429	5	g' °K
30	70.75	4		ΔH_m cal/g		5	h'
10	48.14	5		ΔH_v cal/g		5	m to
1	10.41	5		25°C	77.98	5	n °K
Pressure mm 25°C	2.6452	5		30 mm	74.14	5	o
t_e	1196.0	5		BP	63.06	5	m' to
Density g/ml 20°C	0.781	2		t_e	60.95	5	n' °K
d_4^{25}	0.777	2		t_e (d, e)	60.84	5	o'
d_4^{30}	0.773	4		$\Delta H_v/T_e$	18.83	5	
a	0.7970	4		d 71 to	82.20	5	Surface tension dynes/cm. 20°C
b	-0.0380	4		e 187 °C	0.1140	5	u.
Ref. Index $n_D^{20°C}$	1.436	2		d' 25 to	80.08	5	Dispersion
25	1.434	2		e' 71 °C	0.0840	5	BP
30	1.431	4		d	0.242	5	Flash Point °C
"C"	0.7407	4		v_c ml/g	4.131	5	Fire Point
MR (Obs.)	47.63	2		t_c °C	345.	5	M Spec.
MR (Calc.)	48.38	5		P _c mm	15744.	5	Ultra V.
(nD-d/2)	1.046	2		PV/RT 25°C	1.0000	5	X-Ray Dif.
Dielectric	2.062	5		30 mm	1.0000	5	Infrared
A 71 to	6.8911	5		BP	0.9480	5	Solubility in +
B 234 °C	1504.2	5		t_e	0.9334	5	Acetone
C	207.	5		t_c	0.24	5	Carbon tet.
A* 71 to	1.38518	5		ΔH_c kcal/m			Benzene
B* 197 °C	1413.1	5		ΔH_f			Ether
K				ΔF_f			n-Heptane
t_x to				Viscosity centistokes °C			Ethanol
t_x °C				η			Water
A' 25 to	7.2419	5		B^v to			Water in
B' 71 °C	1705.4	5		A ^v °C			
C'	225.	5		(B ^v) to			
A'* 25 to	1.72474	5		(A ^v) °C			
B'* 71 °C	1605.2	5		c_p liq. °K			
Ac 234 to	7.79459	5		c_p vap. °K			
Bc t_c -	2410.3	5		c_v vap.			
Cc t_c -	324.7	5					
Cryos. A° const. B°							
t_e °C	187.37	5					
$T_R = 0.82 T_c$						+ 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:							

NAME		3-Ethyl-2, 2, 4-trimethylpentane			STRUCTURAL FORMULA	
					$ \begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{CH} \quad \text{CH} \quad \text{CH}_3 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array} $	
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276	
F. P. °C		Ref.	dt/dP °C/mm		f	to
F. P. 100%			25°C	3.5358	g	°K
B. P. °C			BP	0.05235	h	
760 mm	155.3	2	t_e	0.03680	f'	to
100	89.23	4	30 mm	0.7250	g'	°K
30	60.23	4	ΔH_m cal/g		h'	
10	38.17	5	ΔH_v cal/g		m	to
1	1.39	5	25°C	74.15	n	°K
Pressure mm 25°C	4.7370	5	30 mm	71.40	o	
t_e	1160.4	5	BP	60.74		
Density g/ml 20°C	0.7571	2	t_e	58.84	m'	to
t 25	0.7531	2	t_e (d, e)	58.76	n'	°K
d 30	0.7491	4	$\Delta H_v/T_e$	18.76	o'	
a	0.7731	4	d 60 to	78.15	Surface tension dynes/cm. 20°C	
b	-0.0380	4	e 173 °C	0.1121	25.96	
Ref. Index			d' 25 to	76.10	30 24.88	
n_D 20°C	1.4223	2	e' 60 °C	0.0782	40 23.82	
25	1.4199	2	d_c g/ml	0.234	Parachor [P] 20°C	
30	1.4175	4	v_c ml/g	4.272	30	
"C"	0.7414	4	t_c °C	324.	40	
MR (Obs.)	47.78	2	Pc mm	14706.	Sugd. 424.2	
MR (Calc.)	48.38	5	PV/RT		Exp. L. l. %/wt. u.	
(nD-d/2)	1.0438	2	25°C	1.0000	Dispersion	
Dielectric	2.023	5	30 mm	1.0000	98.	
A 60 to	6.8631	5	BP	0.9485	Flash Point °C	
B 211 °C	1452.7	5	t_e	0.9349	Fire Point	
C	209.	5	t_c	0.24	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 60 to	1.3684	5	ΔH_c kcal/m		Solubility in +	
B* 183 °C	1363.7	5	ΔH_f		Acetone	
K			ΔF_f		Carbon tet.	
t_k to			Viscosity centistokes		Benzene	
t_x °C			η		Ether	
A' 25 to	7.2226	5			n-Heptane	
B' 60 °C	1653.1	5	B_v to		Ethanol	
C'	227.	5	A' °C		Water	
A'* 25 to	1.71021	5	(B'v) to		Water in	
B'* 60 °C	1553.1	5	(A'v) °C			
Ac 211 to	7.64307	5	c_p liq. °K			
Bc t_c °C	2183.2	5	c_p vap. °K			
Cc	304.6	5	c_v vap.			
Cryos. A° const. B°						
t_e °C	172.95	5				
$T_R = 0.81 T_c$					+ 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:						

NAME		3-Ethyl-2, 3, 4-trimethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} \text{---} \text{CHCH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \text{---} \text{C} \text{---} \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.		Ref.		Ref.	
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	6.3989	5	g	°K
B. P. °C			BP	0.05358	5	h	
760 mm	169.44	2	t_e	0.03759	5	f'	to
100	101.72	4	30 mm	0.7450	5	g'	°K
30	71.94	4				h'	
10	49.26	5	$\Delta\text{Hm cal/g}$			m	to
1	11.43	5	25°C	78.42	5	n	°K
Pressure mm 25°C	2.4751	5	30 mm	74.45	5	o	
t_e	1198.6	5	BP	63.25	5	m'	to
Density g/ml 20°C	0.7773	2	t_e	61.11	5	n'	°K
25	0.7733	2	t_e (d, e)	61.00	5	o'	
d ^t 25	0.7693	4	$\Delta\text{Hv}/T_e$	18.81	5	Surface tension dynes/cm. 20°C	
d ₄ 30						30	28.85
a	0.7933	4	d 72 to	82.71	5	40	27.67
b	-0.0380	4	e 189 °C	0.1149	5		26.54
Ref. Index			d' 25 to	80.53	5	Parachor [P]	
n _D 20°C	1.4333	2	e' 72 °C	0.0846	5	20°C	
25	1.4310	2	d _c g/ml	0.240	5	30	
30	1.4285	4	v _c ml/g	4.168	5	40	
"C"	0.7399	4	t _c °C	347.	5	Sugd.	424.2
MR (Obs.)	47.60	2	P mm	15653.	5	Exp. L.l. %/wt. u.	
MR (Calc.)	48.38	5	PV/RT			Dispersion	97.
(nD-d/2)	1.0447	2	25°C	1.0000	5	Flash Point °C	
Dielectric	2.054	5	30 mm	1.0000	5	Fire Point	
A 72 to	6.8938	5	BP	0.9470	5	M Spec. Ultra V. X-Ray Dif. Infrared	
B 235 °C	1509.9	5	t_e	0.9322	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
C	207.	5	t_c	0.24	5		
A* 72 to	1.38832	5	$\Delta\text{Hc kcal/m}$				
B* 199 °C	1419.1	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k --- to			η °C				
t _x --- °C							
A' 25 to	7.24360	5	B ^v to				
B' 72 °C	1711.2	5	A ^v --- °C				
C'	225.	5	(B ^v) to				
A'* 25 to	1.72596	5	(A ^v) --- °C				
B'* 72 °C	1610.9	5	c _p liq. °K				
Ac 235 to	7.80480	5	c _p vap. °K				
Bc t _c °C	2426.8	5	c _v vap.				
Cc t _c °C	325.7	5					
Cryos. A°							
const. B°							
t _e °C	188.95	5					
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. 149

NAME		2, 2, 3, 3, 4-Pentamethylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{C} \quad \text{CH} \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}_3\text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276		
		Ref.			Ref.		
F. P. °C	-36.45	2	dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	5.5392	5	h	
760 mm	166.05	2	BP	0.05328	5	f'	to
100	98.72	4	t _e	0.03759	5	g'	to °K
30	69.13	4	30 mm	0.7402	5	h'	
10	46.60	5	ΔHm cal/g			m	to
1	9.01	5	ΔHv cal/g			n	to °K
Pressure mm 25°C			25°C	77.37	5	o	
t _e	2.8978	5	30 mm	73.71	5	m'	to
Density g/ml 20°C			BP	62.70	5	n'	to °K
d _t 25	0.78009	2	t _e	60.63	5	o'	
d ₄ 30	0.77675	2	t _e (d, e)	60.52	5	Surface tension dynes/cm. 20°C	
	0.7734	4	ΔHv/T _e	18.82	5	30	29.26
a	0.7934	4	d _e 69 to	81.56	5	40	28.27
b	-0.0367	4	e 185 °C	0.1136	5		27.30
Ref. Index			d' 25 to	79.45	5	Parachor [P]	
n _D 20°C			e' 69 °C	0.0831	5	20°C	
25	1.43606	2	d _e g/ml	0.249	5	30	
30	1.43412	2	v _c ml/g	4.012	5	40	
"C"	0.7417	4	t _c °C	346.	5	Sugd.	424.2
MR (Obs.)	47.693	2	P _c mm	16236.	5	Exp. L. l. %/wt. u.	
MR (Calc.)	48.38	2	PV/RT				
(nD-d/2)	1.04602	5	25°C	1.0000	5	Dispersion	97.
Dielectric	2.062	5	30 mm	1.0000	5	Flash Point °C	
A 69 to	6.8863	5	BP	0.9480	5	Fire Point	
B 235 °C	1496.1	5	t _e	0.9335	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	207.	5	t _c	0.24	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 69 to	1.38223	5	ΔHc kcal/m				
B* 195 °C	1405.4	5	ΔHf				
K			ΔFf				
t _k to °C			Viscosity centistokes				
t _x to °C			η °C				
A' 25 to	7.2383	5	B ^v to °C				
B' 69 °C	1697.1	5	A ^v to °C				
C'	225.	5	(B ^v) to °C				
A* 25 to	1.72197	5	(A ^v) °C				
B* 69 °C	1596.9	5	c _p liq. °K				
Ac 235 to	7.79495	5	c _p vap. °K				
Bc t _c °C	2410.3	5	c _v vap.				
Cc	326.8	5					
Cryos. A° const. B°							
t _e °C	185.15	5					
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. 150

NAME		2, 2, 3, 4, 4-Pentamethylpentane				STRUCTURAL FORMULA		
						$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3\text{C} \quad \text{CH} \quad \text{C} \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{10}\text{H}_{22}$	Molecular Weight	142.276			
		Ref.				Ref.		
F. P. °C	-38.75	2	dt/dP °C/mm			f		to
F. P. 100%			25°C	4.1689	5	g		°K
B. P. °C			BP	0.05270	5	h		
760 mm	159.29	2	t_e	0.03768	5	f'		to
100	92.74	4	30 mm	0.7307	5	g'		°K
30	63.52	4				h'		
10	41.28	5						
1	4.20	5						
Pressure mm 25°C	3.9551	5	ΔHm cal/g			m		to
t_e	1170.4	5	25°C	75.32	5	n		°K
Density g/ml 20°C	0.76703	2	30 mm	72.24	5	o		
d^t 25	0.76361	2	BP	61.41	5			
d^t 30	0.7602	4	t_e	59.45	5	m'		to
			t_e (d, e)	59.36	5	n'		°K
			$\Delta\text{Hv}/T_e$	18.77	5	o'		
a	0.7807	4	d 64 to	79.43	5	Surface tension dynes/cm. 20°C		
b	-0.0368	4	e 178 °C	0.1131	5	30	27.35	5
Ref. Index n_D 20°C	1.43069	2	d' 25 to	77.32	5	40	26.38	5
25	1.42868	2	e' 64 °C	0.0800	5		25.44	5
30	1.42660	4	d c g/ml	0.244	5	Parachor [P] 20°C		
"C"	0.7455	4	v c ml/g	4.102	5	30		
MR (Obs.)	47.984	2	t c °C	333.	5	40		
MR (Calc.)	48.38	2	P c mm	15544.	5	Sugd.	424.2	5
(nD-d/2)	1.04717	2	PV/RT 25°C	1.0000	5	Exp. L.l./wt. u.		
Dielectric	2.047	5	30 mm	1.0000	5	Dispersion	98.	2
A 64 to	6.8712	5	BP	0.9475	5	Flash Point °C		
B 224 °C	1468.6	5	t_e	0.9335	5	Fire Point		
C	209.	5	t_c	0.24	5	M Spec. Ultra V. X-Ray Dif. Infrared		
A* 64 to	1.37443	5	ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 188 °C	1379.3	5	ΔHf					
K			ΔFf					
c			Viscosity centistokes					
t_k --- to			η °C					
t_x --- °C								
A' 25 to	7.22785	5	B' v to					
B' 64 °C	1669.2	5	A' v --- °C					
C'	227.	5	(B' v) to					
A'* 25 to	1.71400	5	(A' v) --- °C					
B'* 64 °C	1569.1	5	c_p liq. °K					
Ac 224 to	7.70538	5	c_p vap. °K					
Bc t_c °C	2275.4	5	c_v vap.					
Cc t_c °C	314.2	5						
Cryos. A° const. B°								
t_e °C	177.44	5						
$T_R = 0.82 T_c$						+ 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:								

NAME		n-Undecane				STRUCTURAL FORMULA				
						CH ₃ (CH ₂) ₉ CH ₃				
Mole % Pur.	Ref.	Molecular Formula	C ₁₁ H ₂₄	Molecular Weight	156.292					
		Ref.			Ref.					
F.P. °C	-25.594	2	dt/dP °C/mm			f		to		
F.P. 100%			25°C	30.42	5	g		°K		
B.P. °C			BP	0.05356	5	h				
760 mm	195.890	2	t _e	0.03641	5	f'		to		
100	127.943	2	30 mm	0.7526	5	g'		°K		
30	97.90	4	ΔHm cal/g			h'				
10	74.97	4	ΔHv cal/g			m	300 to	0.0255	4	
1	36.60	5	25°C	86.4	2	n	600 °K	0.0014	4	
Pressure mm 25°C	0.4289	5	30 mm	77.55	5	o		-0.0647	4	
t _e	1244.8	5	BP	63.5	2					
Density g/ml 20°C	0.74017	2	t _e	60.81	5	m'	700 to	0.1104	4	
25	0.73655	2	t _e (d, e)	60.46	5	n'	1000 °K	0.0012	4	
d ₄ ^t	0.7329	4	ΔHv/T _e	19.38	5	o'		-0.0640	4	
a	0.75465	4	d	98 to	5	Surface tension dynes/cm. 20°C				
b	-0.03724	4	e	217 °C	5	γ	30	23.80	2	
Ref. Index n _D 20°C	1.41716	2	d'	25 to	5		40	22.88	2	
25	1.41500	2	e'	98 °C	5	Parachor [P]				
30	1.41284	4	d _c g/ml	0.237	2	20°C	471.0	4		
"C"	0.7497	4	v _c ml/g	4.223	2	30	471.0	4		
MR (Obs.)	53.12	2	t _c °C	367.	2	40	471.0	4		
MR (Calc.)	52.998	5	P _c mm	14592.	2	Sugd.	463.2	5		
(nD-d/2)	1.04707	2	PV/RT			Exp. L.l. %/wt. u.				
Dielectric	2.01	5	25°C	1.0000	5	Dispersion				
A 98 to	6.97674	2	30 mm	1.0000	5	Flash Point °C				
B 258 °C	1572.477	2	BP	0.9305	5	Fire Point				
C	188.022	2	t _e	0.9126	5	M. Spec. Ultra V. X-Ray Dif. Infrared				
A* 98 to	1.530D ^o	5	t _e	0.242	2	Solubility in +				
B* 227 °C	1493.5	5	ΔHc kcal/m	1663.55	2	Acetone				
K			ΔHf			Carbon tet.				
c			ΔFf			Benzene				
t _k to °C			Viscosity centistokes			Ether				
t _x to °C			η	110 °C	2	n-Heptane				
A' 25 to	7.3225	5		130	2	Ethanol				
B' 98 °C	1776.4	5		150	2	Water				
C'	206.	5		170	2	Water in				
A'* 25 to	1.8511	5	B ^v 100 to	491.2	4					
B'* 98 °C	1685.0	5	A ^v 180 °C	2.49440	4					
Ac 258 to	7.9352	5	(B ^v) to							
Bc t _c °C	2543.8	5	(A ^v) °C							
Cc t _c °C	309.3	5	c _p liq. °K							
Cryos. A* const. B*			c _p vap. °K							
t _e °C	217.09	5	c _v vap.							
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:										

NAME		n-Dodecane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₁₀ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₁₂ H ₂₆	Molecular Weight	170.328
		Ref.		Ref.	
F. P. °C	-9.587	2	dt/dP °C/mm		
F. P. 100%			25°C	89.64	5
B. P. °C	216.278	2	BP	0.05528	2
760 mm	146.142	2	t _e	0.03639	5
100	115.1	4	30 mm	0.7771	5
30	91.45	5			
10	51.84	5	ΔHm cal/g	51.69	3'
1					
Pressure mm 25°C	0.1320	5	ΔHv cal/g		
t _e	1297.3	5	25°C	86.0	2
			30 mm	75.46	5
Density g/ml 20°C	0.74869	2	BP	61.3	2
d ^t 25	0.74516	2	t _e	58.38	5
d ₄ 30	0.74163	4	t _e (d, e)	57.97	5
			ΔHv/T _e	19.37	5
a	0.76281	4	d 150 to	91.58	5
b	-0.03706	4	e 230 °C	0.1400	5
			d' 25 to	88.92	5
Ref. Index n _D 20°C	1.42160	2	e' 150 °C	0.1170	5
25	1.41949	2	d _c g/ml	0.237	2
30	1.41735	4	v _c ml/g	4.215	2
"C"	0.7486	4	t _c °C	386.	2
MR (Obs.)	57.76	5	P _c mm	13604.	2
MR (Calc.) (nD-d/2)	57.616	2	PV/RT 25°C	1.0000	5
	1.04725	5	30 mm	1.0000	5
Dielectric	2.02	5	BP	0.9283	5
A 150 to	6.98059	2	t _e	0.9084	5
B 280°C	1625.928	2	t _c	0.237	2
C	180.311	2			
A* 150 to	1.5604	5	ΔHc kcal/m	1810.48	2
B* 250°C	1546.9	5	ΔHf		
K			ΔFf		
t _c to			Viscosity centistokes		
t _x °C			η		
A' 25 to	7.3157	5	150 °C	0.5128	2
B' 150 °C	1830.0	5	170	0.4516	2
C'	198.3	5	190	0.4017	2
			210	0.3597	2
A'* 25 to	1.8787	5	B ^v 140 to	529.0	4
B'* 150 °C	1740.9	5	A ^v 220 °C	2.46116	4
			(B ^v) to		
Ac 280 to	8.06653	5	(A ^v) °C		
Bc t _c °C	2780.0	5	c _p liq. °K		
Cc t _c °C	322.0	5	c _p vap. °K		
Cryos. A° const. B°			c _v vap.		
t _e °C	240.09	5			
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: 3 NFPA 325; 3' JACS 76, 333 (1954) Linke et al.					

NAME		n-Tridecane		STRUCTURAL FORMULA		
				$\text{CH}_3(\text{CH}_2)_{11}\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula $\text{C}_{13}\text{H}_{28}$	Molecular Weight 184.354			
				Ref.	Ref.	
F. P. °C	-5.392	2	dt/dP °C/mm		f to	
F. P. 100%			25°C	249.27	g °K	
B. P. °C			BP	0.0568	h	
760 mm	235.44	2	t _e	0.03648	f' to	
100	163.3	2	30 mm	0.7994	g' °K	
30	131.45	4	ΔHm cal/g		h'	
10	107.09	5	ΔHv cal/g		m 300 to	
1	66.35	5	25°C	85.9	n 600 °K	
Pressure mm 25°C	0.03972	5	30 mm	73.60	o	
t _e	1339.0	5	BP	59.1		
Density g/ml 20°C	0.7564	2	t _e	55.97	m' 700 to	
d ^t 25	0.7528	2	t _e (d, e)	55.47	n' 1000 °K	
d ⁴ 30	0.7492	2	ΔHv/T _e	19.30	o'	
a	0.7708	4	d 131 to	91.92	Surface tension dynes/cm. 20°C	
b	-0.0372	4	e 261 °C	0.1394	γ	26.1 2
Ref. Index n _D 20°C	1.4256	2	d' 25 to	88.78	30	25.2 2
25	1.4234	2	e' 131 °C	0.1153	40	24.3 2
30	1.4213	4	d _c g/ml	0.24	Parachor [P] 20°C	
"C"	0.7476	4	v _c ml/g	4.231	30	550.9 4
MR (Obs.)	62.40	5	t _c °C	404.	40	551.3 4
MR (Calc.)	62.234	2	P _c mm	12920.	Sugd.	551.6 4
(nD-d/2)	1.0474	5	PV/RT 25°C	1.0000	Exp. L. l. %/wt. u.	
Dielectric	2.03	5	30 mm	1.0000	Dispersion	
A 131 to	6.9887	2	BP	0.92225	Flash Point °C	
B 302 °C	1677.43	2	t _e	0.9001	Fire Point	
C	172.90	2	t _c	0.23	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 131 to	1.6005	5	ΔHc kcal/m	1957.40	Solubility in +	
B* 271 °C	1600.8	5	ΔHf		Acetone	
K			ΔFf		Carbon tet.	
c			Viscosity centistokes		Benzene	
t _k to			η 170 °C	0.5043	Ether	
t _k °C			190	0.4468	n-Heptane	
A' 25 to	7.3147	5	210	0.3987	Ethanol	
B' 131 °C	1881.7	5	230	0.3577	Water	
C'	190.9	5	B ^v 160 to	558.8	Water in	
A'* 25 to	1.9095	5	A ^v 240 °C	Z.44372		
B'* 131 °C	1795.0	5	(B ^v) to			
Ac 302 to	8.1985	5	(A ^v) °C			
Bc t _c °C	3013.2	5	c _p liq. °K			
Cc	333.4	5	c _p vap. °K			
Cryos. A° const. B°			c _v vap.			
t _e °C	261.5	5				
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:						

NAME		n-Tetradecane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₁₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₁₄ H ₃₀	Molecular Weight	198.380
F. P. °C	5.863	2	dt/dP °C/mm		
F. P. 100%			25°C	711.4	5
B. P. °C			BP	0.0582	2
760 mm	253.57	2	t _e	0.03632	5
100	179.6	2	30 mm	0.8202	5
30	146.91	4	ΔHm cal/g		
10	121.92	5	ΔHv cal/g		
1	80.13	5	25°C	85.7	2
Pressure mm 25°C	0.01172	5	30 mm	71.85	5
t _e	1390.0	5	BP	57.5	2
Density g/ml 20°C	0.7628	2	t _e	54.19	5
d ₄ 25	0.7593	2	t _e (d, e)	53.66	5
d ₄ 30	0.7558	4	ΔHv/T _e	19.36	5
a	0.7768	4	d 147 to	91.62	5
b	-0.0370	4	e 282 °C	0.1346	5
Ref. Index n _D 20°C	1.4289	2	d' 25 to	88.94	5
25	1.4268	2	e' 147 °C	0.1298	5
30	1.4247	4	d _c g/ml	0.24	2
"C"	0.7467	4	v _c ml/g	4.184	2
MR (Obs.)	67.03	5	t _c °C	422.	2
MR (Calc.)	66.852	2	P _c mm	12160.	2
(n _D -d/2)	1.0475	5	PV/RT		
Dielectric	2.04	5	25°C	1.0000	5
A 147 to	6.9957	2	30 mm	1.0000	5
B 325°C	1725.46	2	BP	0.9232	5
C 165.75	165.75	2	t _e	0.8996	5
A* 147 to	1.6252	5	t _c	0.23	2
B* 292°C	1647.4	5	ΔHc kcal/m	2104.32	2
K			ΔHf		
c			Δff		
t _x to			Viscosity centistokes		
t _x °C			η		
A' 25 to	7.3143	5	190 °C	0.4946	2
B' 147°C	1930.4	5	210	0.4402	2
C'	183.8	5	230	0.3941	2
A'* 25 to	1.9386	5	250	0.3552	2
B'* 147°C	1846.1	5	B ^v 180 to	588.9	4
Ac 325 to	8.36982	5	A ^v 260 °C	Σ.42490	4
Bc t _c °C	3312.8	5	(B ^v) to		
Cc t _c °C	352.5	5	(A ^v) °C		
Cryos. A° const. B°			c _p liq. °K		
t _e °C	282.11	5	c _p vap. °K		
			c _v vap.		
T _R = 0.86 T _c					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		n-Pentadecane			STRUCTURAL FORMULA			
					$\text{CH}_3(\text{CH}_2)_{13}\text{CH}_3$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{15}\text{H}_{32}$	Molecular Weight	212.406			
		Ref.			Ref.			Ref.
F.P. °C	9.926	2	dt/dP			f	to	
F.P. 100%			°C/mm	35521.	5	g	°K	
B.P. °C			25°C			h		
760 mm	270.63	2	BP	0.0595	2	f'	to	
100	195.0	2	t_e	0.03642	5	g'	°K	
30	161.57	4	30 mm	0.8390	5	h'		
10	136.01	5				m	300 to	0.0239
1	93.26	5				n	600 °K	0.0014
			$\Delta\text{Hm cal/g}$			o		-0.0648
Pressure mm 25°C	0.00233	5	$\Delta\text{Hv cal/g}$	85.7	2			
t_e	1424.1	5	25°C	70.26	5	m'	700 to	0.1156
Density g/ml 20°C	0.7685	2	30 mm	55.6	2	n'	1000 °K	0.0012
d_t	0.7650	2	BP	52.12	5	o'		-0.0639
d_4	0.7615	4	t_e (d, e)	51.51	5			
				19.28	5			
a	0.7825	4	$\Delta\text{Hv}/T_e$			Surface tension dynes/cm. 20°C		
b	-0.0370	4	d 160 to	91.99	5			27.1
Ref. Index			e 290 °C	0.1344	5			26.2
n_D			d' 25 to	86.18	5			25.3
25	1.4319	2	e' 160 °C	0.1130	5	Parachor: [P]		
30	1.4298	2	d_c g/ml	0.24	2			630.6
	1.4277	4	v_c ml/g	4.190	2			631.1
"C"	0.7461	4	t_c °C	437.	2			631.4
MR (Obs.)	71.67	5	P_c mm	11400.	2			619.2
MR (Calc.)	71.47	5	PV/RT			Exp. L. l. %/wt.		
(nD-d/2)	1.0476	5	25°C	1.0000	5	u.		
Dielectric	2.05	5	30 mm	1.0000	5	Dispersion		
A 160 to	7.0017	2	BP	0.9170	5	Flash Point °C		
B 338 °C	1768.82	2	t_e	0.8914	5	Fire Point		
C	158.60	2	t_c	0.23	2	M. Spec.		
A* 160 to	1.6613	5	$\Delta\text{Hc kcal/m}$	2251.24	2	Ultra V.		
B* 310 °C	1693.8	5	ΔHf			X-Ray Dif.		
K			ΔFf			Infrared		
c			Viscosity centistokes			Solubility in +		
t_k to			η 210 °C	0.4819	2	Acetone		
t_x °C			230	0.4308	2	Carbon tet.		
A' 25 to	7.3123	5	250	0.3878	2	Benzene		
B' 160 °C	1973.3	5	270	0.3510	2	Ether		
C'	176.6	5	B_v 200 to	608.0	4	n-Heptane		
A'* 25 to	1.9646	5	A_v 280 °C	2.42601	4	Ethanol		
B'* 160 °C	1891.6	5	(B_v) to			Water		
Ac 338 to	8.5317	5	(A_v) °C			Water in		
Bc t_c °C	3600.5	5	c_p liq. °K					
Cc t_c °C	369.1	5	c_p vap. °K					
Cryos. A°			c_v vap.					
const. B°								
t_e °C	301.06	5						
$T_R = 0.86 T_c$				+ 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:								

NAME		n-Hexadecane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₁₄ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₁₆ H ₃₄	Molecular Weight	226.432
		Ref.		Ref.	
F. P. °C	18.165	2	dt/dP °C/mm		
F. P. 100%			71.87°C	127.43	5
B. P. °C			BP	0.06077	2
760 mm	286.793	2	t _e	0.03617	5
100	209.519	2	30 mm	0.8596	5
30	175.2	4			
10	149.04	4	ΔHm cal/g		
1	105.20	5			
Pressure °C			ΔHv cal/g		
mm 71.87	0.00105	5	71.87°C	79.39	5
t _e	1474.2	5	30 mm	68.43	5
			BP	54.3	2
Density			t _e	50.76	5
g/ml 20°C	0.77344	2	t _e (d, e)	50.13	5
d ^t 25	0.76996	2	ΔHv/T _e	19.38	5
d ₄ 30	0.76648	4			
a	0.7874	4	d 175 to	90.64	5
b	-0.0370	4	e 310 °C	0.1267	5
Ref. Index			d' 70 to	88.46	5
n _D 20°C	1.43453	2	e' 175 °C	0.1143	5
25	1.43250	2	d _c g/ml	0.24	2
30	1.43036	4	v _c ml/g	4.195	2
"C"	0.7456	4	t _c °C	452.	2
MR (Obs.)	76.32	5	P _c mm	10640.	2
MR (Calc.)	76.088	2	PV/RT		
(nD-d/2)	1.04781	5	71.87°C	1.0000	5
			30 mm	1.0000	5
Dielectric	2.06	5	BP	0.9197	5
A 175 to	7.03044	2	t _e	0.8937	5
B 358°C	1831.317	2	t _c	0.22	2
C	154.528	2	ΔHc kcal/m	2398.17	2
A* 175 to	1.70090	5	ΔHf		
B* 330°C	1752.9	5	ΔFf		
K			Viscosity		
c			centistokes		
t _x to			η 225 °C	0.4816	2
t _x °C			245	0.4322	2
A' 70 to	7.33309	5	265	0.3910	2
B' 175°C	2036.4	5	285	0.3540	2
C'	172.5	5	B ^v 220 to	626.8	4
A"* 70 to	1.97708	5	A ^v 290 °C	2.42611	4
B"* 175°C	1944.2	5	(B ^v) to		
Ac 358 to	8.7725	5	(A ^v) °C		
Bc t _c °C	4015.9	5	c _p liq. °K		
Cc	397.6	5	c _p vap. °K		
Cryos. A°			c _v vap.		
const. B°					
t _e °C	319.7	5			
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:					

NAME		n-Heptadecane			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_{15}\text{CH}_3$		
Mole % Pur. 99.0 [#]	Ref. 3	Molecular Formula $\text{C}_{17}\text{H}_{36}$	Molecular Weight 240.458				
		Ref.			Ref.		Ref.
F.P. °C	21.980	2	dt/dP °C/mm			f	to
F.P. 100%			83.5°C	129.08	5	g	°K
B.P. °C			BP	0.0619	2	h	
760 mm	301.82	2	t _e	0.03618	5	f'	to
100	223.2	2	t _e (d, e)	0.8733	5	g'	°K
30	188.36	4	30 mm			h'	
10	161.75	5	ΔHm cal/g			m	300 to
1	117.26	5	ΔHv cal/g			n	600 °K
Pressure °C			83.5°C	81.28	2	o	0.0238
mm 83.5	0.0, 572	5	30 mm	67.20	5		0.0014
t _e	1510.3 ³	5	BP	52.8	2		-0.0648
Density g/ml 20°C	0.7780 [#]	2	t _e	49.09	5	m'	700 to
t 25	0.7745	2	t _e (d, e)	48.38	5	n'	1000 °K
d ₄ 30	0.7710	4	ΔHv/T _e	19.36	5	o'	0.1161
							0.0012
							-0.0639
a	0.7920	4	d 188 to	91.10	5	Surface tension dynes/cm. 20°C	
b	-0.0370	4	e 337 °C	0.1269	5	γ	28.0 [#]
Ref. Index n _D 20°C	1.4369 [#]	2	d' 85 to	88.3	5		30
25	1.4348	2	e' 188 °C	0.1343	5		40
70	1.4170	3				26.2	
"C"	0.7450	4	d, g/ml	0.24	2	Parachor [P] 20°C	
MR (Obs.)	80.96	2	v _c ml/g	4.159	2		711.0
MR (Calc.)	80.706	5	t _c °C	462.	2		30
(n _D -d/2)	1.0479	2	P _c mm	9880.	2		711.6
Dielectric	2.06	5					40
A 188 to	7.0115	2	PV/RT				Sugd. 697.2
B 374 °C	1847.82	2	83.5°C	1.0000	5	Exp. L. l. %/wt. u.	
C	145.52	2	30 mm	1.0000	5	Dispersion	
			BP	0.9176	5	Flash Point °C	
A* 188 to	1.7043	5	t _e	0.8902	5	Fire Point	
B* 347 °C	1771.33	5	t _c	0.22	2	M. Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHc kcal/m	2545.09	2		
c			ΔHf				
t _k to			ΔFf				
t _x °C			Viscosity centistokes			Solubility in +	
A' 85 to	7.3095	5	η			Acetone	
B' 188 °C	2052.2	5	240 °C	0.4804	2	Carbon tet.	
C'	163.5	5	260	0.4330	2	Benzene	
			280	0.3920	2	Ether	
			300	0.3550	2	n-Heptane	
A'* 85 to	1.96828	5	B ^v 230 to	659.1	4	Ethanol	
B'* 188 °C	1959.6	5	A ^v 310 °C	7.40037	4	Water	
Ac 374 to	8.9220	5	(B ^v) to			Water in	
Bc t _c °C	4310.1	5	(A ^v) °C				
Cc	414.4	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	336.6	5	c _v vap.				
T _R = 0.88 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.							
# purity applies to n _D 70°C							

NAME		n-Octadecane		STRUCTURAL FORMULA		
				CH ₃ (CH ₂) ₁₆ CH ₃		
Mole % Pur.	99.9 [#]	Ref. 3	Molecular Formula C ₁₈ H ₃₈	Molecular Weight 254.484		
F. P. °C	28.180	2	dt/dP °C/mm		f	to
F. P. 100%			25°C	94805.4	g	°K
B. P. °C	316.12	2	BP	0.0630	h	
760 mm	236.	2	t _e	0.03608	f'	to
100	200.66	4	30 mm	0.8890	g'	°K
30	173.57	5			h'	
10	128.28	5	ΔHm cal/g	57.65	m	300 to
1			25°C		n	600°K
Pressure mm 25°C	0.0 ₃ 73	5	30 mm	85.3 [#]	o	0.0236
t _e	1549.3 [±]	5	BP	65.74	n	0.0014
Density g/ml 20°C	0.7819 [#]	2	t _e	51.5	o	-0.0649
d ^t 25	0.7785 [#]	2	t _e (d, e)	47.69	m'	700 to
d ₄ 30	0.7751	4	ΔHv/T _e	46.96	n'	1000°K
				19.38	o'	0.1163
a	0.7955	4	d 201 to	90.49		0.0012
b	-0.0 ₃ 68	4	e 353 °C	0.1234		0.0012
Ref. Index n _D 25	1.4390 [#]	2	d' 25 to	88.09		-0.0639
25	1.4369 [#]	2	e' 201 °C	0.1114		
70	1.4191	3	d _c g/ml	0.24		
"C"	0.7446	4	v _c ml/g	4.322		
MR (Obs.)	85.61	5	t _c °C	477.		
MR (Calc.)	85.324	2	P _c mm	9880.		
(nD-d/2)	1.0480	5	PV/RT 25°C	1.0000		
Dielectric	2.07	5	30 mm	1.0000		
A 201 to	7.0156	2	BP	0.9178		
B 387 °C	1883.73	2	t _e	0.8893		
C	139.46	2	t _c	0.22		
A* 201 to	1.7241	5	ΔHc kcal/m	2692.01		
B* 363 °C	1806.7	5	ΔHf			
K			ΔFf			
c			Viscosity centistokes			
t _k to			η			
t _x °C			190 °C	0.701		
A' 25 to	7.3094	5	210	0.616		
B' 201 °C	2088.9	5	230	0.547		
C'	157.5	5	250	0.490		
A** 25 to	2.03584	5	B ^v 180 to	628.1		
B** 201 °C	2014.1	5	A ^v 260 °C	Z.48970		
Ac 387 to	9.1876	5	(B ^v) to			
Bc t _c °C	4810.2	5	(A ^v) °C			
Cc	449.57	5	c _p liq. °K			
Cryos. A° const. B°			c _p vap. °K			
t _e °C	353.0	5	c _v vap.			
T _R = 0.88 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.						
# purity applies to n _D 70°C						

NAME		n-Nonadecane			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₁₇ CH ₃				
Mole % Pur. 99.5 #	Ref. 3	Molecular Formula	C ₁₉ H ₄₀	Molecular Weight	268.510				
		Ref.			Ref.				Ref.
F. P. °C	32.1	2	dt/dP °C/mm			f	to		
F. P. 100%			54.24°C	8682.84	5	g	°K		
B. P. °C			BP	0.0640	2	h			
760 mm	329.7	2	t _e	0.03599	5	f'	to		
100	248.	2	30 mm	0.9035	5	g'	°K		
30	212.40	4	ΔHm cal/g	40.78	3	h'			
10	184.9	5	ΔHv cal/g			m	300 to	0.0237	4
1	138.8	5	54.24°C	83.23	5	n	600 °K	0.0014	4
Pressure °C			30 mm	64.38	5	o		-0.0649	4
mm 54.24	0.001	5	BP	50.3	2	m'	700 to	0.1164	4
t _e	1586.4	5	t _e	46.37	5	n'	1000 °K	0.1165	4
Density g/ml 20°C	0.7855 #	2	t _e (d, e)	45.64	5	o'		-0.0639	4
d _t 25	0.7821 #	2	ΔHv/T _e	19.40	5	Surface tension dynes/cm. 20°C			
d ₄ 30	0.7787 #	4	d 212 to	89.88	5	γ	30	27.8 #	2
a	0.7991	4	e 369 °C	0.1201	5		40	26.9	2
b	-0.0368	4	d' 54 to	89.7	5	Parachor [P] 20°C			
Ref. Index n _D 20°C			e' 212 °C	0.1192	5		30	791.2	4
25	1.4409 #	2	d _c g/ml	0.24	2		40	791.8	4
70	1.4388 #	2	v _c ml/g	4.097	2		70	792.2	4
	1.4211 #	3	t _c °C	487.	2		40	775.2	5
"C"	0.7442	4	P _c mm	9120.	2	Exp. L. l. %/wt. u.			
MR (Obs.)	90.25	4	PV/RT			Dispersion			
MR (Calc.) (n _D -d/2)	89.942	2	54.24°C	1.0000	5	Flash Point °C			
	1.0481	4	30 mm	1.0000	5	Fire Point			
Dielectric	2.08	5	BP	0.9184	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
A 212 to	7.0192	2	t _e	0.8885	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in			
B 403 °C	1917.0	2	t _c	0.22	2				
C	133.5	2	ΔHc kcal/m	2838.94	2				
A* 212 to	1.7427	5	ΔHf						
B* 379 °C	1839.43	5	ΔFi						
K			ΔFi						
c			Viscosity centistokes						
t _k to °C			η						
t _x			190 °C	0.757	2				
A' 25 to	7.31561	5	210	0.662	2				
B' 212 °C	2127.54	5	230	0.586	2				
C'	152.	5	250	0.524	2				
A** 25 to	2.06337	5	B _v 200 to	641.7	4				
B** 212 °C	2054.7	5	A _v 260 °C	2.49284	4				
Ac 403 to	9.4412	5	(B _v) to						
Bc t _c °C	5302.	5	(A _v) °C						
Cc	482.	5	c _p liq. °K						
Cryos. A° const. B°			c _p vap. °K						
t _e °C	368.49	5	c _v vap.						
T _R = 0.89 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.									
# purity applies to n _D ^{70°C}									

NAME		n-Eicosane			STRUCTURAL FORMULA	
					CH ₃ (CH ₂) ₁₈ CH ₃	
Mole % Pur.	99.9 [#]	Ref. 3	Molecular Formula C ₂₀ H ₄₂	Molecular Weight 282.536		
F.P. °C	36.8	2	dt/dP °C/mm		f	to
F.P. 100%			61.35°C	8808.41	g	°K
B.P. °C			BP	0.06492	h	
760 mm	342.7	2	t _e	0.03614	f'	to
100	260.	2	30 mm	0.9174	g'	°K
30	223.61	4	ΔHm cal/g	59.11	h'	
10	195.7	5	ΔHv cal/g		m	300 to
1	148.9	5	61.35°C	79.66	n	600 °K
Pressure °C			30 mm	63.08	o	0.0236
mm 61.35	0.001	5	BP	48.8		0.0014
t _e	1608.	5	t _e	44.80		-0.0649
			t _e (d, e)	43.99	m'	700 to
Density g/ml 20°C	0.7887 [#]	2	ΔHv/T _e	19.29	n'	1000 °K
25	0.7853 [#]	2			o'	0.1162
d ₄ ^t	0.7550	3	d 224 to	89.89		0.0012
			e 383 °C	0.1199		-0.0639
			d' 61 to	85.93		
			e' 224 °C	0.1022		
a	0.8023	4	d c g/ml	0.24		
b	-0.0368	4	v c ml/g	4.247		
Ref. Index n _D 20°C			t _c °C	502.		
25	1.4426 [#]	2	P _c mm	8360.		
70	1.4405 [#]	3	PV/RT 61.35°C	1.0000		
"C"	0.7439	4	30 mm	1.0000		
MR (Obs.)	94.90	4	BP	0.9122		
MR (Calc.)	94.56	2	t _e	0.8810		
(n _D -d/2)	1.0482	4	t _c	0.21		
Dielectric	2.08	5	ΔHc kcal/m	2985.86		
A 224 to	7.0225	2	ΔHf			
B 417 °C	1948.7	2	ΔFf			
C	127.8	2	Viscosity centistokes			
A* 224 to	1.77166	5	η			
B* 393 °C	1874.62	5	190 °C	0.814		
K			210	0.710		
t _x to			230	0.627		
t _x °C			250	0.560		
A' 25 to	7.30970	5	B ^v 180 to	651.4		
B' 224 °C	2155.78	5	A ^v 260 °C	Z. 50316		
C'	146.	5	(B ^v) to			
A'* 25 to	2.07885	5	(A ^v) °C			
B'* 224 °C	2085.2	5	c _p liq. °K			
Ac 417 to	9.6945	5	c _p vap. °K			
Bc t _c °C	5807.	5				
Cc	513.	5				
Cryos. A° const. B°						
t _e °C	382.84	5				
TR = 0.89 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.						
# purity applies to n _D ^{70°C}						

NAME		n-Heneicosane			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₁₉ CH ₃			
Mole % Pur.	99.9 ¹	Ref. 3	Molecular Formula C ₂₁ H ₄₄	Molecular Weight 296.562				
		Ref.			Ref.	Ref.		
F. P. °C	40.5	2	dt/dP °C/mm			f	to	
F. P. 100%			114.64°C.		150.40	g	°K	
B. P. °C			BP		0.0657	h	---	
760 mm	356.5	2	t _e		0.0360	f'	to	
100	271.52	4	30 mm		0.9765	g'	°K	
30	232.88	4	ΔHm cal/g		38.44	h'		
10	203.07	5	ΔHv cal/g			m	to	
1	152.94	5	114.64°C.		68.7	n	°K	
Pressure °C			30 mm		58.50	o		
mm 14.64	0.1	5	BP		47.05			
t _e	1607.4	5	t _e		43.69	m'	to	
Density g/ml 20°C	0.7917 [‡]	2	t _e (d, e)		43.30	n'	°K	
t ₂₅	0.7883 [‡]	2	ΔHv/T _e		19.33	o'		
d ₄ ²⁵	0.7583 ¹	3	d 232 to		80.06	Surface tension dynes/cm. 20°C		
a	0.8053	4	e 397 °C		0.0926	γ	30	26.91
b	-0.0368	4	d' 115 to		78.58		40	26.00
Ref. Index n _D 20°C	1.4441 [‡]	2	e' 232 °C		0.0862			25.11
25	1.4420 [‡]	2	d _c g/ml			Parachor [P] 20°C		
70	1.4247 ¹	3	v _c ml/g				30	
"C"	0.7434	4	t _c °C				40	
MR (Obs.)	99.52 [‡]	2	P _c mm				Sugd.	853.2
MR (Calc.) (nD-d/2)	99.178	5	PV/RT		1.0000	Exp. L. l. %/wt. u.		
	1.0483 [‡]	2	114.64°C.		1.0000	Dispersion		98. [‡]
Dielectric	2.09	5	30 mm		0.8948	Flash Point °C		
A 115 to	7.47174	5	BP		0.8624	Fire Point		
B 492 °C	2424.	5	t _e			M. Spec. Ultra V. X-Ray Dif. Infrared		
C	171.5	5	ΔHc kcal/m			Solubility in ⁺		
A* 115 to	2.24451	5	ΔHf			Acetone		
B* 410 °C	2343.	5	ΔFf			Carbon tet.		
K			Viscosity centistokes			Benzene		
t _c			η °C			Ether		
t _k to			B ^v to			n-Heptane		
t _x °C			A ^v °C			Ethanol		
A' to			(B ^v)			Water		
B' °C			(A ^v)			Water in		
C' °C			c _p liq. °K					
A* 110 to	2.15834	5	c _p vap. °K					
B* 233 °C	2309.1	5	c _v vap.					
Ac to								
Bc t _c °C								
Cc °C								
Cryos. A° const. B°								
t _e °C	396.79	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

¹ purity applies to n_D^{70°C}. and d₄²⁵

NAME		n-Docosane		STRUCTURAL FORMULA					
				CH ₃ (CH ₂) ₂₀ CH ₃					
Mole % Pur.	99.7 ¹	Ref.	3	Molecular Formula	C ₂₂ H ₄₆	Molecular Weight	310.588		
		Ref.				Ref.		Ref.	
F.P. °C	44.4		2	dt/dP °C/mm				f	to °K
F.P. 100%				122.90°C.	149.36	5		g	
B.P. °C				BP	0.0666	4		h	
760 mm	368.6		2	t _e	0.0359	5		f'	to °K
100	282.39		4	30 mm	0.9920	5		g'	
30	243.15		4	ΔHm cal/g	37.67	3		h'	
10	212.86		5	ΔHv cal/g				m	to °K
1	161.88		5	122.90°C.	67.19	5		n	
Pressure mmHg	0.1		5	30 mm	57.28	5		o	
t _e	1637.4		5	BP	46.00	5		m'	to °K
Density g/ml	0.7944 [‡]		2	t _e	42.60	5		n'	
d ₄ ^t	0.7910 [‡]		2	t _e (d, e)	43.38	5		o'	
d ₄ [‡]	0.7631 [‡]		3	ΔHv/T _e	19.82	5		Surface tension dynes/cm. 20°C	
a	0.8080		4	d 242 to °C	79.14	5		27.12	5
b	-0.0368		4	e 410 to °C	0.0899	5		30	5
Ref. Index n _D				d' 110 to °C	77.32	5		40	5
25	1.4455 [‡]		2	e' 242 °C	0.0824	5		Parachor [P] 20°C	
70	1.4435 [‡]		2	d _c g/ml				30	
	1.4260 [‡]		3	v _c ml/g				40	
"C"	0.7431		4	t _c °C				Sugd.	892.2
MR (Obs.)	104.16 [‡]		2	P _c mm				Exp. L.l. %/wt. u.	
MR (Calc.) (nD-d/2)	103.796		5	PV/RT				98.‡	2
	1.0483 [‡]		2	122.90°C.	1.0000	5		Dispersion	
Dielectric	2.09		5	30 mm	1.0000	5		Flash Point °C	
A 242 to °C	7.49602		5	BP	0.8943	5		Fire Point	
B 499 °C	2482.52		5	t _e	0.8609	5		M Spec. Ultra V. X-Ray Dif. Infrared	
C	169.3		5	ΔHc kcal/m				Solubility in +	
A* 242 to °C	2.28329		5	ΔHf				Acetone	
B* 420 °C	2401.2		5	ΔFf				Carbon tet.	
K				Viscosity centistokes				Benzene	
c				η °C				Ether	
t _k to °C								n-Heptane	
t _x to °C								Ethanol	
A'				B ^v to °C				Water	
B'				A ^v to °C				Water in	
C'				(B ^v) to °C					
A* 110 to °C	2.20092		5	(A ^v) to °C					
B* 242 °C	2367.2		5	c _p liq. °K					
Ac to °C				c _p vap. °K					
Bc t _c °C				c _v vap.					
Cc									
Cryos. A° const. B°									
t _e °C	410.47		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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.									
1 purity applies to n _D ^{70°C.} and d ₄ ^t									

NAME		n-Tricosane		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₂₁ CH ₃	
Mole % Pur. 99.6 ¹	Ref.	Molecular Formula C ₂₃ H ₄₈	Molecular Weight 324.614		
	Ref.				Ref.
F.P. °C	47.6	2	dt/dP		
F.P. 100%			130.85°C.		f
B.P. °C			25°C	151.91	g
760 mm	380.2	2	BP	0.0675	h
100	292.84	4	t _e	0.0358	
30	253.03	4	30 mm	1.0068	f'
10	222.27	5	ΔHm cal/g	39.74	g'
1	170.48	5			h'
Pressure °C			ΔHv cal/g		m
mm 130.85	0.1	5	130.85°C.	65.77	n
t _e	1666.0	5	30 mm	56.07	o
Density g/ml 20°C	0.7969 [‡]	2	BP	44.99	
d ^t 25	0.7935 [‡]	2	t _e	41.56	m'
d ^t 70	0.7641 ¹	3	t _e (d, e)	42.38	n'
			ΔHv/T _e	19.83	o'
a	0.8105	4	d 252 to	78.11	
b	-0.0368	4	e 423 °C	0.0871	
Ref. Index			d' 125 to	76.16	
n _D 20°C	1.4468 [‡]	2	e' 252 °C	0.0794	
25	1.4448 [‡]	2	d _c g/ml		
70	1.4276 ¹	3	v _c ml/g		
"C"	0.7428	4	t _c °C		
MR (Obs.)	108.80 [‡]	2	P _c mm		
MR (Calc.)	108.414	5	PV/RT		
(n _D -d/2)	1.0484 [‡]	2	130.85°C.	1.0000	
Dielectric	2.09	5	30 mm	1.0000	
A 252 to	7.51789	5	BP	0.8936	
B 506 °C	2537.9	5	t _e	0.8594	
C	167.1	5	t _c		
A* 252 to	2.31840	5	ΔHc kcal/m		
B* 433 °C	2456.0	5	ΔHf		
K			ΔFf		
t _k to			Viscosity		
t _x °C			centistokes		
A'			η		
B'					
C'					
A ¹ * 125 to	2.22338	5	B ^v to		
B ¹ * 252 °C	2420.4	5	A ^v °C		
Ac to			(B ^v)		
Bc t _c °C			(A ^v)		
Cc t _c °C			c _p liq. °K		
Cryos. A°			c _p vap. °K		
const. B°			c _v vap.		
t _e °C	423.63	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.					
¹ purity applies to n _D ^{70°C} . and d ₄ ^t					

NAME		n-Tetracosane			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₂₂ CH ₃			
Mole % Pur.	99.9 ¹	Ref.	Molecular Formula	C ₂₄ H ₅₀	Molecular Weight	338,640		
		Ref.			Ref.			
F. P. °C	50.9	2	dt/dP °C/mm			f	to	
F. P. 100%			138.4°C.		154.37	g	°K.	
B. P. °C	391.3	2	BP		0.0683	h		
760 mm	302.82	4	t _e		0.0358	f'	to	
100	262.46	4	30 mm		1.021	g'	°K.	
30	231.3	5	ΔHm cal/g		38.74	h'		
10	178.7	5	ΔHv cal/g			m	to	
Pressure °C	0.1	5	138.4°C.		64.4	n	°K.	
mm 138.4	1694.4	5	30 mm		54.93	o		
t _e			BP		44.05			
Density g/ml 20°C	0.7991 [‡]	2	t _e		40.59	m'	to	
25	0.7958 [‡]	2	t _e (d, e)		40.35	n'	°K.	
d ₄ 70	0.7657 [‡]	3	ΔHv/T _e		19.40	o'		
a	0.8123	4	d 1260 to	77.09	5	Surface tension dynes/cm. 20°C		
b	-0.0366	4	e 435 to	0.0844	5	‡	27.47	
Ref. Index n _D 20°C	1.4480 [‡]	2	d' 135 to	74.96	5	30	26.58	
25	1.4460 [‡]	2	e' 260 °C	0.0763	5	40	25.70	
70	1.4286 [‡]	3	d c g/ml			40		
"C"	0.7427	5	v c ml/g			Sugd.	970.2	
MR (Obs.)	113.44 [‡]	2	t c °C					
MR (Calc.)	113.032	5	P c mm					
(nD-d/2)	1.0484 [‡]	2	PV/RT					
Dielectric	2.10	5	138.4°C.	1.0000	5	Exp. L. l. %/wt. u.		
A 260 to	7.53923	5	30 mm	1.0000	5	Dispersion		
B 500 °C	2591.9	5	BP	0.8933	5	98. [‡]		
C	165.1	5	t _e	0.8583	5	Flash Point °C		
A* 260 to	2.35245	5	t _c			Fire Point		
B* 450 °C	2509.5	5	ΔHc kcal/m			M Spec.		
K			ΔHf			Ultra V.		
c			ΔFf			X-Ray Dif.		
t _k to			Viscosity centistokes			Infrared		
t _x °C			η			Solubility in +		
A' to						Acetone		
B' °C			B ^v to			Carbon tet.		
C' °C			A ^v °C			Benzene		
A' 135 to	2.26522	5	(B ^v) to			Ether		
B' 260 °C	2472.2	5	(A ^v) °C			n-Heptane		
Ac to			c _p liq. °K			Ethanol		
Bc t _c °C			c _p vap. °K			Water		
Cc °C			c _v vap.			Water in		
Cryos. A° const. B°								
t _e °C	436.24	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.								
1 purity applies to n _D 70°C. and d ₄								

NAME		n-Pentacosane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₃ CH ₃		
Mole % Pur.	99.8 ¹	Ref.	3	Molecular Formula	C ₂₅ H ₅₂	Molecular Weight	352.666
F.P. °C	53.7	Ref.	2	dt/dP °C/mm		f	to
F.P. 100%				145.7°C.	156.7	g	°K
B.P. °C				BP	0.0690	h	
760 mm	401.9	2		t _e	0.0357	f'	to
100	312.36	4		30 mm	1.0345	g'	°K
30	271.48	4		ΔHm cal/g	39.13	h'	
10	239.87	5				m	to
1	186.55	5		ΔHv cal/g		n	°K
Pressure°C				145.7°C.	63.08	o	
mm 145.7	0.1	5		30 mm	53.82		
t _e	1720.0	5		BP	43.12	m'	to
Density g/ml 20°C	0.8012 [‡]	2		t _e	39.64	n'	°K
25	0.7979 [‡]	2		t _e (d, e)	40.36	o'	
d ₄ 70	0.7693 ¹	3		ΔHv/T _e	19.84		
a	0.8144	4		d	76.09	Surface tension dynes/cm. 20°C	
b	-0.0366	4		e	0.447	27.63	5
Ref. Index n _D 20°C	1.4491 [‡]	2		d'	0.447	30	5
25	1.4471 [‡]	2		e'	140	40	5
70	1.4302 ¹	3			0.0737		
"C"	0.7424	5		d		Parachor [P] 20°C	
MR (Obs.)	118.09 [‡]	2		e		30	
MR (Calc.)	117.65	5		d'		40	1009.2
(nD-d/2)	1.0485 [‡]	2		e'		Sugd.	5
Dielectric	2.10	5					
A 270 to	7.55835	5		d		Exp. L.l. %/wt.	
B 500 °C	2642.8	5		e		u.	
C	163.1	5		d'		Dispersion	98. [‡]
A* 270 to	2.38417	5		e'		Flash Point °C	
B* 460 °C	2560.0	5				Fire Point	
K						M. Spec. Ultra V. X-Ray Dif. Infrared	
t _k to						Solubility in Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
t _x °C							
A'							
B'							
C'							
A' 140 to	2.29501	5					
B' 270 °C	2521.2	5					
Acl to							
Bc t _c °C							
Cc							
Cryos. A° const. B°							
t _e °C	448.26	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.

¹ purity applies to n_D^{70°C.} and d₄^t

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		n-Hexacosane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₄ CH ₃		
Mole % Pur.	99.8 ¹	Ref. 3	Molecular Formula C ₂₆ H ₅₄	Molecular Weight 366.692			
		Ref.			Ref.		
F.P. °C	56.4	2	dt/dP °C/mm			f to	
F.P. 100%			152.75°C.			g °C	
B.P. °C	412.2	2	BP		158.97	h	
760 mm	321.64	4	t _e		0.0698	h'	
100	280.25	4	30 mm		0.0356	g' to	
30	248.22	4			1.0477	h' °C	
10	194.18	5					
1		5	ΔHm cal/g				
Pressure °C			ΔHv cal/g			m to	
mm 152.75	0.1	5	152.75°C.		61.84	n °K	
t _e	1746.1	5	30 mm		52.78	o	
			BP		42.24		
Density g/ml 20°C	0.8032 [‡]	2	t _e		38.72	m' to	
d ₄ ^t 25	0.7998 [‡]	2	t _e (d, e)		39.42	n' °K	
d ₄ ^t 70	0.7704 [‡]	3	ΔHv/T _e		19.82	o'	
a	0.8168	4	d 278 to	75.17	5	Surface tension dynes/cm. 20°C	
b	-0.0368	4	e 460 °C	0.0799	5	y	27.79
			d' 140 to	72.68	5	30	26.86
Ref. Index n _D 20°C	1.4501 [‡]	2	e' 278 °C	0.0710	5	40	25.95
25	1.4481 [‡]	2	d _c g/ml			Parachor [P] 20°C	
70	1.4310 [‡]	3	v _c ml/g			30	
"C"	0.7421	5	t _c °C			40	
MR (Obs.)	122.73 [‡]	2	P _c mm			Sugd.	1048.2
MR (Calc.)	122.268	5	PV/RT			Exp. L. l. %/wt. u.	
(n _D -d/2)	1.0485 [‡]	2	152.75°C.		1.0000	Dispersion 98. [‡]	
Dielectric	2.103	5	30 mm		1.0000	Flash Point °C	
A 278 to	7.57689	5	BP		0.8924	Fire Point	
B 500 °C	2692.73	5	t _e		0.8560	M Spec. Ultra V.	
C	161.2	5	t _c			X-Ray Dif. Infrared	
A* 278 to	2.41467	5	ΔHc kcal/m			Solubility in ⁺	
B* 470 °C	2609.5	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to			η °C			Ether	
t _x °C						n-Heptane	
A'						Ethanol	
B'						Water	
C'						Water in	
A' * 140 to	2,32296	5	B ^v to				
B' * 278 °C	2569.0	5	A ^v °C				
Ac to			(B ^v)				
Bc t _c °C			(A ^v)				
Cc			c _p liq. °C				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	459.98	5	c _v vap.				
‡ 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.							

¹ purity applies to n_D^{70°C} and d₄^t

NAME		n-Heptacosane			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_{25}\text{CH}_3$		
Mole % Pur.	99.0 ¹	Ref.	3	Molecular Formula	$\text{C}_{27}\text{H}_{56}$	Molecular Weight	380.718
		Ref.				Ref.	
F.P. °C	59.0	2		dt/dP °C/mm			
F.P. 100%				159.55°C.	161.13	5	f to °K
B.P. °C				BP	0.070	2	g
760 mm	422.1	2		t _e	0.03463	5	h
100	330.55	4		30 mm	1.0544	5	f' to °K
30	288.67	4		ΔHm cal/g	37.93	3	g'
10	256.26	5					h'
1	201.54	5		ΔHv cal/g			m to °K
Pressure °C				159.55°C.	60.65	5	n
mmHg	59.55	5		30 mm	51.8	5	o
t _e	1770.4	5		BP	41.4	5	
Density g/ml	20°C			t _e	38.6	5	m' to °K
d ^t 25	0.8050 [‡]	2		t _e (d, e)	38.76	5	n'
d ^t 70	0.8016 [‡]	2		ΔHv/T _e	19.90	5	o'
	0.7732 ¹	3					
a	0.8186	4		d 285 to °C	74.30	5	Surface tension dynes/cm. 20°C
b	-0.0368	4		e 470 to °C	0.0779	5	γ
Ref. Index n _D 20°C	1.4511 [‡]	2		d' 150 to °C	71.58	5	30
25	1.4491 [‡]	2		e' 285 °C	0.0685	5	40
70	1.4321 ¹	3					26.09
"C"	0.7420	4		d _c g/ml			Parachor [P] 20°C
MR (Obs.)	127.37 [‡]	2		v _c ml/g			30
MR (Calc.)	126.886	5		t _c °C			40
(n _D -d/2)	1.0486 [‡]	2		P _c mm			Sugd. 1087.2
Dielectric	2.11	5		PV/RT			Exp. L. l. %/wt. u.
A 285 to °C	7.59371	5		159.55°C.	1.0000	5	Dispersion
B 520 °C	2740.08	5		30 mm	1.0000	5	98. [‡]
C	159.3	5		BP	0.8919	5	Flash Point °C
A* 285 to °C	2.4430	5		t _e	0.8548	5	Fire Point
B* 500 °C	2656.4	5		t _e			M. Spec. Ultra V. X-Ray Dif. Infrared
K				ΔHc kcal/m			Solubility in ⁺ Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
t _k to °C				ΔHf			
t _x				ΔFf			
A'				Viscosity centistokes η °C			
B'							
C'							
A' 150 to °C	2.35017	5		B _v to °C			
B' 285 °C	2614.8	5		A _v			
Ac to °C				(B _v)			
Bc t _c °C				(A _v)			
Cc t _c °C				c _p liq. °K			
Cryos. A° const. B°				c _p vap. °K			
t _e °C	471.24	5		c _v vap.			
‡ 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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.							
¹ purity applies to n _D ^{70°C} and d ₄ ^t							

NAME		n-Octacosane			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₂₆ CH ₃			
Mole % Pur.	99.0 ¹	Ref.	Molecular Formula	C ₂₈ H ₅₈	Molecular Weight	394.744		
		Ref.				Ref.		
F. P. °C	61.4	2	dt/dP °C/mm			f to °K		
F. P. 100%			0.1 mm	163.21	5	g		
B. P. °C	431.6	2	BP	0.071	2	h		
760 mm	339.10	4	t _e	0.03475	5	f' to °K		
100	296.76	4	30 mm	1.0682	5	g'		
30	263.97	5	ΔHm cal/g		3	h'		
10	208.58	5	ΔHv cal/g			m to °K		
1	166.06	5	0.1 mm	59.50	5	n		
0.1			30 mm	50.8	5	o		
Press. mm	1737.2	5	BP	40.6	5	m' to °K		
t _e			t _e	37.8	5	n'		
Density g/ml 20°C	0.8067 [‡]	2	t _e (d, e)	37.77	5	o'		
d ^t 25	0.8033 [‡]	2	ΔHv/T _e	19.79	5	Surface tension dynes/cm. 20°C		
d ₄ 70	0.7750 ¹	3				30	28.06	5
a	0.8203	4	d 295 to	73.25	5	40	27.12	5
b	-0.0368	4	e 480 °C	0.0756	5		26.21	5
Ref. Index n _D 20°C	1.4520 [‡]	2	d' 162 to	70.56	5	Parachor [P] 20°C		
25	1.4500 [‡]	2	e' 295 °C	0.0666	5	30		
70	1.4330 ¹	3				40		
"C"	0.7418	4	d _c g/ml			Sugd.	1126.2	5
MR (Obs.)	132.01 [‡]	2	v _c ml/g			Exp. L. l. %/wt. u.		
MR (Calc.) (nD-d/2)	131.504	5	t _c °C			Dispersion		98. [‡]
Dielectric	2.11	5	P _c mm			Flash Point °C		
A 295 to	7.60972	5	PV/RT			Fire Point		
B 520 °C	2785.80	5	0.1 mm	1.0000	5	M Spec. Ultra V. X-Ray Dif. Infrared		
C			30 mm	1.0000	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
A* 295 to	2.47084	5	BP	0.8912	5			
B* 490 °C	2702.8	5	t _e	0.8535	5			
K			t _c					
c			ΔHc kcal/m					
t _x to °C			ΔHf					
t _x to °C			ΔFf					
A' to °C			Viscosity centistokes °C					
B' to °C			η					
C' to °C								
A'* 162 to	2.37498	5						
B'* 295 °C	2658.5	5						
Ac to °C								
Bc to °C								
Cc to °C								
Cryos. A° const. B°								
t _e °C	480.	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.								
1 purity applies to n _D ^{70°C} and d ₄ ^t								

NAME		n-Nonacosane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₇ CH ₃		
Mole % Pur.	99.5	Ref. 3	Molecular Formula C ₂₉ H ₆₀	Molecular Weight 408.770			
		Ref.			Ref.		Ref.
F.P. °C	63.7	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	165.23	5	g	°K
B.P. °C			BP	0.071	5	h	---
760 mm	440.8	2	t _e	0.0347	5	f'	to
100	347.38	4	30 mm	1.0796	5	g'	°K
30	304.59	4	ΔHm cal/g			h'	
10	271.43	5	ΔHv cal/g			m	to
1	215.40	5	0.1 mm	58.40	5	n	°K
0.1	172.36	5	30 mm	49.9	5	o	
Press. mm			BP	39.8	5	m'	to
t _e	1816.9	5	t _e	37.1	5	n'	°K
Density g/ml 20°C			t _e (d, e)	36.94	5	o'	
d ₄ ^t 25	0.8083 [#]	2	ΔHv/T _e	19.78	5	Surface tension dynes/cm. 20°C	
d ₄ ^t 30	0.8049 [#]	2				28.18 [#]	5
d ₄ ^t 30	0.8015 [#]	4	d 302 to	72.49	5	30	27.25 [#]
a	0.8219 [#]	4	e 491 °C	0.0742	5	40	26.33 [#]
b	-0.0368 [#]	4	d' 169 to	69.47	5	Parachor [P]	
Ref. Index n _D 20°C			e' 302 °C	0.0643	5	20°C	
25	1.4529 [#]	2	d _c g/ml			30	
30	1.4508 [#]	2	v _c ml/g			40	
"C"	0.7418	4	t _c °C			Sugd.	1165.2
MR (Obs.)	136.65 [#]	2	P _c mm			Exp. L. l. %/wt.	
MR (Calc.)	136.122	5	PV/RT			u.	
(nD-d/2)	1.0487 [#]	2	0.1 mm	1.0000	5	Dispersion	98. [#]
Dielectric	2.11	5	30 mm	1.0000	5	Flash Point °C	
A 302 to	7.62529	5	BP	0.8910	5	Fire Point	
B 500 °C	2830.55	5	t _e	0.8527	5	M. Spec.	
C			t _c			Ultra V.	
A* 302 to	2.49691	5	ΔHc kcal/m			X-Ray Dif.	
B* 501 °C	2746.2	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)			Ethanol	
A* 169 to	2.39938	5	(A ^v)			Water	
B* 302 °C	2701.3	5	c _p liq. °K			Water in	
Ac to			c _p vap. °K				
Bc t _c °C			c _v vap.				
Cc t _c °C							
Cryos. A°							
const. B°							
t _e °C	492.51	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: 3 JACS 77(2019) 1955 Schoerer A. A. et al.							

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NAME		n-Triacontane				STRUCTURAL FORMULA	
						CH ₃ (CH ₂) ₂₈ CH ₃	
Mole % Pur.	99.0 ¹	Ref. 3	Molecular Formula C ₃₀ H ₆₂	Molecular Weight 422.796			
		Ref.			Ref.		
F.P. °C	65.8	2	dt/dP °C/mm			f to	
F.P. 100%			0.1 mm	167.20	5	g °K	
B.P. °C			BP	0.072	5	h	
760 mm	449.7	2	t _e	0.03469	5	f' to	
100	355.40	4	30 mm	1.0907	5	g' °K	
30	312.16	4	ΔHm cal/g			h'	
10	278.65	5	ΔHw cal/g			m to	
1	222.00	5	0.1 mm	57.33	5	n °K	
0.1	178.46	5	30 mm	49.0	5	o	
Press. mm	1838.9	5	BP	39.1	5	m' to	
t _e			t _e	36.3	5	n' °K	
Density g/ml 20°C	0.8097 [‡]	2	t _e (d, e)	36.13	5	o'	
25	0.8064 [‡]	2	ΔHv/T _e	19.77	5		
d ₄ ^t 25	0.8031	4	d 309 to	71.47	5	Surface tension dynes/cm. 20°C	
d ₄ ^t 30			e 510 °C	0.0720	5	30	28.29
a	0.8229	4	d' 170 to	68.45	5	40	27.37
b	-0.0366	4	e' 309 °C	0.0623	5		26.49
Ref. Index n _D 20°C	1.4536 [‡]	2	d _c g/ml			Parachor [P] 20°C	
25	1.4516 [‡]	2	v _c ml/g			30	
70	1.4348 [‡]	3	t _c °C			40	
"C"	0.7415	4	P _c mm			Sugd.	1204.2
MR (Obs.)	141.29 [‡]	2	PV/RT			Exp. L.l. %/wt. u.	
MR (Calc.) (n _D -d/2)	140.74	5	0.1 mm	1.0000	5	Dispersion	
	1.0487 [‡]	2	30 mm	1.0000	5	98. [‡]	
Dielectric	2.11	5	BP	0.8906	5	Flash Point °C	
A 309 to	7.64044	5	t _e	0.8517	5	Fire Point	
B 481 °C	2874.34	5	t _c			M Spec. Ultra V. X-Ray Dif. Infrared	
A* 309 to	2.52257	5	ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 511 °C	2789.6	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k to			η °C				
t _x °C			B ^v to				
A' to			A ^v °C				
B' °C			(B ^v) ₁				
C' °C			(A ^v) ₁				
A* 175 to	2.42407	5	c _p liq. °K				
B* 309 °C	2743.7	5	c _p vap. °K				
Ac to			c _v vap.				
Bc t _c °C							
Cc °C							
Cryos. A° const. B°							
t _e °C	502.65	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: 3 JACS 77 (2019) 1955 Schoerer A. A. et al.							
1 ¹ purity applies to n _D 70°C.							

NAME		n-Hentriacontane				STRUCTURAL FORMULA			
						CH ₃ (CH ₂) ₂₉ CH ₃			
Mole % Pur.	Ref.	Molecular Formula	C ₃₁ H ₆₄	Molecular Weight	436.822				
		Ref.			Ref.			Ref.	
F.P. °C	67.9	2	dt/dP °C/mm			f	to		
F.P. 100%			0.1 mm	169.01	5	g	°K		
B.P. °C			BP	0.073	5	h	-----		
760 mm	458.	2	t _e	0.03336	5	f'	to		
100	362.87	4	30 mm	1.0818	5	g'	°K		
30	319.23	4	ΔHm cal/g			h'			
10	285.40	5	ΔHv cal/g			m	to		
1	228.17	5	0.1 mm	56.29	5	n	°K		
0.1	184.17	5	30 mm	48.1	5	o			
Press. mm t _e	1859.3	5	BP	38.4	5	m'	to		
Density g/ml 20°C	0.8111 [‡]	2	t _e (d, e)	35.6	5	n'	°K		
d ⁴ 25	0.8078 [‡]	2	ΔHv/T _e	36.69	5	o'			
d ⁴ 30	0.8045	4		20.52	5	Surface tension dynes/cm. 20°C		28.40	5
a	0.8243	4	d 320 to	70.41	5	γ	30	27.48	5
b	-0.0366	4	-e 508 °C	0.0699	5		40	26.59	5
Ref. Index n _D 20°C	1.4543 [‡]	2	d' 180 to	67.46	5	Parachor [P] 20°C			
25	1.4523 [‡]	2	e' 320 °C	0.0607	5		30		
30	1.4503	4	d _c g/ml				40		
"C"	0.7413	4	v _c ml/g				Sugd.	1243.2	5
MR (Obs.)	145.93 [‡]	2	t _c °C			Exp. L. l. %/wt. u.			
MR (Calc.)	145.358	5	P _c mm			Dispersion	98. [‡]		2
(n _D -d/2)	1.0487	2	PV/RT			Flash Point °C			
Dielectric	2.11	5	0.1 mm	1.0000	5	Fire Point			
A 320 to	7.65344	5	30 mm	1.0000	5	M. Spec. Ultra V.			
B 485 °C	2914.17	5	BP	0.8905	5	X-Ray Dif. Infrared			
C			t _e	0.8511	5	Solubility in ⁺			
A* 320 to	2,54572	5	t _c			Acetone			
B* 518 °C	2829.	5	ΔHc kcal/m			Carbon tet.			
K			ΔHf			Benzene			
c			ΔFf			Ether			
t _k --- to			Viscosity centistokes η °C			n-Heptane			
t _x --- °C						Ethanol			
A' to			B ^v to			Water			
B' --- °C			A ^v --- °C			Water in			
C' --- °C			(B ^v) ---						
A' * 180 to	2.44635	5	(A ^v) ---						
B' * 320 °C	2782.1	5	c _p liq. °K						
Ac to			c _p vap. °K						
Bc t _c °C			c _v vap.						
Cc t _c °C									
Cryos. A° const. B°									
t _e °C	512.12	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:

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		n-Dotriacontane				STRUCTURAL FORMULA		
						CH ₃ (CH ₂) ₃₀ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₃₂ H ₆₆	Molecular Weight	450.848			
		Ref.			Ref.			
F. P. °C	69.7	2	dt/dP °C/mm			f		to
F. P. 100%			0.1 mm	171.00	5	g		°K
B. P. °C	467.	2	BP	0.073	5	h		
760 mm	370.97	4	t _e	0.0347	5	f'		to
100	326.88	4	30 mm	1.1119	5	g'		°K
30	292.69	4	ΔHm cal/g			h'		
10	234.83	4	0.1 mm	55.37	5	m		to
1	190.32	5	30 mm	47.1	5	n		°K
0.1			BP	38.24	5	o		
Press. mm	1884.1	5	t _e	35.0	5	m'		to
t _e			t _e (d, e)	34.67	5	n'		°K
Density	0.8124 [‡]	2	ΔHv/T _e	19.71	5	o'		
g/ml 20°C	0.8091 [‡]	2	d 324 to	67.70	5	Surface tension		
d ^t 25	0.8091 [‡]	2	e 520 to	0.0632	5	dynes/cm. 20°C		
d ⁴ 30	0.8058	4	d' 186 to	66.96	5	28.50 5		
			e' 324 °C	0.0609	5	30 27.58 5		
a	0.8256	4	d c g/ml			40 26.69 5		
b	-0.0366	4	v _c ml/g			Parachor [P]		
Ref. Index	1.4550 [‡]	2	t _c °C			20°C		
n _D 25	1.4530 [‡]	2	P _c mm			30		
30	1.4516	4	PV/RT			40		
"C"	0.7412	4	0.1 mm	1.0000	5	Sugd. 1282.2 5		
MR (Obs.)	150.57 [‡]	2	30 mm	1.0000	5	Exp. L.l. %/wt.		
MR (Calc.)	149.976	2	BP	0.8910	5	u.		
(n _D -d/2)	1.0488 [‡]	5	t _e	0.8500	5	Dispersion 98. [‡] 2		
Dielectric	2.12	5	t _c			Flash Point °C		
A 324 to	7.66838	5	ΔHc kcal/m			Fire Point		
B 530 °C	2958.7	5	ΔHf			M Spec.		
C			ΔFf			Ultra V.		
A* 324 to	2.56852	5	Viscosity			X-Ray Dif.		
B* 530 °C	2872.3	5	centistokes			Infrared		
K			η °C			Solubility in +		
c						Acetone		
t _k to						Carbon tet.		
t _x °C						Benzene		
A' to						Ether		
B' °C						n-Heptane		
C' °C						Ethanol		
A' 186 to	2.46864	5	B ^v to			Water		
B' 324 °C	2824.6	5	A ^v °C			Water in		
Ac to			(B ^v)					
Bc t _c °C			(A ^v)					
Cc °C			c _p liq. °K					
Cryos. A ^o			c _p vap. °K					
const. B ^o			c _v vap.					
t _e °C	522.46	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:								

NAME		n-Tritriacontane			STRUCTURAL FORMULA			
Mole % Pur.		Ref.	Molecular Formula C ₃₃ H ₆₈	Molecular Weight 464.874	CH ₃ (CH ₂) ₃₁ CH ₃			
F. P. °C	71.4	2	dt/dP °C/mm		Ref.	f	to	Ref.
F. P. 100%			0.1 mm	172.76	5	g	°K	
B. P. °C			BP	0.074	5	h	-----	
760 mm	475.	2	t _e	0.03462	5	f'	to	
100	378.17	4	t _e (d, e)	1.1221	5	g'	°K	
30	333.70	4	ΔHm cal/g			h'		
10	299.19	5	0.1 mm	54.42	5	m	to	
1	240.77	5	30 mm	46.5	5	n	°K	
0.1	195.81	5	BP	37.1	5	o		
Press. mm t _e	1900.8	5	t _e	34.3	5	m'	to	
Density g/ml 20°C	0.8136 [‡]	2	t _e	33.99	5	n'	°K	
25	0.8103 [‡]	2	ΔHv/T _e	19.69	5	o'		
d ₄ 30	0.8070	4	d 330 to	68.70	5	Surface tension dynes/cm. 20°C		
a	0.8268	4	e 529 °C	0.0665	5	γ	28.59	5
b	-0.0366	4	d' 190 to	65.66	5		30	5
Ref. Index n _D 20°C	1.4557 [‡]	2	e' 330 °C	0.0574	5		40	5
25	1.4536 [‡]	2	d _c g/ml			Parachor [P] 20°C		
30	1.4517	4	v _c ml/g				30	
"C"	0.7412	4	t _c °C				40	
MR (Obs.)	155.21 [‡]	2	P _c mm			Sugd.	1321.2	5
MR (Calc.) (nD-d/2)	154.594	5	PV/RT			Exp. L. l. %/wt. u.		
Dielectric	1.0488 [‡]	2	0.1 mm	1.0000	5	Dispersion		98. [‡]
A 330 to	7.68082	5	30 mm	1.0000	5	Flash Point °C		
B 539 °C	2997.60	5	BP	0.8895	5	Fire Point		
C			t _e	0.8491	5	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 330 to	2.59301	5	ΔHc kcal/m			Solubility in ⁺		
B* 539 °C	2912.0	5	ΔHf			Acetone		
K			ΔFf			Carbon tet.		
t _k to			Viscosity centistokes			Benzene		
t _k °C			η °C			Ether		
A' to			B ^v to			n-Heptane		
B' °C			A ^v °C			Ethanol		
C' °C			(B ^v)			Water		
A** 185 to	2.48943	5	(A ^v)			Water in		
B** 330 °C	2862.0	5	c _p liq. °K					
Ac to			c _p vap. °K					
Bc t _c °C			c _v vap.					
Cc °C								
Cryos. A° const. B°								
t _e °C	531.48	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. 174

NAME		n-Tetatriacontane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₃₄ H ₇₀	Molecular Weight	478.900		
F. P. °C	73.1	2	dt/dP °C/mm			f	to
F. P. 100%			0.1 mm	174.29	5	g	°K
B. P. °C	482.	2	BP	0.074	5	h	+
760 mm	384.47	4	t _e	0.03457	5	f'	to
100	339.65	4	30 mm	1.1310	5	g'	°K
30	304.87	5	ΔHm cal/g			h'	
10	245.97	5	ΔHv cal/g			m	to
1	200.62	5	0.1 mm	53.44	5	n	°K
0.1			30 mm	45.7	5	o	
Press. mm	1918.5	5	BP	36.4	5	m'	to
t _e			t _e	33.7	5	n'	°K
Density g/ml 20°C	0.8148 [‡]	2	t _e (d, e)	33.32	5	o'	
25	0.8115 [‡]	2	ΔHv/T _e	19.69	5		
d ₄ ^t 30	0.8082	4	d 336 to	67.89	5	Surface tension dynes/cm. 20°C	
a	0.8280	4	e 537 °C	0.0653	5	30	28.68
b	-0.0366	4	d' 190 to	64.60	5	40	27.77
Ref. Index n _D 20°C	1.4563 [‡]	2	e' 336 °C	0.0557	5		26.87
25	1.4542 [‡]	2	d _c g/ml			Parachor [P]	
30	1.4524	4	v _c ml/g			20°C	
"C"	0.7410	4	t _c °C			30	
MR (Obs.)	159.85 [‡]	2	P _c mm			40	
MR (Calc.) (n _D -d/2)	159.212	5	PV/RT			Sugd.	1360.2
	1.0488 [‡]	2	0.1 mm	1.0000	5	Exp. L. l. %/wt.	
Dielectric	2.12	5	30 mm	1.0000	5	u.	
A 336 to	7.69164	5	BP	0.8895	5	Dispersion	98. [‡]
B 547 °C	3031.78	5	t _e	0.8486	5	Flash Point °C	
C			t _c			Fire Point	
A* 336 to	2.61320	5	ΔHc kcal/m			M Spec.	
B* 547 °C	2945.7	5	ΔHf			Ultra V.	
K			ΔFf			X-Ray Dif.	
c			Viscosity centistokes			Infrared	
t _k to			η °C			Solubility in +	
t _x °C						Acetone	
A' to			B ^v to			Carbon tet.	
B' °C			A ^v °C			Benzene	
C' °C			(B ^v)			Ether	
A* 190 to	2.50973	5	(A ^v)			n-Heptane	
B* 336 °C	2895.2	5	c _p liq. °K			Ethanol	
Ac to			c _p vap. °K			Water	
Bc t _c °C			c _v vap.			Water in	
Cc °C							
Cryos. A° const. B°							
t _e °C	539.49	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:							

NAME		n-Pentatriacontane				STRUCTURAL FORMULA			
						$\text{CH}_3(\text{CH}_2)_{33}\text{CH}_3$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{35}\text{H}_{72}$	Molecular Weight	492.926				
		Ref.			Ref.				
F.P. °C	74.7	2	dt/dP °C/mm			f	to		
F.P. 100%			0.1 mm	176.04	5	g	°K		
B.P. °C			BP	0.0754	5	h	---		
760 mm	490.	2	t _e	0.03453	5	f'	to		
100	391.68	4	30 mm	1.141	5	g'	°K		
30	346.47	4	ΔHm cal/g			h'			
10	311.36	5	ΔHv cal/g			m	to		
1	251.90	5	0.1 mm	52.60	5	n	°K		
0.1	206.10	5	30 mm	45.0	5	o			
Press. mm	1938.5	5	BP	35.8	5	m'	to		
t _e			t _e (d, e)	33.1	5	n'	°K		
Density g/ml 20°C	0.8157 [‡]	2	t _e	32.73	5	o'			
25	0.8124 [‡]	2	ΔHv/T _e	19.67	5	Surface tension dynes/cm. 20°C			
d ₄ 30	0.8093	4	d 343 to	67.21	5	γ	28.74	5	
a	0.8289	4	e 546 °C	0.0641	5		30	27.85	5
b	-0.0366	4	d' 200 to	63.76	5	Parachor [P]			
Ref. Index			e' 343 °C	0.0541	5		20°C		
n _D 20°C	1.4568 [‡]	2	d _c g/ml				30		
25	1.4548 [‡]	2	v _c ml/g				40		
30	1.4529	4	t _c °C				Sugd.	1399.2	5
"C"	0.7408	4	P _c mm			Exp. L. 1. %/wt.			
MR (Obs.)	164.49 [‡]	2	PV/RT			u.			
MR (Calc.)	163.83	5	0.1 mm	1.0000	5	Dispersion	98. [‡]	2	
(n _D -d/2)	1.0489 [‡]	2	30 mm	1.0000	5	Flash Point °C			
Dielectric	2.12	5	BP	0.8892	5	Fire Point			
A 343 to	7.70371	5	t _e	0.8478	5	M. Spec.			
B 505 °C	3070.74	5	t _c			Ultra V.			
C	147.	5	ΔHc kcal/m			X-Ray Dif.			
A* 343 to	2.63438	5	ΔHf			Infrared			
B* 546 °C	2984.4	5	ΔFf			Solubility in ⁺			
K			Viscosity centistokes			Acetone			
c			η °C			Carbon tet.			
t _k to						Benzene			
t _x °C						Ether			
A' to						n-Heptane			
B' °C						Ethanol			
C' °C						Water			
A' * 200 to	2.52835	5	B ^v to			Water in			
B' * 343 °C	2932.1	5	A ^v °C						
Acl to			(B ^v)						
Bc t _c °C			(A ^v)						
Cc °C			c _p liq. °K						
Cryos. A ^o const. B ^o			c _p vap. °K						
t _e °C	548.62	5	c _v vap.						

‡ 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:

NAME		n-Hexatriacontane				STRUCTURAL FORMULA					
						$\text{CH}_3(\text{CH}_2)_{34}\text{CH}_3$					
Mole % Pur.	99.0	Ref. 3	Molecular Formula	$\text{C}_{36}\text{H}_{74}$	Molecular Weight	506.952					
F. P. °C	76.2	2	dt/dP °C/mm				f		to		
F. P. 100%			0.1 mm		177.75	5	g		°K		
B. P. °C			BP		0.0759	5	h		---		
760 mm	497.	2	t _e		0.0355	5	f'		to		
100	397.98	4	t _e (d, e)				g'		°K		
30	352.43	4	ΔHm cal/g				h'				
10	317.06	5	ΔHv cal/g				m		to		
1	257.11	5	0.1 mm			5	n		°K		
0.1	210.93	5	30 mm		43.65	5	o				
Press. mm	1938.	5	BP		35.2	5	m'		to		
Density g/ml 20°C	0.8169 [‡]	2	t _e		31.23	5	n'		°K		
25	0.8136 [‡]	2	t _e (d, e)		31.7	5	o'				
d ₄ ^t 30	0.8103	4	ΔHv/T _e		19.09	5	Surface tension dynes/cm. 20°C				
a	0.8301	4	d 349 to		64.22	5	γ		30	28.85	5
b	-0.0366	4	e 554 °C		0.0584	5			40	27.93	5
Ref. Index n _D 20°C	1.4573 [‡]	2	d'				Parachor [P] 20°C				
25	1.4554 [‡]	2	e'						30		
30	1.4534	4	d _c g/ml						40		
"C"	0.7406	4	v _c ml/g						Sugd.	1438.2	5
MR (Obs.)	169.13 [‡]	2	t _c °C				Exp. L. l. %/wt. u.				
MR (Calc.)	168.448	5	P mm				Dispersion				
(n _D -d/2)	1.0489 [‡]	2	PV/RT				Flash Point °C				
Dielectric	2.12	5	0.1 mm		1.0000	5	Fire Point				
A 349 to	7.71344	5	30 mm		1.0000	5	M Spec. Ultra V. X-Ray Dif. Infrared				
B 560 °C	3104.00	5	BP		0.8852	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in				
C	145.	5	t _e		0.8397	5					
A* 349 to	2.65726	5	t _c								
B* 560 °C	3017.4	5	ΔHc kcal/m								
K			ΔHf								
c			ΔFf								
t _x	to		Viscosity centistokes								
t _x	°C		γ °C								
A'	to		B ^v								
B'	to		A ^v								
C'	°C		(B ^v)								
A* to			(A ^v)								
B* °C			c _p liq. °K								
Ac	to		c _p vap. °K								
Bc	°C		c _v vap.								
Cc	°C										
Cryos. A° const. B°											
t _e °C	556.3	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:											

NAME		n-Heptatriacontane			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₃₅ CH ₃				
Mole % Pur.	Ref.	Molecular Formula	C ₃₇ H ₇₆	Molecular Weight	520.978				
F.P. °C	77.7	Ref.	2	dt/dP °C/mm		Ref.			
F.P. 100%				0.1 mm	179.09	5	f to °K		
B.P. °C				BP	0.0764	5	g		
760 mm	504.	2	2	t _e	0.3449	5	h		
100	404.28	4	4	30 mm	1.1590	5	f' to °K		
30	358.39	4	4	ΔHm cal/g			g'		
10	322.74	5	5	ΔHv cal/g			h'		
1	262.32	5	5	0.1 mm	50.91	5	m to °K		
0.1	215.74	5	5	30 mm	43.6	5	n		
Press. mm				BP	34.6	5	o		
t _e	1973.0	5	5	t _e	32.0	5	m' to °K		
Density g/ml 20°C	0.8179 [‡]	2	2	t _e (d, e)	31.54	5	n'		
d _t 25	0.8146 [‡]	2	2	ΔHv/T _e	19.61	5	o'		
d ₄ 30	0.8113	4	4	d 355 to °C	65.75	5	Surface tension dynes/cm. 20°C		
a	0.8311	4	4	e 562 to °C	0.0618	5	γ	28.93	5
b	-0.0366	4	4	d' 210 to °C	61.96	5	30	28.00	5
Ref. Index n _D 20°C	1.4578 [‡]	2	2	e' 355 °C	0.0512	5	40	27.10	5
25	1.4559 [‡]	2	2	d _c g/ml			Parachor [P] 20°C		
30	1.4539	4	4	v _c ml/g			30		
"C"	0.7405	4	4	t _c °C			40		
MR (Obs.)	173.77 [‡]	2	2	P _c mm			Sugd.	1477.2	5
MR (Calc.)	173.066	5	5	PV/RT			Exp. L.l. %/wt. u.		
(nD-d/2)	1.0489 [‡]	2	2	0.1 mm	1.0000	5	Dispersion	98. [‡]	2
Dielectric	2.13	5	5	30 mm	1.0000	5	Flash Point °C		
A 355 to °C	7.72381	5	5	BP	0.8888	5	Fire Point		
B 570 °C	3138.26	5	5	t _e	0.8465	5	M. Spec. Ultra V.		
C	144.	5	5	ΔHc kcal/m			X-Ray Dif.		
A* 355 to °C	2.67222	5	5	ΔHf			Infrared		
B* 570 °C	3051.3	5	5	ΔFf			Solubility in ⁺		
K				Viscosity centistokes η °C			Acetone		
t _k to °C							Carbon tet.		
t _x to °C							Benzene		
A' to °C							Ether		
B' to °C							n-Heptane		
C' to °C							Ethanol		
A' * 210 to °C	2,565.11	5	5	B ^v to °C			Water		
B' * 355 °C	2997.5	5	5	A ^v to °C			Water in		
Ac to °C				(B ^v)					
Bc to °C				(A ^v)					
Cc to °C				c liq. °K					
Cryos. A° const. B°				c vap. °K					
t _e °C	564.63	5	5	c _v vap.					

[‡] 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. 178

NAME		n-Octatriacontane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₆ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₃₈ H ₇₈	Molecular Weight	535.004		
F. P. °C	79.0	2				f	to
F. P. 100%						g	°K
B. P. °C						h	
760 mm	511.	2		180.62	5		
100	410.58	4		0.076	5		
30	364.35	4		0.03444	5		
10	328.43	5		1.1679	5		
1	267.51	5					
0.1	220.55	5					
Press. mm							
t _e	1990.2	5					
Density							
g/ml 20°C	0.8188 [‡]	2					
d ₄ ^t 25	0.8155 [‡]	2					
d ₄ ^t 30	0.8122	4					
a	0.8320	4					
b	-0.0366	4					
Ref. Index							
n _D 20°C	1.4583 [‡]	2					
25	1.4564 [‡]	2					
30	1.4543	4					
"C"	0.7404	4					
MR (Obs.)	178.41 [‡]	2					
MR (Calc.)	177.684	5					
(n _D -d/2)	1.0489 [‡]	2					
Dielectric	2.13	5					
A 361 to	7.73405	5					
B 521°C	3172.56	5					
C							
A* 361 to	2.69112	5					
B* 580°C	3085.4	5					
K							
c							
t _k --- to							
t _x --- °C							
A' --- to							
B' --- °C							
C' --- °C							
A* 216 to	2.58304	5					
B* 361°C	3030.2	5					
Ac to							
Bc t _c °C							
Cc t _c °C							
Cryos. A°							
const. B°							
t _e °C	572.63	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:							

NAME		n-Nonatriacontane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₇ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₃₉ H ₈₀	Molecular Weight	549.030		
F.P. °C	80.3	2				f	to
F.P. 100%						g	°K
B.P. °C						h	
760 mm	518.	2		dt/dP °C/mm	182.18	5	
100	416.88	4		0.1 mm	0.076	5	
30	370.30	4		BP	0.0345	5	
10	334.10	5		t _e	1.1755	5	
1	272.69	5		30 mm			f'
0.1	225.33	5		ΔHm cal/g			g'
Press. mm	2007.1	5					h'
t _e				ΔHv cal/g			m
Density				0.1 mm	49.37	5	n
g/ml 20°C	0.8197 [‡]	2		30 mm	42.3	5	o
d ₄ ^t	0.8164 [‡]	2		BP	33.6	5	
d ₄ ³⁰	0.8131	4		t _e	30.9	5	m'
				t _e (d, e)	30.43	5	n'
				ΔHv/T _e	19.54	5	o'
a	0.8329	4		d 366 to	64.11	5	
b	-0.0366	4		e 577 °C	0.0589	5	
Ref. Index				d' 220 to	60.35	5	
n _D 20°C	1.4588 [‡]	2		e' 366 °C	0.0488	5	
25	1.4568 [‡]	2		d _c g/ml			
30	1.4549	4		v _c ml/g			
"C"	0.7404	4		t _c °C			
MR (Obs.)	183.05 [‡]	2		P _c mm			
MR (Calc.)	182.302	5		PV/RT			
(n _D -d/2)	1.0490 [‡]	2		0.1 mm	1.0000	5	
Dielectric	2.13	5		30 mm	1.0000	5	
A 366 to	7.74491	5		BP	0.8881	5	
B 523 °C	3207.87	5		t _e	0.8451	5	
C				t _c			
A* 366 to	2.71037	5		ΔHc kcal/m			
B* 587 °C	3120.5	5		ΔHf			
K				ΔFf			
c				Viscosity			
t _k to				centistokes			
t _x °C				η			
A' to							
B' °C							
C'							
A' 220 to	2.60082	5		B _v to			
B' 366 °C	3064.4	5		A _v °C			
Ac to				(B _v)			
Bc t _c °C				(A _v)			
Cc °C				c _p liq. °K			
Crys. A°				c _p vap. °K			
const. B°				c _v vap.			
t _e °C	580.62	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:

NAME		n-Tetracontane			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₈ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₄₀ H ₈₂	Molecular Weight	563.056		
F.P. °C	81.5	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	183.66	5	g	°K
B.P. °C			BP	0.077	5	h	---
760 mm	525.	2	t _e	0.03460	5	f'	to
100	423.19	4	t _e (d, e)	1.1871	5	g'	°K
30	376.27	4	ΔHm cal/g			h'	
10	339.79	5	ΔHv cal/g			m	to
1	277.91	5	0.1 mm	48.68	5	n	°K
0.1	230.17	5	30 mm	41.7	5	o	
Press. mm	2025.3	5	BP	33.1	5	m'	to
Density g/ml 20°C			t _e	30.5	5	n'	°K
25	0.8205 [‡]	2	t _e (d, e)	29.78	5	o'	
d ₄ ^t 30	0.8139	2	ΔHv/T _e	19.41	5	Surface tension dynes/cm. 20°C	
a	0.8337	4	d 372 to	63.46	5	γ	29.13
b	-0.0366	4	e 585 °C	0.0578	5		28.20
Ref. Index n _D 20°C			d' 225 to	59.68	5		40
25	1.4593 [‡]	2	e' 372 °C	0.0478	5	Parachor [P] 20°C	
30	1.4573 [‡]	2	d _c g/ml				
"C"	0.7404	4	v _c ml/g				
MR (Obs.)	187.69 [‡]	2	t _c °C				
MR (Calc.) (nD-d/2)	186.92	5	P _c mm				
Dielectric	2.13	5	PV/RT				
A 372 to	7.75334	5	0.1 mm	1.0000	5	Exp. L.l.%/wt. u.	
B 526 °C	3240.23	5	30 mm	1.0000	5	Dispersion	
C			BP	0.8881	5	Flash Point °C	
A* 372 to	2.72652	5	t _e	0.8446	5	Fire Point	
B* 595 °C	3152.5	5	t _c			M Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHc kcal/m			Solubility in +	
c			ΔHf			Acetone	
t _k --- to			ΔFf			Carbon tet.	
t _x --- °C			Viscosity centistokes °C			Benzene	
A' --- to			η			Ether	
B' --- °C						n-Heptane	
C' --- °C			B ^v --- to			Ethanol	
A* 225 to	2.61602	5	A ^v --- °C			Water	
B* 372 to	3095.5	5	(B ^v) ---			Water in	
Ac --- to			(A ^v) ---				
Bc t _c °C			c _p liq. °K				
Cc t _c °C			c _p vap. °K				
Cryos. A° const. B°			c _v vap.				
t _e °C	588.65	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. 1

NAME		Methyl fluoride			STRUCTURAL FORMULA		
		Fluoromethane			CH ₃ F		
Mole % Pur.	Ref.	Molecular Formula	CH ₃ F	Molecular Weight	34.034		
F. P. °C		Ref.	dt/dP °C/mm			f	to
F. P. 100%			25°C			g	°K
B. P. °C			BP	0.0238	2	h	
760 mm	-78.35	2	t _e	0.0326	5	f'	to
100	-108.68	2	30 mm	0.3392	5	g'	°K
30	-122.19	2	ΔHm cal/g			h'	
10	-132.50	2	ΔHv cal/g			m	to
1	-149.60	5	25°C			n	°K
Pressure mm 25°C			30 mm	130.76	5	o	
t _e	511.5	5	BP	118.46	5	m'	to
Density g/ml 20°C			t _e	120.56	5	n'	°K
t _e			t _e (d, e)	120.37	5	o'	
d ₄ ^t 25			ΔHv/T _e	21.83	5	Surface tension dynes/cm. 20°C	
d ₄ ^t 30			d -125 to	96.49	5	30	
a			e -65 °C	0.2804	5	40	
b			d' to			Parachor [P]	
Ref. Index			e' °C			20°C	
n _D 25			d _c g/ml	0.275	5	30	
30			v _c ml/g	3.63	5	40	
"C"			t _c °C	44.6	3	Sugd. 91.8	
MR (Obs.)			P _c mm	44080.	3	Exp. L. l. %/wt.	
MR (Calc.) (nD-d/2)	6.668	5	PV/RT 25°C			u.	
Dielectric			30 mm	1.0000	5	Dispersion	
A -122 to	7.09761	2	BP	0.9700	5	Flash Point °C	
B -20 °C	740.22	2	t _e	0.9782	5	Fire Point	
C	253.89	2	t _c	0.275	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* -122 to	1.26539	5	ΔHc kcal/m			Solubility in ⁺	
B* -65 °C	688.81	5	ΔHf			Acetone ∞	
K			ΔFf			Carbon tet. ∞	
c			Viscosity centistokes			Benzene ∞	
t _k to			η °C			Ether ∞	
t _x °C			B ^v to			n-Heptane ∞	
A' to			A ^v °C			Ethanol ∞	
B' °C			(B ^v) to			Water ∞	
C' °C			(A ^v) °C			Water in	
A'* to			c _p liq. °K				
B'* °C			c _p vap. °K				
A _c -20 to	7.81764	4	c _v vap.				
B _c t _c °C	1113.00	4					
C _c t _c °C	306.57	4					
Cryos. A° const. B°							
t _e °C	-85.23	5					
T _R = 0.75T _c ⁺ grams/100 grams solvent							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: Literature							
PURIFICATION: Literature							
LITERATURE REFERENCES: 3 Chem. Rev. 52, No. 1, 117 (1953), Kolbe and Lynn; 3' Physia 14, 104 (1948), Nichols and Wassenaar.							

NAME		Perfluoro-n-hexane			STRUCTURAL FORMULA				
					CF ₃ (CF ₂) ₄ CF ₃				
Mole % Pur.	Ref.	Molecular Formula	C ₆ F ₁₄	Molecular Weight	338.060				
F. P. °C	-87.1	3				f		to	
F. P. 100%						g		°K	
B. P. °C			dt/dP °C/mm			h			
760 mm	57.11	3	25°C	0.1045	5				
100	8.27	5	BP	0.03827	5	f'		to	
30	-13.52	5	t _e	0.03573	5	g'		°K	
10	-30.1	5	30 mm	0.5473	5	h'			
1	-57.8	5	ΔHm cal/g			m		to	
Pressure mm 25°C	218.9	5	ΔHv cal/g			n		°K	
t _e	890.9	5	25°C	22.50	5	o			
Density g/ml 20°C	1.6995	3	30 mm	24.14	5				
d ₄ ^t 25	1.6851	4	BP	21.00	5	m'		to	
d ₄ 30	1.6695	3	t _e	19.62	5	n'		°K	
		4	t _e (d, e)	20.8	5	o'			
			ΔHv/T _e	19.80	5	Surface tension dynes/cm. 20°C			
a	1.7612	4	d	-14 to	23.53	5	30	11.92	3
b	-0.0029	4	e	-62 °C	0.044 [‡]	5	40	10.93	3
Ref. Index n _D 22°C	1.2515	3	d'				40	10.10	3
25			e'				Parachor [P]		
30			d _c g/ml				20°C	369.4	4
"C"			v _c ml/g				30	367.9	4
MR (Obs.)	31.584 [‡]	4	t _c °C				40	365.6	4
MR (Calc.) (nD-d/2)	0.4146	5	P mm				Sugd.	364.8 [‡]	5
Dielectric			PV/RT				Exp. L.l./wt. u.		
A -14 to	7.12338	4	25°C	0.9839	5	Dispersion			
B 66 °C	1205.37	4	30 mm	1.0000	5	Flash Point °C			
C	227.0	4	BP	0.9600	5	Fire Point			
A* -14 to	2.09419	5	t _e	0.9559	5	M Spec. Ultra V.			
B* 65 °C	1130.9	5	t _c			X-Ray Dif.			
K			ΔHc kcal/m			Infrared			
c			ΔHf			Solubility in +			
t _k			ΔFf			Acetone			
t _x			Viscosity centistokes			Carbon tet.			
A' to			η	20 °C	0.4160	3	Benzene		
B' °C				40	0.3270	3	Ether		
C' °C				50	0.2916	3	n-Heptane		
A'* to			B ^v 10 to	487.4	4	Ethanol			
B'* °C			A ^v 60 °C	3.95674	4	Water			
Ac to			(B ^v)			Water in			
Bc t _c °C			(A ^v) °C						
Cc °C			c _p liq. °K						
Cryos. A°			c _p vap. °K						
const. B°			c _v vap.						
t _e °C	61.81	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 JACS 74, 3771 (1952) Stiles and Cady									
‡ atomic ref. index for Fluorine in polyfluoro compounds = 1.22									
‡ atomic [P] for Fluorine in polyfluoro compounds = 24.									

No. 3

NAME		Perfluoro-2-methylpentane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CF}_3 \\ \\ \text{CF}_3\text{CF}(\text{CF}_2)_2\text{CF}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_6F_{14}	Molecular Weight	338.060		
F. P. °C							
F. P. 100%							
B. P. °C							
760 mm	57.73	3					
100	8.30	5					
30	-13.69	5					
10	-30.5	5					
1	-58.3	5					
Pressure mm 25°C	216.8	5					
t_e	831.	5					
Density g/ml 20°C	1.7326	3					
d_4^{25}	1.7169	4					
d_4^{30}	1.7011	4					
a	1.7946	4					
b	-0.0031	4					
Ref. Index $n_D^{22^\circ\text{C}}$	1.2564	3					
25							
30							
"C"	0.1688	4					
MR (Obs.)	31.544	5					
MR (Calc.)	31.588 [‡]	2					
($n_D - d/2$)	0.3901	5					
Dielectric							
A -14 to	7.08320	4					
B 73 °C	1198.63	4					
C	227.5	4					
A* -14 to	2.02668	5					
B* 65 °C	1118.1	5					
K							
c							
t_k to							
t_x °C							
A' to							
B' °C							
C' to							
A** to							
B** °C							
Ac to							
Bc t_c °C							
Cc to							
Cryos. A°							
const. B°							
t_e °C	60.39	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: Lit.							
PURIFICATION: Lit.							
LITERATURE REFERENCES: 3 JACS 74, 3771 (1952) Stiles and Cady							
‡ Atomic ref. index for Fluorine in polyfluoro compounds = 1.22							

No. 4

NAME		Methyl chloride		STRUCTURAL FORMULA		
		Chloromethane		CH ₃ Cl		
Mole % Pur.	Ref.	Molecular Formula	CH ₃ Cl	Molecular Weight	50.491	
		Ref.		Ref.	Ref.	
F. P. °C	-97.720	3 ¹	dt/dP °C/mm		f to	
F. P. 100%			25°C	0.0081	5	g °K
B. P. °C			BP	0.0305	5	h + - - -
760 mm	-24.22	2	t _e	0.0340	5	f' to
100	-62.91	2	30 mm	0.4292	5	g' °K
30	-80.03	2	ΔHm cal/g			h'
10	-93.05	2	ΔHv cal/g			m to
1	-114.58	5	25°C	89.54	5	n °K
Pressure mm 25°C	4309.7	5	30 mm	114.01	5	o
t _e	662.9	5	BP	101.30	5	m' to
Density g/ml-24°C	0.997	3 ²	t _e	102.04	5	n' °K
d ^t -20	0.990	3 ²	t _e (d, e)	102.02	5	o'
d ₄ -10	0.973	3 ²	ΔHv/T _e	20.55	5	
a	0.9576	4	d -80 to	95.79	5	Surface tension dynes/cm. -20°C
b	-0.02184	4	e -20 °C	0.2276	5	y -10
Ref. Index n _D 20°C			e' to °C			40
25						
30			d _c g/ml	0.353	3 ¹	Parachor [P] 20°C
"C"			v _c ml/g	2.833	3 ¹	30
MR (Obs.)			t _c °C	143.1	3	40
MR (Calc.) (n _D -d/2)	11.685	5	P _c mm	50084.	3	Sugd. 110.4
Dielectric			PV/RT 25°C	0.9073	5	Exp. L. l. %/wt. u.
A -80 to	6.99445	2	30 mm	1.0000	5	Dispersion
B 40 °C	902.45	2	BP	0.9660	5	Flash Point °C
C	243.60	2	t _e	0.9692	5	Fire Point
A* -90 to	1,242.62	5	t _c	0.2752	4	M Spec. Ultra V.
B* 40 °C	841.23	5	ΔHc kcal/m			X-Ray Dif.
K			ΔHf			Infrared
c			Viscosity centistokes			Solubility in +
t _k to °C			η °C			Acetone ∞
t _x to °C						Carbon tet. ∞
A' to °C						Benzene ∞
B' to °C						Ether ∞
C' to °C						n-Heptane ∞
A'* to °C						Ethanol ∞
B'* to °C						Water ∞
Ac 40 to	7.81148	4	B ^v to °C			Water in
Bc t _c °C	1433.6	4	A ^v to °C			
Cc t _c °C	317.5	4	(B ^v)			
Cryos. A° const. B°			(A ^v)			
t _e °C	-27.34	4	c _p liq. °K			
			c _p vap. °K			
			c _v vap.			
+ 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 Chem. Rev. 52, No. 1, 117 (1953), Kolbe and Lynn; 3 ¹ Timmermans; 3 ² Lange						

NAME	Methylene chloride			STRUCTURAL FORMULA CH ₂ Cl ₂		
	Dichloromethane					
Mole % Pur. 99.81	Ref. 1	Molecular Formula CH ₂ Cl ₂	Molecular Weight 84.940			
	Ref.			Ref.		Ref.
F. P. °C	-95.14	1	dt/dP °C/mm		f	to
F. P. 100%			25°C	0.0575	g	°K
B. P. °C			BP	0.03692	h	
760 mm	39.75	1	t _e	0.03406	f'	to
100	-7.27	1	30 mm	0.5248	g'	°K
30	-28.18	4	ΔHm cal/g	16.89	h'	
10	-44.12	4	ΔHv cal/g		m	to
1	-70.55	5	25°C	80.55	n	°K
Pressure mm 25°C	435.86	5	30 mm	89.20	o	
t _e	841.21	5	BP	78.18	m'	to
Density g/ml 20°C	1.32554	1	t _e	77.74	n'	°K
25	1.31630	1	t _e (d, e)	77.71	o'	°K
d ₄ ^t	1.41519	1	ΔHv/T _e	20.91		
30	1.30700	4	d _e -28 to	84.63	Surface tension dynes/cm. 20°C	
a	1.36277	4	e 43 °C	0.1622	γ	28.00
b	-0.00178	4	d'		30	26.41
Ref. Index n _D 20°C	1.42416	1	e'		40	24.84
25	1.42115	1	d _c g/ml		Parachor [P]	
55	1.41519	1	v _c ml/g	252.	20°C	149.4
"C"	0.4252	4	t _c °C	5	30	149.6
MR (Obs.)	16.357	4	P _c mm	56400.	40	149.9
MR (Calc.)	16.552	5	PV/RT		Sugd.	147.6
(nD-d/2)	0.76139	4	25°C	0.9727	Exp. L. l. %/wt. u.	
Dielectric			30 mm	1.0000	Dispersion	
A -28 to	7.07138	1	BP	0.9600	Flash Point °C	
B 121 °C	1134.6	1	t _e	0.9573	Fire Point	
C	231.	5	t _c		M. Spec. Ultra V. X-Ray Dif. Infrared	
A* -28 to	1.46352	5	ΔHc kcal/m		Solubility in +	
B* 53 °C	1063.0	5	ΔHf		Acetone	
K			ΔFf		Carbon tet.	
c			Viscosity centistokes		Benzene	
t _k to			η	0.3868	Ether	
t _x °C			20 °C	0.3530	n-Heptane	
A' to			40	0.3274	Ethanol	
B' °C			60	0.3000	Water	
C'			80		Water in	
A1* to			B _v 10 to	182.34		
B1* °C			A _v 50 °C	2.9656		
Ac 121 to	7.50819	5	(B _v) 50 to	223.35		
Bc t _c °C	1462.59	5	(A _v) 90 °C	2.8447		
Cc	278.60	5	c _p liq. °K			
Cryos. A°	0.02286	1	c _p vap. °K			
const. B°			c _v vap.			
t _e °C	42.63	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: Dow, dist.						
PURIFICATION: Dow, dist.						
LITERATURE REFERENCES:						

NAME	Chloroform		STRUCTURAL FORMULA	
	Trichloromethane		$\begin{array}{c} \text{Cl} \\ \\ \text{Cl}-\text{C}-\text{H} \\ \\ \text{Cl} \end{array}$	
Mole % Pur. 99.74	Ref. 1	Molecular Formula CHCl_3	Molecular Weight 119.389	
F.P. °C	-63.59	Ref. 1		
F.P. 100%				
B.P. °C			dt/dP °C/mm	
760 mm	61.73	4	25°C	0.1205
100	9.79	5	BP	0.04107
30	-13.06	5	t_e	0.0358
10	-30.39	5	30 mm	0.5718
1	-58.93	5	ΔH_m cal/g	17.62
Pressure mm 25°C	197.4	5	ΔH_v cal/g 25°C	62.11
t_e	906.	5	30 mm	65.66
			BP	57.30
Density g/ml 20°C	1.48316	1	t_e	56.68
25	1.47985	1	t_e (d, e)	56.68
d_4^{25}	1.47650	4	$\Delta H_v/T_e$	19.87
a	1.49652	4	d -13 to	64.20
b	-0.0362	4	e -70 °C	0.1118
			d' to	
Ref. Index n_D 20°C	1.44593	1	e' °C	
25	1.44293	1		
50	1.42822	1	d	g/ml
"C"	0.3984	4	v	ml/g
MR (Obs.)	21.46	4	t_c	°C
MR (Calc.)	21.419	5	P_c	mm
($n_D-d/2$)	0.70435	4		39741.
			PV/RT 25°C	0.9990
Dielectric	4.639	1	30 mm	1.0000
A -15 to	6.90328	4	BP	0.9610
B 35°C	1163.0	4	t_e	0.9561
C	227.	5	t_c	
A* -15 to	1.41286	5	ΔH_c kcal/m	
B* 90°C	1086.	5	ΔH_f	
K			ΔF_f	
t_x to			Viscosity centistokes	
t_x °C			η 20 °C	0.3789
			30	0.3481
A' to			40	0.3206
B' °C			50	0.2969
C' °C				
A'*			B ^v 10 to	338.5
B'*			A ^v 60 °C	2.42528
			(B ^v) to	
Ac 135 to	7.3362	5	(A ^v) °C	
Bc t _c °C	1498.	5		
Cc	276.	5	c_p liq. °K	
Cryos. A* const. B*	0.02418	1	c_p vap. °K	
t_e °C	67.32	5	c_v vap.	
$T_R = 0.75 T_c$				
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula				
SOURCE: Dow				
PURIFICATION: Distillation				
LITERATURE REFERENCES:				

NAME		Carbon Tetrachloride			STRUCTURAL FORMULA					
					CCl ₄					
Mole % Pur.	99.94	Ref. 1	Molecular Formula	C Cl ₄	Molecular Weight	153.838				
		Ref.					Ref.			
F.P. °C			dt/dP °C/mm				f	to		
F.P. 100%	-22.99	1	25°C	0.1972	5		g	°K		
B.P. °C			BP	0.04322	5		h			
760 mm	76.54	1	t _e	0.0360	5		f'	to		
100	21.81	4	t _e 30 mm	0.6040	5		g'	°K		
30	-2.31	4					h'			
10	-20.62	5	ΔHm cal/g	5.04	4		m	to		
1	-50.82	5	25°C				n	°K		
Pressure mm 25°C	115.2	5	30 mm	50.39	5		o			
t _e	960.	5	BP	52.31	5		m'	to		
Density g/ml 20°C	1.59397	1	t _e	46.41	5		n'	°K		
t 25	1.58429	1	t _e (d, e)	45.89	5		o'			
d ₄ 30	1.57456	4		45.90	5					
			ΔHv/T _e	19.74	5					
a	1.63277	4	d -5 to	52.14	5		Surface tension dynes/cm. 20°C			
b	-0.00190	4	e 90 °C	0.0736	5		γ	30	26.84	1
Ref. Index n _D 20°C	1.46005	1	d'				40	26.17	1	
25	1.45704	1	e'					25.51	1	
30	1.45409	4					Parachor [P]			
"C"	0.3817	4	d _c g/ml	0.5576	3		20°C	219.7	4	
MR (Obs.)	26.44	5	v _c ml/g	1.7934	3		30	221.0	4	
MR (Calc.)	26.286	2	t _c °C	283.15	3		40	222.1	4	
(n _D -d/2)	0.66306	5	P _c mm	34200.	3		Sugd.	222.0	5	
Dielectric			PV/RT 25°C	0.9973	5		Exp. L. l. %/wt. u.			
A -15 to	6.93390	4	30 mm	1.0000	5		Dispersion			
B 138 °C	1242.43	4	BP	0.9703	5		Flash Point °C			
C	230.0	4	t _e	0.9645	5		Fire Point			
			t _c	0.2718	4		None			
A* -5 to	1.51283	5					M. Spec. Ultra V.			
B* 100 °C	1155.8	5	ΔHc kcal/m				X-Ray Dif.			
K			ΔHf				Infrared			
c			ΔFf							
t _k to			Viscosity centistokes				Solubility in +			
t _x °C			η 20 °C	0.6091	1		Acetone			
A' to			40	0.47364	1		Carbon tet.			
B' °C			60	0.3825	1		Benzene			
C' °C							Ether			
A'* to			B ^v 10 to	493.5	4		n-Heptane			
B'* °C			A ^v 70 °C	Z. 10154	4		Ethanol			
			(B ^v) to				Water			
			(A ^v) °C				Water in			
Ac 138 to	7.3703	5	c _p liq. °K							
Bc t _c °C	1584.	5								
Cc	277.	5	c _v vap. 300°K	0.206	3'					
Cryos. A° const. B°	0.00629	1	c _v vap.							
t _e °C	84.39	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: Dow, Lit.										
PURIFICATION: Distillation, Lit.										
LITERATURE REFERENCES: 3 Young; 3' Timmermans										

NAME		Methylene bromochloride			STRUCTURAL FORMULA		
		Bromochloromethane			CH ₂ ClBr		
Mole % Pur.	Ref.	Molecular Formula	CH ₂ ClBr	Molecular Weight	129.399		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	0.1514	5	h	
760 mm	68.11	4	BP	0.04074	5	f'	to
100	16.69	5	t _e	0.0350	5	g'	°K
30	-5.89	5				h'	
10	-22.98	5	ΔHm cal/g			m	to
1	-51.09	5				n	°K
Pressure mm 25°C	147.2	5	ΔHv cal/g			o	
t _e	925.	5	25°C	60.68	5		
Density g/ml 20°C	1.93439	1	30 mm	64.81	5	m'	to
d ₄ ^t 25	1.92292	1	BP	55.43	5	n'	°K
d ₄ ^t 30	1.91143	4	t _e	54.69	5	o'	
			t _e (d, e)	54.64	5	Surface tension dynes/cm. 20°C	
			ΔHv/T _e	20.36	5	30	33.32
a	1.98028	4	d -6 to	64.06	5	40	31.87
b	-0.00225	4	e -74 °C	0.1267	5		30.39
Ref. Index n _D 20°C	1.48376	1	d'			Parachor [P] 20°C	
25	1.48076	1	e'			30	160.7
30	1.47761	4	e'			40	160.9
"C"	0.3297	4	d _c g/ml	0.625	5	30	161.3
MR (Obs.)	19.13	4	v _c ml/g	1.60	5	40	161.3
MR (Calc.)	19.450	5	t _c °C	297.	5	Sugd.	161.3
(nD-d/2)	0.51657	4	P mm	45600.	5	Exp. L. l. %/wt. u.	
Dielectric			PV/RT			Dispersion	
A -6 to	6.86624	4	25°C	0.9919	5	Flash Point °C	
B 297 °C	1132.3	4	30 mm	1.0000	5	Fire Point	
C	216.	4	BP	0.9618	5	M Spec. Ultra V.	
A* -6 to	1.41396	5	t _e	0.9563	5	X-Ray Dif.	
B* 84 °C	1060.4	5	t _c	0.265	5	Infrared	
K			ΔHc kcal/m			Solubility in +	
c			ΔHf			Acetone	
t _k to			ΔHf			Carbon tet.	
t _x °C			ΔHf			Benzene	
A' to			Viscosity centistokes			Ether	
B' °C			η			n-Heptane	
C' °C			20 °C	0.3486	1	Ethanol	
A'' to			40	0.2949	1	Water	
B'' °C			60	0.2569	1	Water in	
Cc to			B ^v 10 to	323.8	4		
Cc t _c °C			A ^v 70 °C	Z. 43796	4		
Cryos. A°			(B ^v) to				
const. B°			(A ^v) °C				
t _e °C	.74.32	5	c _p liq. °K				
			c _p vap. °K				
			c _v vap.				
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:							

NAME		Bromotrichloromethane			STRUCTURAL FORMULA		
					C Cl ₃ Br		
Mole % Pur. 99.94	Ref. 1	Molecular Formula C Cl ₃ Br	Molecular Weight 198.297				
		Ref.		Ref.			Ref.
F. P. °C	-5.65	1	dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.5246	g	°K	
B. P. °C			BP	0.04655	h		
760 mm	104.70	1	t _e	0.03682	f'	to	
100	45.93	1	30 mm	0.6450	g'	°K	
30	20.13	4	ΔHm cal/g	3.05	h'		
10	0.60	4			m	to	
1	-31.53	5	ΔHv cal/g		n	°K	
Pressure mm 25°C	38.40	5	25°C	44.21	o		
t _e	1027.13	5	30 mm	44.56			
Density g/ml 20°C	2.01221	1	BP	38.61	m'	to	
d ₄ ^t 25	2.00130	1	t _e	37.86	o'	°K	
d ₄ ^t 30	1.99037	4	t _e (d, e)	37.84			
a	2.05583	4	ΔHv/T _e	19.30			
b	-0.00216	4	d 20 to	45.97		Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C	1.50633	1	e 116	0.0703		30	31.26
25	1.50342	1	d'			40	29.98
50	1.48903	1	e'				28.72
"C"	0.3308	4	d _c g/ml			Parachor [P] 20°C	233.0
MR (Obs.)	29.294	4	v _c ml/g	318.	5	30	233.2
MR (Calc.) (nD-d/2)	29.184	5	t _c °C			40	233.3
Dielectric	0.50023	4	P _c mm	30812.	5	Sugd.	235.7
A 20 to	6.86625	1	PV/RT			Exp. L. l. %/wt. u.	
B 170 °C	1294.08	1	25°C	0.9996	5	Dispersion	
C	220.	5	30 mm	1.0000	5	Flash Point °C	
A* 20 to	1.55053	5	BP	0.9580	5	Fire Point	
B* 126 °C	1209.8	5	t _e	0.9492	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHc kcal/m			Solubility in +	
c			ΔHf			Acetone	
t _k to			ΔFf			Carbon tet.	
t _x °C			Viscosity centistokes			Benzene	
A' to			η 20 °C	0.8138	1	Ether	
B' °C			40	0.6091	1	n-Heptane	
C' to			60	0.4788	1	Ethanol	
A** to			80	0.3893	1	Water	
B** °C			B ^v 10 to	577.74	4	Water in	
Ac 170 to	7.29174	5	A ^v 50 °C	3.9400	4		
Bc t _c °C	1647.18	5	(B ^v) 50 to	528.82	4		
Cc t _c °C	269.99	5	(A ^v) 90 °C	2.0931	4		
Cryos. A° const. B°	0.00426	1	c _p liq. °K				
t _e °C	115.72	5	c _p vap. °K				
			c _v vap.				
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, dist.							
PURIFICATION: Dow, dist.							
LITERATURE REFERENCES:							

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		Methyl bromide			STRUCTURAL FORMULA		
		Bromomethane			CH ₃ Br		
Mole % Pur.	99.71	Ref. 1	Molecular Formula CH ₃ Br	Molecular Weight 94.950			
F. P. °C	-94.07	1	dt/dP °C/mm		f		to
F. P. 100%			25°C	0.0187	g		°K
B. P. °C			BP	0.0339	h		
760 mm	+3.56	2	t _e	0.0346	f'		to
100	-39.40	2	30 mm	0.4752	g'		°K
30	-58.37	2	ΔHm cal/g		h'		
10	-72.78	2	ΔHv cal/g		m		to
1	-96.56	5	25°C	56.99	n		°K
Pressure mm 25°C	1633.0	5	30 mm	67.72	o		
t _e	739.7	5	BP	59.74	m'		to
Density g/ml-10°C	1.73676	1	t _e	59.83	n'		°K
d ^t -5	1.74566	1	t _e (d, e)	59.57	o'		
d ^t 30			ΔHv/T _e	20.49	Surface tension dynes/cm. -10°C		
a	1.73676	4	d -58 to	60.20	y		
b	-0.002411	4	e -3 °C	0.1289	40		
Ref. Index n _D 20°C			d' to °C		Parachor [P]		
25			e' to °C		20°C		
30					30		
"C"			d _c g/ml	194.0	40		
MR (Obs.)			v _c ml/g		Sugd. 124.1		
MR (Calc.) (nd-d/2)	14.583	5	t _c °C		Exp. L. l. %/wt. u.		
Dielectric			P _c mm		Dispersion		
A -58 to	6.95965	2	PV/RT	0.9399	Flash Point °C		
B 53 °C	986.59	2	25°C	1.0000	Fire Point		
C	238.32	2	30 mm	0.9625	M Spec. Ultra V. X-Ray Dif. Infrared		
A* -58 to	1.44534	5	BP	0.9632	Solubility in +		
B* 13 °C	920.93	5	t _e		Acetone ∞		
K			t _c		Carbon tet. ∞		
c			η centistokes	0.2834	Benzene ∞		
t _x to °C			-30 °C	0.2575	Ether ∞		
A' to °C			-20	0.2356	n-Heptane ∞		
B' to °C			-10	0.2174	Ethanol ∞		
C' to °C			0		Water ∞		
A'* to °C			B ^v -40 to	256.30	Water in		
B'* to °C			A ^v -10 °C	2.3985			
Ac to °C			(B ^v) -10 to	251.07			
Bc t _c °C			(A ^v) 10 °C	2.4183			
Cc t _c °C			c _p liq. °K				
Cryos. A° const. B°	0.02120	1	c _p vap. °K				
t _e °C	2.86	5	c _v vap.				
+ 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, dist.							
LITERATURE REFERENCES: 3 Timmermans; 3' Kirk and Othmer, Encyc. of Chemical Technology 2, 651 (1948)							

NAME		Ethyl chloride			STRUCTURAL FORMULA		
		Chloroethane			CH ₂ ClCH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₂ H ₅ Cl	Molecular Weight 64.517				
	Ref.						Ref.
F. P. °C			dt/dP °C/mm		f		
F. P. 100%			25°C	0.0245	g		
B. P. °C			BP	0.0350	h		
760 mm	+12.27	2	t _e	0.0348	f'		
100	-32.03	2	30 mm	0.4896	g'		
30	-51.59	2	ΔHm cal/g		h'		
10	-66.43	2			m		
1	-90.93	5	ΔHv cal/g		n		
Pressure mm 25°C	1199.0	4	25°C	88.07	o		
t _e	764.2	5	30 mm	102.92			
Density g/ml 0°C	0.92390	3	BP	90.55	m'		
d ₄ ^t 10	0.90280	3	t _e	90.52	n'		
d ₄ ^t 25	0.87062	4	t _e (d, e)	90.40	o'		
			ΔHv/T _e	20.49			
a	0.92572	4	d _e -52 to	92.92	Surface tension dynes/cm. 5°C		
b	-0.00203	4	e _e 15 °C	0.1938	γ	21.20	3
Ref. Index n _D 10	1.3790	3	d _e ' to		10	20.64	3
30	1.3738	4	e _e ' °C		40		
"C"	0.5486	4	d _c g/ml		Parachor [P] 5°C		
MR (Obs.)	16.137	4	v _c ml/g		10	151.2	4
MR (Calc.)	16.303	5	t _c °C		40	152.3	4
(n _D -d/2)	0.8171	4	P _c mm		Sugd.	149.4	5
Dielectric			PV/RT 25°C	0.9492	Exp. L. l. %/wt. u.		
A -50 to	6.94914	2	30 mm	1.0000	Dispersion		
B 70 °C	1012.77	2	BP	0.9620	Flash Point °C		
C	236.67	2	t _e	0.9618	Fire Point		
A* -50 to	1.25525	5	t _e		M. Spec. Ultra V. X-Ray Dif. Infrared		
B* 40 °C	945.56	5	ΔHc kcal/m		Solubility in ⁺		
K			ΔHf		Acetone		
c			ΔFf		Carbon tet.		
t _k to			Viscosity centistokes η 5 °C	0.3196	Benzene		
t _x °C			η 10	0.3090	Ether		
A' to			B ^v -5 to	230.8	n-Heptane		
B' °C			A ^v 20 °C	2.67499	Ethanol		
C'			(B ^v) to		Water		
A'* to °C			(A ^v) °C		Water in		
B'* to °C			c _p liq. °K				
A _c 70 to			c _p vap. °K				
B _c t _c °C			c _v vap.				
C _c t _c °C	250.	5					
Cryos. A° const. B°							
t _e °C	12.42	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: Literature							
PURIFICATION: Literature							
LITERATURE REFERENCES: 3 Timmermans							

NAME		1, 2-Dichloroethane		STRUCTURAL FORMULA	
				CH ₂ ClCH ₂ Cl	
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight		
99.93	1	C ₂ H ₄ Cl ₂	98.966		
F. P. °C	-35.66	1	dt/dP °C/mm		
F. P. 100%			25°C	0.2647	5
B. P. °C	83.47	1	BP	0.04192	5
760 mm	29.83	4	t _e	0.0342	5
100	5.83	5	30 mm	0.6038	5
30	-12.54	5	ΔHm cal/g	20.03	4
10	-43.11	5	ΔHv cal/g		
1			25°C	83.92	5
Pressure mm 25°C	80.3	5	30 mm	86.31	5
t _e	963.	5	BP	76.38	5
Density g/ml 20°C	1.25309	1	t _e	76.88	5
d ^t 25	1.24579	1	t _e (d, e)	75.40	5
d ^t 30	1.23847	1	ΔHv/T _e	20.88	5
a	1.28209	4	d 6 to	87.06	5
b	-0.00143	4	e 92 to °C	0.1279	5
Ref. Index n _D 20°C	1.44476	1	d' to °C		
25	1.44210	1	e' to °C		
30	1.43929	4	d _c g/ml	0.517	5
"C"	0.4704	4	v _c ml/g	1.935	5
MR (Obs.)	21.01	4	t _c °C	306.	5
MR (Calc.)	21.170	5	P _c mm	49035.	5
(nD-d/2)	0.81821	4	PV/RT		
Dielectric	10.19	1	25°C	0.9994	5
A 6 to	7.18431	4	30 mm	1.0000	5
B 161 °C	1358.5	4	BP	0.9560	5
C	232.	4	t _e	0.9499	5
A* 6 to	1.58516	5	t _c	0.260	5
B* 102 °C	1274.2	5	ΔHc kcal/m		
K			ΔHf		
c			ΔFf		
t _k to °C			Viscosity centistokes		
t _x to °C			η		
A' to °C			20 °C	0.6671	1
B' to °C			40	0.5287	1
C' to °C			60	0.4337	1
A'* to °C			70	0.3982	1
B'* to °C			B ^v 10 to	441.1	4
C'* to °C			A ^v 80 °C	Z. 31484	4
Ac 161 to	7.6284	5	(B ^v) to		
Bc t _c °C	1730.	5	(A ^v) °C		
Cc t _c °C	283.	5	c _p liq. °K		
Cryos. A° const. B°	0.01770	1	c _p vap. °K		
t _e °C	91.19	5	c _v vap.		
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:					

NAME		1, 1, 2-Trichloroethane			STRUCTURAL FORMULA		
					CHCl ₂ CH ₂ Cl		
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight				
99.90	1	C ₂ H ₃ Cl ₃	133.415				
		Ref.			Ref.		
F.P. °C	-36.59	1	dt/dP °C/mm			f	to
F.P. 100%			25°C	0.8090	5	g	°K
B.P. °C			BP	0.0458	5	h	
760 mm	113.77	1	t _e	0.0356	5	f'	to
100	55.78	4	30 mm	0.6349	5	g'	°K
30	30.36	5	ΔHm cal/g	20.68	4	h'	
10	11.04	5	ΔHv cal/g			m	to
1	-20.5	5	25°C	72.75	5	n	°K
Pressure mm 25°C	22.49	5	30 mm	72.06	5	o	
t _e	1055.5	5	BP	61.33	5		
Density g/ml 20°C	1.43968	1	t _e	59.70	5	m'	to
25	1.43194	1	t _e (d, e)	59.8	5	n'	°K
d ^t 25	1.42420	4	ΔHv/T _e	19.97	5	o'	
d ^t 30							
a	1.47061	4	d 25 to	75.96	5	Surface tension dynes/cm. 20°C	
b	-0.00154	4	e 126 °C	0.1286	5	γ	33.61
Ref. Index n _D 20°C	1.47124	1	d' to			30	32.24
25	1.46868	1	e' °C			40	30.84
30	1.46600	4					
"C"	0.4323	4	d _c g/ml	0.497	4	Parachor [P]	
MR (Obs.)	25.91	5	v _c ml/g	2.012	4	20°C	223.1
MR (Calc.)	26.037	2	t _c °C	339.	5	30	223.2
(nD-d/2)	0.75140	5	P _c mm	36263.	5	40	223.1
Dielectric	7.116	1				Sugd.	223.8
A 30 to	6.84165	4	PV/RT			Exp. L.l. %wt.	
B 186 °C	1262.6	4	25°C	1.0000	5	u.	
C	205.	4	30 mm	1.0000	5	Dispersion	
A* 30 to	1.35368	5	BP	0.9603	5	Flash Point °C	
B* 136 °C	1183.5	5	t _e	0.9511	5	Fire Point	
K			t _c	0.255	5	M. Spec.	
c			ΔHc kcal/m			Ultra V.	
t _k to			ΔHf			X-Ray Dif.	
t _x °C			ΔFf			Infrared	
A' to			Viscosity centistokes			Solubility in ⁺	
B' °C			η			Acetone	
C'			20 °C	0.82145	1	Carbon tet.	
A'* to			40	0.63307	1	Benzene	
B'* °C			60	0.50894	1	Ether	
A ^v 10 to			80	0.42113	1	n-Heptane	
B ^v 90 °C			B ^v 10 to	489.6	4	Ethanol	
A ^v °C			A ^v 90 °C	2.23823	4	Water	
A ^v °C			(B ^v)			Water in	
A ^v °C			(A ^v)				
A _c 186 to	7.2567	5	c _p liq. °K				
B _c t _c °C	1599.	5	c _p vap. °K				
C _c t _c °C	254.	5	c _v vap.				
Cryos. A° const. B°	0.02484	1					
t _e °C	125.68	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:		Dow					
PURIFICATION:		Distillation					
LITERATURE REFERENCES:							

NAME		Methyl chloroform			STRUCTURAL FORMULA		
					CH ₃ CCl ₃		
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight				
99.92	1	C ₂ H ₃ Cl ₃	133.425				
	Ref.				Ref.	Ref.	
F.P. °C	-30.41			dt/dP °C/mm		f to	
F.P. 100%				25°C		g °K	
B.P. °C				BP	0.1829	5	
760 mm	74.096	1		t _e	0.04250	4	
100	20.35	1		30 mm	0.03643	5	
30	-3.301	4		ΔHm cal/g	4.90	4	
10	-21.22	4		ΔHv cal/g			
1	-50.75	5		25°C	57.86	5	
				30 mm	61.12	5	
Pressure mm 25°C	123.37	5		BP	52.44	5	
t _e	925.86	5		t _e	51.74	5	
Density g/ml 20°C	1.33899	1		t _e (d, e)	51.71	5	
t 25	1.33063	1		ΔHv/T _e	19.51	5	
d ₄ 30	1.32224	1		d -3 to	60.75	5	
				e 81 °C	0.1122	5	
a	1.37247	4		e' to			
b	-0.00164	4					
Ref. Index n _D 20°C	1.43789	1		d _c g/ml			
25	1.43519	1		v _c ml/g	266.	5	
50	1.42165	1		t _c °C			
"C"	0.4338	4		P _c mm	30274.	5	
MR (Obs.)	26.152	4		PV/RT			
MR (Calc.)	26.037	5		25°C	0.9867	5	
(n _D -d/2)	0.7684	4		30 mm	1.0000	5	
Dielectric				BP	0.9467	5	
A -3 to	6.90160	1		t _e	0.9405	5	
B 31°C	1202.60	1					
C	225.	5		ΔHc kcal/m			
A* -3 to	1.46948	5		ΔHf			
B* 91°C	1129.16	5		ΔFf			
K				Viscosity centistokes			
c				γ 20 °C	0.6282	1	
t _x to				40	0.4899	1	
t _x °C				60	0.3962	1	
A' to				80	0.3612	1	
B' °C				B ^v 10 to	495.84	4	
C'				A ^v 50 °C	2.1070	4	
A** to				(B ^v) 50 to	236.35	4	
B** °C				(A ^v) 90 °C	2.8886	4	
Ac 131 to	7.32705	5		c _p liq. °K			
Bc °C	1524.70	5		c _p vap. °K			
Cc °C	269.86	5		c _v vap.			
Cryos. A° const. B°	0.00558	1					
t _e °C	80.61	5					
T _R = 0.75 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: Dow, dist.							
PURIFICATION: Dow, dist.							
LITERATURE REFERENCES:							

NAME		sec. Butylbromide				STRUCTURAL FORMULA			
						$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{Br}$			
Mole % Pur.	99.56	Ref. 1	Molecular Formula $\text{C}_4\text{H}_9\text{Br}$	Molecular Weight 137.028					
		Ref.			Ref.				
F. P. °C	-112.65	1	dt/dP °C/mm			f		to	
F. P. 100%			25°C	0.3281	5	g		°K	
B. P. °C			BP	0.04510	5	h			
760 mm	91.44	4	t _e	0.0368	5	f'		to	
100	34.61	5	30 mm	0.6216	5	g'		°K	
30	9.73	5	ΔHm cal/g	12.01	4	h'			
10	-9.08	5	ΔHv cal/g			m		to	
1	-39.97	5	25°C	60.64	5	n		°K	
Pressure mm 25°C	64.65	5	30 mm	62.25	5	o			
t _e	989.	5	BP	53.67	5	m'		to	
Density g/ml 20°C	1.26085	1	t _e	52.73	5	n'		°K	
d ^t 25	1.25354	1	t _e (d, e)	52.70	5	o'			
d ⁴ 30	1.24624	4	ΔHv/T _e	19.32	5	Surface tension dynes/cm. 20°C			
a	1.29004	4	d 10 to	63.27	5	γ	25.01		1
b	-0.00144	4	e 100 °C	0.1050	5		30	23.90	1
Ref. Index			d' to				40	22.82	1
n _D 20°C	1.43705	1	e'			Parachor [P]			
25	1.43453	1	d _c g/ml	0.412	5	20°C	243.0		4
50	1.42079	1	v _c ml/g	2.425	5	30	243.1		4
"C"	0.4598	4	t _c °C	286.	5	40	243.0		4
MR (Obs.)	28.48	4	P _c mm	26756.	5	Sugd.	241.1		5
MR (Calc.)	28.437	5	PV/RT			Exp. L. l. %/wt.			
(n _D -d/2)	0.80662	4	25°C	0.9978	5	u.			
			30 mm	1.0000	5	Dispersion			
			BP	0.9579	5	Flash Point °C			
			t _e	0.9507	5	Fire Point			
			t _c	0.255	5	M. Spec.			
			ΔHc kcal/m			Ultra V.			
			ΔHf			X-Ray Dif.			
			ΔFf			Infrared			
			Viscosity centistokes			Solubility in ⁺			
			η 20 °C	0.4692	1	Acetone			
			40	0.3884	1	Carbon tet.			
			60	0.3293	1	Benzene			
			80	0.2843	1	Ether			
			B ^v 10 to	374.6	4	n-Heptane			
			A ^v 90 °C	2.39320	4	Ethanol			
			(B ^v) to			Water			
			(A ^v) °C			Water in			
			c _p liq. °K						
			c _p vap. °K						
			c _v vap.						
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:									

NAME		1, 2-Dibromo-1, 1-dichloroethane			STRUCTURAL FORMULA				
					CH ₂ BrCCl ₂ Br				
Mole % Pur.	99.97	Ref. 1	Molecular Formula C ₂ H ₂ Cl ₂ Br ₂	Molecular Weight 256.782					
		Ref.			Ref.				
F. P. °C	-66.85	1	dt/dP °C/mm			f to			
F. P. 100%			25°C	11.0081	5	g °K			
B. P. °C			BP	0.05269	4	h			
760 mm	178.30	1	t _e	0.03573	5	f' to			
100	111.28	4	30 mm	0.7460	5	g' °K			
30	81.54	4	ΔHm cal/g	4.73	4	h'			
10	58.79	4	ΔHv cal/g			m to			
1	20.64	5	25°C	46.37	5	n °K			
Pressure mm 25°C	1.3482	5	30 mm	43.51	5	o			
t _e	1246.14	5	BP	37.75	5	m' to			
Density g/ml 20°C	2.26216	1	t _e	36.55	5	n' °K			
d ^t 25	2.25230	1	t _e (d, e)	36.50	5	o'			
d ^t 30	2.24244	4	ΔHv/T _e	19.87	5	Surface tension dynes/cm. 20°C			
a	2.30159	4	d 81 to	48.38	5	30	39.12	1	
b	-0.00197	4	e 199 °C	0.0596	5	40	37.92	1	
Ref. Index n _D 20°C	1.55666	1	d' 25 to	47.63	5	40	36.83	1	
25	1.55400	1	e' 81 °C	0.0504	5	Parachor [P]			
35	1.54889	1	d _v g/ml			20°C	283.9	4	
"C"	0.3215	4	v _c ml/g	420.	5	30	284.2	4	
MR (Obs.)	36.523	4	t _c °C	32870.	5	40	284.6	4	
MR (Calc.)	36.700	5	P _c mm			Sugd.	288.4	5	
(nD-d/2)	0.42558	4	PV/RT			Exp. L.l./wt. u.			
Dielectric			25°C	1.0000	5	Dispersion			
A 81 to	7.03778	4	30 mm	1.0000	5	Flash Point °C			
B 1246 °C	1593.35	4	BP	0.9617	5	Fire Point			
C	205.	5	t _e	0.9482	5	M Spec. Ultra V. X-Ray Dif. Infrared			
A* 81 to	1.75459	5	t _c			Solubility in +			
B* 209 °C	1493.7	5	ΔHc kcal/m			Acetone			
K			ΔHf			Carbon tet.			
t _c to			ΔFf			Benzene			
t _x °C			Viscosity centistokes			Ether			
A' 25 to			η 20 °C	1.4680	1	n-Heptane			
B' 81 °C			40	1.0399	1	Ethanol			
C'			60	0.7852	1	Water			
A'' to			80	0.6209	1	Water in			
B'' °C			B ^v 10 to	687.51	4				
Ac to	7.45239	5	A ^v 50 °C	3.8219	4				
Bc t _c °C	1989.74	5	(B ^v) 50 to	599.96	4				
Cc t _c °C	258.0	5	(A ^v) 90 °C	7.0944	4				
Cryos. A° const. B°	0.01439	1	c _p liq. °K						
t _e °C	199.18	5	c _p vap. °K						
			c _v vap.						
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, dist.									
PURIFICATION: Dow, dist.									
LITERATURE REFERENCES:									

NAME	Ethyl bromide			STRUCTURAL FORMULA		
	Bromoethane					
Mole % Pur. 99.87	Ref. 1	Molecular Formula C ₂ H ₅ Br	Molecular Weight 108.976	C ₂ H ₅ Br		
		Ref.				Ref.
F.P. °C	-119.33	1	dt/dP °C/mm		f	to
F.P. 100%			25°C	0.0560	g	°K
B.P. °C			BP	0.0382	h	
760 mm	38.35	2	t _e	0.0354	f'	to
100	-10.00	2	30 mm	0.5330	g'	°K
30	-31.30	2	ΔHm cal/g		h'	
10	-47.45	2	ΔHv cal/g		m	to
1	-74.08	5	25°C	59.91	n	°K
Pressure mm 25°C	468.60	5	30 mm	66.69	o	
t _e	837.3	5	BP	58.32		
Density g/ml 20°C	1.45939	1	t _e	57.98	m'	to
d _t 25	1.44917	1	t _e (d, e)	57.73	n'	°K
d _t 30	1.43889	4	ΔHv/T _e	20.01	o'	
a	1,50075	4	d -32 to	62.93	Surface tension dynes/cm. 20°C	
b	-0.00195	4	e 41 °C	0.1203	γ	23.70
Ref. Index n _D 20°C	1.42416	1	d'			30 22.46
25	1.42104	1	e'			40 21.45
30	1.41776	4	d _c g/ml	0.507	Parachor [P]	
"C"	0.3862	4	v _c ml/g	1.9724	20°C	165.1
MR (Obs.)	19.060	4	t _c °C	230.7	30	165.3
MR (Calc.) (nD-d/2)	0.6945	4	P _c mm	42000.	40	
Dielectric	9.112	1			Sugd.	163.1
A -32 to	6,91995	2	PV/RT		Exp. L. l. %/wt.	
B 110 °C	1090.81	2	25°C	0.9716	u.	
C	231.71	2	30 mm	1.0000	Dispersion	
A* -32 to	1,42140	5	BP	0.9600	Flash Point °C	
B* 51 °C	1019.18	5	t _e	0.9574	Fire Point	
K			t _c	0.2873	M. Spec.	
c			ΔHc kcal/m		Ultra V.	
t _k to			ΔHf		X-Ray Dif.	
t _x °C			ΔFf		Infrared	
A' to			Viscosity centistokes		Solubility in +	
B' °C			η		Acetone	∞
C'			0 °C	0.3191	Carbon tet.	∞
A** to			10	0.2914	Benzene	∞
B** °C			20	0.2690	Ether	∞
Ac 110 to	7,59098	5	30	0.2503	n-Heptane	∞
Bc t _c °C	1545.3	5	B ^v -10 to	291.22	Ethanol	∞
Cc t _c °C	290.0	5	A ^v 40 °C	2,43797	Water	∞
Cryos. A° const. B°			(B ^v) to		Water in	
t _e °C	41.19	5	(A ^v) °C			
			c _p liq. °K			
			c _p vap. °K			
			c _v vap.			

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, literature

PURIFICATION: Distillation, literature

LITERATURE REFERENCES: 3 Chem. Rev. 52, No. 1, 117 (1953) Kolbe and Lynn

NAME		1, 2-Dibromoethane			STRUCTURAL FORMULA		
		Ethylenedibromide			CH ₂ BrCH ₂ Br		
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight				
99.91	1	C ₂ H ₄ Br ₂	187.884				
F. P. °C	9.79	1	dt/dP °C/mm			f to	
F. P. 100%	9.85	4	25°C	1.5320	5	g °K	
B. P. °C			BP	0.04803	5	h	
760 mm	131.36	1	t _e	0.0356	5	f' to	
100	70.21	4	30 mm	0.6820	5	g' °K	
30	43.04	5	ΔHm cal/g	12.76	4	h'	
10	22.22	5	ΔHv cal/g			m to	
1	-12.74	5	25°C	52.48	5	n °K	
Pressure mm 25°C	11.70	5	30 mm	51.70	5	o	
t _e	1112.	5	BP	45.6	5	m' to	
Density g/ml 20°C	2.17920	1	t _e	44.58	5	n' °K	
d ^t 25	2.16877	1	t _e (d, e)	44.60	5	o'	
d ₄ 30	2.15833	4	ΔHv/T _e	19.99	5	Surface tension dynes/cm. 20°C	
a	2.22090	4	d 43 to	54.67	5	30	
b	-0.00208	4	e 146 °C	0.0690	5	40	
Ref. Index n _D 20°C	1.53868	1	d' 25 to	53.58	5	35.13	
25	1.53603	1	e' 43 °C	0.0438	5	37.22	
30	1.53317	4	d _c g/ml	0.776	5	40	
"C"	0.3237	4	v _c ml/g	1.288	5	214.0	
MR (Obs.)	27.00	4	t _c °C	377.	5	Sugd.	
MR (Calc.)	26.966	5	P _c mm	42731.	5	214.8	
(nD-d/2)	0.44908	4	PV/RT			215.0	
Dielectric	4.771	1	25°C	1.0000	5	4	
A 43 to	7.06245	4	30 mm	1.0000	5	4	
B 215 °C	1469.7	4	BP	0.9645	5	Exp. L. l. %/wt. u.	
C	220.	4	t _e	0.9541	5	Dispersion	
A* 43 to	1.67853	5	t _c	0.255	5	Flash Point °C	
B* 156 °C	1374.2	5	ΔHc kcal/m			Fire Point	
K			ΔHf			M Spec. Ultra V.	
c			ΔFf			X-Ray Dif.	
t _k to			Viscosity centistokes			Infrared	
t _x °C			η			Solubility in +	
A' to			20 °C	0.79558	1	Acetone	
B' °C			40	0.60455	1	Carbon tet.	
C' °C			60	0.48166	1	Benzene	
A'' to			80	0.39768	1	Ether	
B'' °C			B ^v 10 to	503.1	4	n-Heptane	
			A ^v 90 °C	2.17512	4	Ethanol	
			(B ^v) to			Water	
			(A ^v) °C			Water in	
Ac 215 to	7.4959	5	c _p liq. °K				
Bc t _c °C	1871.	5	c _p vap. °K				
Gc t _c °C	276.	5	c _v vap.				
Cryos. A° const. B°	0.01508	1					
t _e °C	145.84	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:		Dow					
PURIFICATION:		Distillation					
LITERATURE REFERENCES:							

NAME		1,1,2-Tribromoethane			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{Br} \quad \text{Br} \\ \quad \\ \text{Br}-\text{CH}-\text{CH}_2 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight				
99.96	1	$\text{C}_2\text{H}_3\text{Br}_3$	266.792				
	Ref.			Ref.		Ref.	
F.P. °C	-29.21				f	to	
F.P. 100%	-29.19				g	°K	
B.P. °C					h		
760 mm	188.93		18.078	5			
100	120.43		0.05408	5			
30	90.21		0.0364	5	f'	to	
10	67.16		0.7567	5	g'	°K	
1	28.62				h'		
			$\Delta\text{Hm cal/g}$	8.1637	4		
Pressure mm 25°C	0.7751		$\Delta\text{Hv cal/g}$	47.27	5	m	
t_e	1263.		25°C	43.33	5	n	
			30 mm	36.76	5	o	
Density g/ml 20°C	2.62111		BP	35.43	5	m'	
25	2.61007		t_e	35.29	5	n'	
d ₄ 30	2.59903		t_e (d, e)	19.52	5	o'	
			$\Delta\text{Hv}/T_e$				
a	2.66526		d 90 to	49.33	5	Surface tension	
b	-0.00221		e 211 °C	0.0665	5	dynes/cm. 20°C	
			d'			30	
Ref. Index			e'			40	
n _D 20°C	1.59336					44.36	
25	1.59076					43.12	
30	1.58797					41.68	
"C"	0.2945						
MR (Obs.)	34.51		d _c g/ml			Parachor [P]	
MR (Calc.)	34.731		v _c ml/g	451.	5	20°C	
(nD-d/2)	0.28278		t _c °C			30	
			P _c mm	35925.	5	40	
Dielectric	5.609					Sugd.	
A 90 to	6.94373		PV/RT			262.7	
B 270 °C	1562.12		25°C	1.0000	5	263.0	
C	196.		30 mm	1.0000	5	263.1	
			BP	0.9529	5	264.9	
A* 90 to	1.68974		t _e	0.9373	5		
B* 221 °C	1469.3		t _c				
K			$\Delta\text{Hc kcal/m}$			Exp. L. l. %/wt.	
c			ΔHf			u.	
t _k to			ΔFf			Dispersion	
t _x °C			Viscosity centistokes			Flash Point °C	
A' to			η 20 °C	1.4784	1	Fire Point	
B' °C			40	1.0190	1	M. Spec.	
C' °C			60	0.7616	1	Ultra V.	
			80	0.5984	1	X-Ray Dif.	
A** to						Infrared	
B** °C			B ^v 10 to	639.3	4	Solubility in ⁺	
			A ^v 90 °C	3.96698	4	Acetone	
			(B ^v) to			Carbon tet.	
A ^c 270 to	7.3511		(A ^v) °C			Benzene	
B ^c t _c °C	1964.					Ether	
C ^c °C	252.		c _p liq. °K			n-Heptane	
			c _p vap. °K			Ethanol	
Cryos. A° const. B°	0.01843		c _v vap.			Water	
t _e °C	211.00					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:							

NAME		Isopropyl chloride		STRUCTURAL FORMULA	
		2-Chloropropane		(CH ₃) ₂ CHCl	
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight		
99.90	1	C ₃ H ₇ Cl	78.543		
F.P. °C	-117.18	1	dt/dP °C/mm		
F.P. 100%	-117.15	1	25°C	0.04931	5
B.P. °C			BP	0.03704	4
760 mm	34.8	4	t _e	0.03466	5
100	-12.17	4	30 mm	0.5198	4
30	-32.93	4	ΔHm cal/g	22.48	4
10	-48.69	5	ΔHv cal/g		
1	-74.72	5	25°C	83.27	5
Pressure mm 25°C	529.5	5	30 mm	93.66	5
t _e	827.2	5	BP	81.53	5
Density g/ml 20°C	0.86257	1	t _e	81.11	5
d ₄ ^t 25	0.85599	1	t _e (d, e)	81.10	5
d ₄ ^t 30	0.84936	4	ΔHv/T _e	20.52	5
a	0.88926	4	d -32 to	87.76	5
b	-0.00124	4	e 40 °C	0.1791	5
Ref. Index n _D 20°C	1.37759	1	d' °C		
25	1.37464	1	e' °C		
30	1.37149	4	d _c g/ml	0.341	5
"C"	0.5855	4	v _c ml/g	2.934	5
MR (Obs.)	20.973	4	t _c °C	212.	5
MR (Calc.)	20.921	5	P _c mm	35451.	5
(n _D -d/2)	0.94630	4	PV/RT		
Dielectric	9.52	1	25°C	0.9690	5
A -32 to	6.96540	5	30 mm	1.0000	5
B 90 °C	1081.6	5	BP	0.9601	5
C	230.	5	t _e	0.9578	5
A* -32 to	1.33241	5	t _c	0.27	5
B* 47 °C	1012.14	5	ΔHc kcal/m		
K			ΔHf		
c			ΔFf		
t _k °C			Viscosity centistokes		
t _x °C			η 0 °C	0.4499	1
A' to			10	0.4079	1
B' °C			20	0.3724	1
C' °C			30	0.3410	1
A'' to			B ^v 0 to	334.0	4
B'' °C			A ^v 40 °C	2.43017	4
Ac 90 to	7.39133	5	(B ^v) to		
Bc t _c °C	1372.3	5	(A ^v) °C		
Cc t _c °C	270.6	5	c _p liq. °K		
Cryos. A° const. B°	0.03661	1	c _p vap. °K		
t _e °C	37.21	5	c _v vap.		
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:					

NAME	Propylene dichloride		STRUCTURAL FORMULA		
	1,2-Dichloropropane				
			<chem>CH3CHClCH2Cl</chem>		
Mole % Pur.	Ref.	Molecular Formula	Molecular Weight		
99.76	1	<chem>C3H6Cl2</chem>	112.992		
F.P. °C	-100.53	1	dt/dP °C/mm		
F.P. 100%	-100.44	4	25°C	0.4082	4
B.P. °C			BP	0.04442	4
760 mm	96.37	1	t _e	0.03573	5
100	40.05	1	30 mm	0.6231	4
30	15.18	4	ΔHm cal/g	13.53	4
10	-3.7	5	ΔHv cal/g		
1	-35.0?	5	25°C	77.00	5
Pressure mm	49.67	4	30 mm	78.23	5
25°C	1003.0	5	BP	67.70	5
t _e			t _e	66.76	5
Density g/ml	1.15597	1	t _e (d, e)	66.45	5
25°C	1.14936	1	ΔHv/T _e	19.89	5
t	1.14273	4	d 15 to	80.17	5
d ₄			e 110 °C	0.1294	5
30			d' to		
a	1.18241	4	e' °C		
b	-0.00131	4	d _c g/ml	0.41	5
Ref. Index			v _c ml/g	2.44	5
n _D			t _c °C	304.3	5
25	1.43937	1	P _c mm	33300.	5
30	1.43679	1	PV/RT		
"C"	0.5041	4	25°C	0.9978	5
MR (Obs.)	25.725	4	30 mm	1.0000	5
MR (Calc.)	25.788	5	BP	0.9550	5
(n _D -d/2)	0.86138	4	t _e	0.9506	5
Dielectric	8.96	1	t _e	0.255	5
A 15 to	6.96395	4	ΔHc kcal/m		
B 160 °C	1295.9	4	ΔHf		
C	221.	5	ΔFf		
A* 15 to	1.41927	5	Viscosity centistokes		
B* 115 °C	1214.9	5	η		
K			20 °C	0.7415	1
c			40	0.5830	1
t _k to			60	0.4747	1
t _x °C			80	0.3978	1
A' to			B ^v 10 to	459.1	4
B' °C			A ^v 90 °C	2.29983	4
C'			(B ^v) to		
A'* to			(A ^v) °C		
B'* °C			c _p liq. °K		
Ac 160 to	7.35053	5	c _p vap. °K		
Bc t _c °C	1610.6	5	c _v vap.		
Cc t _c °C	265.2	5			
Cryos. A°	0.02592	1			
const. B°					
t _e °C	106.03	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: Dow					
PURIFICATION: Dow, Distillation					
LITERATURE REFERENCES:					

NAME		Trimethylene chloro bromide			STRUCTURAL FORMULA		
					CH ₂ ClCH ₂ CH ₂ Br		
Mole % Pur.	Ref.	Molecular Formula	C ₃ H ₆ ClBr	Molecular Weight	157.451		
99.79	1						
F. P. °C	-58.87	Ref.					
F. P. 100%		1					
B. P. °C			dt/dP °C/mm			f	to °K
760 mm	143.36	1	25°C	2.582	5	g	
100	81.16	1	BP	0.04891	4	h	
30	53.57	4	t _e	0.0359	5	f'	to °K
10	32.4	5	30 mm	0.6921	4	g'	
1	-3.0	5				h'	
Pressure mm 25°C	6.495	5	ΔHm cal/g	14.00	4	m	to °K
t _e	1127.0	5	ΔHv cal/g			n	to °K
Density g/ml 20°C	1.59694	1	25°C	66.92	5	o	
d ₄ ^t 25	1.58925	1	30 mm	64.89	5		
30			BP	55.78	5	m'	to °K
4			t _e	54.29	5	n'	to °K
			t _e (d, e)	54.23	5	o'	
			ΔHv/T _e	19.79	5		
a	1.62775	4	d 53 to	70.32	5	Surface tension dynes/cm. 20°C	
b	-0.03154	4	e 65 °C	0.1014	5	30	36.11
Ref. Index n _D 20°C	1.48635	1	d'			40	34.81
25	1.48414	1	e'				33.72
30	1.47260	1				Parachor [P]	
"C"	0.4014	4	d _c g/ml	0.522	5	20°C	241.7
MR (Obs.)	28.325	4	v _c ml/g	1.914	5	30	241.8
MR (Calc.) (nD-d/2)	28.686	5	t _c °C	379.2	5	40	242.3
Dielectric 25°	9.431	1	P _c mm	36000.	5	Sugd.	239.3
A 53 to	7.03215	1	PV/RT			Exp. L. l. %/wt. u.	
B 215 °C	1475.23	1	25°C	1.0000	5	Dispersion	
C	212.	1	30 mm	1.0000	5	Flash Point °C	
A* 53 to	1.59125	5	BP	0.9500	5	Fire Point	
B* 175 °C	1387.9	5	t _e	0.9380	5	M Spec. Ultra V.	
K			t _c	0.255	5	X-Ray Dif. Infrared	
c			ΔHc kcal/m			Solubility in +	
t _k to °C			ΔHf			Acetone	
t _x to °C			ΔFf			Carbon tet.	
A' to °C			Viscosity centistokes			Benzene	
B' to °C			η			Ether	
C' to °C			20 °C	0.9148	1	n-Heptane	
A** to °C			40	0.7042	1	Ethanol	
B** to °C			60	0.5659	1	Water	1.84
C** to °C			80	0.4685	1	Water in	
Ac 215 to	7.32546	5	B ^v 10 to	489.5	4		
Bc t _c °C	1760.2	5	A ^v 90 °C	2.28480	4		
Cc t _c °C	252.	5	(B ^v) to				
Cryos. A° const. B°	0.02418	1	(A ^v) °C				
t _e °C	158.64	5	c _p liq. °K				
			c _p vap. °K				
			c _v vap.				
T _R = 0.75 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: Dow							
PURIFICATION: Dow, Distillation							
LITERATURE REFERENCES:							

NAME		1,3-Dibromopropane		STRUCTURAL FORMULA	
		Trimethylene dibromide		Br(CH ₂) ₃ Br	
Mole % Pur.	99.89	Ref. 1	Molecular Formula C ₃ H ₆ Br ₂	Molecular Weight	201.910
		Ref.			Ref.
F. P. °C	-34.20	1	dt/dP °C/mm		
F. P. 100%			25°C	6.1946	5
B. P. °C			BP	0.05144	5
760 mm	166.67	1	t _e	0.0356	5
100	100.82	4	30 mm	0.7421	5
30	71.32	5	ΔHm cal/g	16.10	4
10	48.64	5	ΔHv cal/g		
1	10.41	5	25°C	54.25	5
Pressure mm 25°C	2.604	5	30 mm	52.47	5
t _e	1206.5	5	BP	46.52	5
Density g/ml 20°C	1.98009	1	t _e	45.30	5
d ₄ ^t 25	1.97119	1	t _e (d, e)	45.34	5
d ₄ ^t 30	1.96229	4	ΔHv/T _e	19.93	5
a	2.01568	4	d _e 71 to	56.92	5
b	-0.00178	4	e 186 °C	0.0624	5
Ref. Index n _D 20°C	1.52318	1	d' to		
25	1.52075	1	e' °C		
30	1.51807	4	d _c g/ml	0.732	5
"C"	0.3467	4	v _c ml/g	1.367	5
MR (Obs.)	31.16	4	t _c °C	414.	5
MR (Calc.)	31.158	5	P _c mm	38811.	5
(n _D -d/2)	0.53314	4	PV/RT		
Dielectric			25°C	1.0000	5
A 71 to	7.19874	4	30 mm	1.0000	5
B 242 °C	1678.3	4	BP	0.9583	5
C	222.	4	t _e	0.9451	5
A* 71 to	1.81483	5	t _c	0.25	5
B* 196 °C	1473.6	5	ΔHc kcal/m		
K			ΔHf		
c			ΔFf		
t _k to			Viscosity centistokes		
t _x °C			η		
A' to			20 °C	1.0431	1
B' °C			40	0.7838	1
C' °C			60	0.6192	1
A** to			80	0.5068	1
B** °C			B _v 10 to	523.7	4
A _c 242 to	7.6370	5	A _v 90 °C	Σ.22212	4
B _c t _c °C	2110.	5	(B _v) to		
C _c °C	278.	5	(A _v) °C		
Cryos. A° const. B°	0.02865	1	c _p liq. °K		
t _e °C	185.62	5	c _p vap. °K		
			c _v vap.		
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:					

NAME	Propylene dibromide		STRUCTURAL FORMULA	
	1,2-Dibromopropane		CH ₂ BrCHBrCH ₃	
Mole % Pur. 99.86	Ref. 1	Molecular Formula C ₃ H ₆ Br ₂	Molecular Weight 201.910	
F.P. °C	-55.50	1	dt/dP °C/mm	
F.P. 100%			25°C	2.167
B.P. °C			BP	0.05044
760 mm	141.99	4	t _e	0.0371
100	78.24	5	30 mm	0.7011
30	50.21	5	ΔHm cal/g	10.58
10	28.86	5	ΔHv cal/g	
1	-6.78	5	25°C	50.24
Pressure mm 25°C	8.0368	5	30 mm	48.94
t _e	1128.	5	BP	42.04
Density g/ml 20°C	1.93268	1	t _e	40.90
d ₄ ^t 25	1.92344	1	t _e (d, e)	40.85
d ₄ ^t 30	1.91419	4	ΔHv/T _e	19.16
a	1.96962	4	d 50 to	52.72
b	-0.00184	4	e 158 °C	0.0752
Ref. Index n _D 20°C	1.52004	1	d'	
25	1.51737	1	e'	
50	1.50420	1	d _c g/ml	0.605
"C"	0.3532	4	v _c ml/g	1.652
MR (Obs.)	31.76	4	t _c °C	371.
MR (Calc.) (nD-d/2)	31.584	5	P _c mm	30719.
	0.55370	4	PV/RT 25°C	1.0000
Dielectric	4.369	1	30 mm	1.0000
A 50 to	6.89105	4	BP	0.9534
B 210 °C	1419.6	4	t _e	0.9409
C	212.	5	t _c	0.255
A* 50 to	1.55314	5	ΔHc kcal/m	
B* 168 °C	1330.9	5	ΔHf	
K			ΔFf	
c			Viscosity centistokes	
t _k to			η	
t _x °C			20 °C	0.8456
A' 25 to			40	0.6462
B' 50 °C			60	0.5168
C'			80	0.4267
A'* to			B ^v 10 to	498.5
B'* °C			A ^v 90 °C	2.21874
Ac 210 to	7.3109	5	(B ^v) to	
Bc t _c °C	1796.	5	(A ^v) °C	
Cc t _c °C	265.	5	c _p liq. °K	
Cryos. A° const. B°	0.02272	1	c _p vap. °K	
t _e °C	157.85	5	c _v vap.	
TR = 0.75 T _c				
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula				
SOURCE: Dow				
PURIFICATION: Distillation				
LITERATURE REFERENCES:				

NAME		1, 2, 3-Tribromopropane			STRUCTURAL FORMULA			
					<chem>BrCH2CHBrCH2Br</chem>			
Mole % Pur. 99.94	Ref. 1	Molecular Formula $C_3H_5Br_3$	Molecular Weight 280.818					
		Ref.						Ref.
F. P. °C	16.19	1	dt/dP °C/mm		f		to	
F. P. 100%			25°C	74.77	g		°K	
B. P. °C			BP	0.0572	h			
760 mm	222.16	4	t _e	0.03669	f'		to	
100	149.18	5	30 mm	0.8160	g'		°K	
30	116.68	5	ΔHm cal/g	20.24	h'			
10	91.79	5			m		to	
1	50.01	5	ΔHv cal/g		n		°K	
Pressure mm 25°C	0.1726	5	25°C	48.76	o			
t _e	1336.5	5	30 mm	43.94				
Density g/ml 20°C	2.42086	1	BP	37.27	m'		to	
d ₄ ^t 25	2.41104	1	t _e	35.83	n'		°K	
d ₄ ^t 30	2.40122	4	t _e (d, e)	35.70	o'			
a	2.46014	4	ΔHv/T _e	19.34				
b	-0.00196	4	d _e 117 to	51.31				
Ref. Index n _D 20°C	1.58621	1	e 247 °C	0.0632				
25	1.58356	1	d'					
50	1.57120	1	e'					
"C"	0.3153	4	d _c g/ml	1.2887				
MR (Obs.)	38.941	4	v _c ml/g	0.776				
MR (Calc.)	39.349	5	t _c °C	550.				
(nD-d/2)	0.3758	4	P _c mm	56554.				
Dielectric	6.256	1	PV/RT					
A 117 to	7.09534	4	25°C	1.0000				
B 322 °C	1779.2	4	30 mm	1.0000				
C	200.	4	BP	0.9400				
A* 117 to	1.84916	5	t _e	0.9234				
B* 257 °C	1681.4	5	t _c	0.24				
K			ΔHc kcal/m					
c			ΔHf					
t _k to			ΔFf					
t _x °C			Viscosity centistokes					
A' to			η 20 °C	3.1764				
B' °C			40	1.8776				
C'			60	1.2651				
A** to			80	0.9249				
B** °C			B _v 35 to	850.07				
Ac 322 to	7.5173	5	A _v 85 °C	3.55946				
Bc t _c °C	2246.	5	(B _v) to					
Cc 264.	264.	5	(A _v) °C					
Cryos. A° const. B°	0.02811	1	c _p liq. °K					
t _e °C	247.0	5	c _p vap. °K					
			c _v vap.					
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:								

NAME	n-Butyl chloride				STRUCTURAL FORMULA CH ₃ (CH ₂) ₃ Cl			
	1-Chlorobutane							
	Mole % Pur.	Ref.	Molecular Formula	Molecular Weight				
99.81	1	C ₄ H ₉ Cl	92.569					
F.P. °C	-123.2	1	dt/dP °C/mm			f	to	
F.P. 100%			25°C	0.2143	5	g	°K	
B.P. °C	78.44	2	BP	0.0426	5	h	---	
760 mm	24.47	2	t _e	0.0358	5	f'	to	
100	+0.67	2	30 mm	0.5959	5	g'	°K	
30	-17.39	2	ΔHm cal/g			h'		
10	-47.18	5	ΔHv cal/g			m	to	
Pressure mm 25°C	102.43	5	25°C	86.31	5	n	°K	
t _e	950.6	5	30 mm	90.03	5	o		
Density g/ml 20°C	0.88621	1	BP	78.18	5	m'	to	
d ₄ ^t 25	0.88080	1	t _e	77.07	5	n'	°K	
d ₄ 30	0.87539	4	t _e (d, e)	76.95	5	o'		
a	0.90790	4	ΔHv/T _e	19.84	5	Surface tension dynes/cm. 20°C		
b	-0.02106	4	d 0 to	90.13	5	γ	30	22.42
Ref. Index n _D 20°C	1.40211	1	e 80 °C	0.1523	5		40	21.32
25	1.39953	1	d' to			Parachor [P] 20°C		
30	1.39686	4	e' °C				30	20.25
"C"	0.6048	4	d c g/ml	0.207	5		40	
MR (Obs.)	25.539	5	v c ml/g	3.370	5		Sugd.	227.4
MR (Calc.)	25.440	4	t c °C	269.0	5	Exp. L.l./wt. u.		
(nD-d/2)	0.95901	4	P c mm	27641.	5	Dispersion		
Dielectric	7.39	3'	PV/RT			Flash Point °C		
A 0 to	6.93790	2	25°C	0.9936	5	Fire Point		
B 123 °C	1227.43	2	30 mm	1.0000	5	M Spec. Ultra V.		
C	224.10	2	BP	0.9580	5	X-Ray Dif.		
A* 0 to	1.32214	5	t _e	0.9517	5	Infrared		
B* 100 °C	1148.80	5	t _c	0.255	5	Solubility in +		
K			ΔHc kcal/m			Acetone		∞
c			ΔHf			Carbon tet.		∞
t _k to			ΔFf			Benzene		∞
t _x °C			Viscosity centistokes			Ether		∞
A' to			η 15 °C	0.5260	3	n-Heptane		∞
B' °C			η 30	0.4626	3	Ethanol		∞
C' °C			B ^v 5 to	324.9	4	Water		∞
A** to			A ^v 40 °C	Σ 59365	4	Water in		
B** °C			(B ^v)					
Ac 123 to	7.13392	5	(A ^v)					
Bc t _c °C	1410.8	5	c _p liq. °K					
Cc t _c °C	255.0	5	c _p vap. °K					
Cryos. A° const. B°			c _v vap.					
t _e °C	85.87	5						
T _R = 0.75 T _c								
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula								
SOURCE: Dow								
PURIFICATION: Distillation								
LITERATURE REFERENCES: 3 Timmermans; 3' NBS								

No. 1

NAME		Ethene (Ethylene)			STRUCTURAL FORMULA		
					CH ₂ =CH ₂		
Mole % Pur.	Ref.	Molecular Formula C ₂ H ₄	Molecular Weight 28.052				
		Ref.			Ref.		
F.P. °C	-169.15 ^f	2	dt/dP °C/mm		25°C	f	to °K
F.P. 100%			BP	0.0224	2	g	
B.P. °C			t _e	0.03495	5	h	
760 mm	-103.71	2	t _e 30 mm	0.3049	5	f'	to °K
100	-131.78	2				g'	
30	-144.00	2				h'	
10	-153.22	2				m	300 to 600 °K
1	-168.30	5				n	0.0698
						o	0.0011
							-0.0634
Pressure mm 25°C			ΔHv cal/g			m'	700 to 1000 °K
t _e	429.3	5	30 mm	129.08	5	n'	0.1300
			BP	115.39	2	o'	0.0010
Density g/ml -10°C	0.384	3'	t _e (d, e)	119.91	5		-0.0632
t 0	0.345	3'	t _e	118.53	5		
d ₄ 30			ΔHv/T _e	20.97	5		
a	0.433	4	d -144 to	80.15	5	Surface tension dynes/cm. 20°C	
b	-0.0013	4	e -115 °C	0.3398	5	y	
			d'			30	
			e'			40	
Ref. Index n _D 20°C			d _e g/ml	0.21	3'	Parachor [P] 20°C	
25			v _c ml/g	4.76	3'	30	
30			t _c °C	9.90	2	40	
"C"			P _c mm	38380.	2	Sugd. 101.2	
MR (Obs.)							
MR (Calc.) (n _D -d/2)	10.969	5	PV/RT 25°C			Exp. L. l. %/wt. u.	
			30 mm	1.0000	5	Dispersion	
			BP	0.9681	5	Flash Point °C	
			t _e	0.9622	5	Fire Point	
			t _e	0.290	3'		
			t _c				
			ΔHc kcal/m	316.20	2	M. Spec. Ultra V. X-Ray Dif. Infrared	
			ΔHf				
			ΔFf				
A* -144 to	6.74756	2	Viscosity centistokes			Solubility in +	
B* - 61°C	585.	2	η -125 °C	0.23	2	Acetone	
C	255.	2	η -115 °C	0.20	2	Carbon tet.	
			η -105 °C	0.16	2	Benzene	
A* -144 to	0.81634	4				Ether	
B* - 80°C	528.72	4				n-Heptane	
K	23.1	4				Ethanol	
c	-0.21634	4				Water	
t _k -80 to	-70.0	4				Water in	
t _x -40 °C	38.2	4					
A' to			B ^v to				
B' °C			A ^v °C				
C' °C			(B ^v)				
A'*			(A ^v)				
B'*			c _p liq. °K				
Ac -61 to	7.3063	5	c _p vap. 300°K	0.37252	2		
Bc t _c °C	1096.	5	400	0.45986	2		
Cc t _c °C	397.	5	c _v vap.				
Cryos. A° const.	0.03725	2					
const. B°	0.0130	2					
t _e °C	-112.83	5					
T _R = 0.75 T _c * at saturation pressure (triple point)				+ grams/100 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 Comm. Leiden 7° 189 a, b, c (Timmermans) Mathias et al; 3' Lange							

NAME		Propene (Propylene)		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}=\text{CH}_2$	
Mole % Pur.	Ref.	Molecular Formula	C_3H_6	Molecular Weight	42.078
F.P. °C	-185.25 [#]	Ref.			
F.P. 100%					
B.P. °C					
760 mm	-47.70	2	dt/dP °C/mm		
100	-84.12	2	25°C		
30	-100.06	2	BP	0.0289	2
10	-112.11	2	t _e	0.0351	5
1	-131.89	5	30 mm	0.3982	5
Pressure mm 25°C	8582.	5	ΔHm cal/g		
t _e	593.97	5	ΔHv cal/g		
Density g/ml 20°C	0.5139 [‡]	2	25°C	140.78	5
d ₄ ^t 25	0.5053 [‡]	2	30 mm	118.24	5
			BP	104.62	2
			t _e	106.03	5
			t _e (d, e)	105.99	5
			ΔHv/T _e	20.31	5
a	0.5585	4	d -100 to	92.22	5
b	-0.00123	4	e -53 °C	0.2600	5
Ref. Index n _D 20°C			d' to		
25			e' °C		
30			d _c g/ml	0.233	2
"C"			v _c ml/g	4.302	2
MR (Obs.)			t _c °C	91.9	2
MR (Calc.) (nD-d/2)	15.587	5	P _c mm	34504.	2
Dielectric			PV/RT 25°C		
A -100 to	6.81960	2	30 mm	1.0000	5
B -0.6 °C	785.	2	BP	0.9632	5
C	247.	2	t _e	0.9694	5
A* -100 to	1.03651	5	t _c	0.274	2
B* -43 °C	729.9	5	ΔHc kcal/m	460.43	2
K			ΔHf		
c			Δff		
t _k to			Viscosity centistokes		
t _x °C			η		
A' to			-115 °C	0.48	2
B' °C			-105	0.40	2
C' °C			-95	0.35	2
A'* to			B ^v to		
B'* °C			A ^v °C		
Ac -0.6 to	7.2658	5	(B ^v) to		
Bc t _c °C	1020.	5	(A ^v) °C		
Cc t _c °C	282.	5	c _p liq. °K		
Cryos. A°	0.04673	2	c _p vap.300 °K	0.36456	2
const. B°	0.0054	2	400	0.45392	2
t _e °C	-52.97	5	c _v vap.		
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:					
[‡] at saturation pressure [#] at saturation pressure (triple point)					

NAME		1-Butene (Butylene)			STRUCTURAL FORMULA					
					CH ₃ CH ₂ CH=CH ₂					
Mole % Pur.	Ref.	Molecular Formula	C ₄ H ₈	Molecular Weight	56.104					
		Ref.			Ref.	Ref.				
F. P. °C	-185.35 [#]	2	dt/dP			f		to		
F. P. 100%			°C/mm			g		°K		
B. P. °C			25°C	0.01483	5	h				
760 mm	-6.26	2	BP	0.0337	2	f'		to		
100	-48.77	2	t _e	0.0358	5	g'		°K		
30	-67.41	2	30 mm	0.4656	5	h'				
10	-81.5	2	ΔHm cal/g			m	300 to	0.0121	4	
1	-104.7	5	ΔHv cal/g			n	600 °K	0.0013	4	
Pressure mm 25°C	2217.	5	25°C	86.8	2	o		-0.052	4	
t _e	703.	5	30 mm	107.38	5					
Density g/ml 20°C	0.5951 [‡]	2	BP	93.36	2	m'	700 to	0.1051	4	
t	0.5888 [‡]	2	t _e (d, e)	93.80	5	n'	1000 °K	0.0011	4	
d ₄ 30		2	t _e	93.81	5	o'		-0.036	4	
			ΔHv/T _e	19.86	5					
a	0.6227	4	d	-67 to	91.92	5	Surface tension dynes/cm. 20°C			
b	-0.0011	4	e	-9 °C	0.2293	5	g	30	12.50	5
Ref. Index n _D 20°C			d'	-9 to			40	11.29	5	
25			e'	°C				10.11	5	
30			d	g/ml	0.233	2	Parachor [P]			
"C"			v	ml/g	4.296	2	20°C			
MR (Obs.) MR (Calc.) (n _D -d/2)	20.205	5	t	°C	146.	2	30			
Dielectric			P _c	mm	30172.	2	40			
A -67 to	6.84290	2	PV/RT			Sugd. 179.2			5	
B -40°C	926.1	2	25°C	0.9177	5	Exp. L. l. %/wt.				
C	240.	2	30 mm	1.0000	5	u.				
A*	-67 to	5	BP	0.9518	5	Dispersion				
B*	2 °C	5	t _e	0.9540	5	Flash Point °C				
K	1.13369	5	t _e	0.277	2	Fire Point				
c	865.72	5	ΔHc kcal/m	607.37	2	M. Spec.				
t _k to			ΔHf			Ultra V.				
t _x °C			ΔFf			X-Ray Dif.				
A' to			Viscosity centistokes			Infrared				
B' °C			η	-55°C	0.32	2	Solubility in +			
C'				-45	0.28	2	Acetone			
A'*	to			-35	0.25	2	Carbon tet.			
B'*	°C		B ^v to			Benzene				
			A ^v °C			Ether				
			(B ^v) to			n-Heptane				
			(A ^v) °C			Ethanol				
Ac 40 to	7.2793	5	c _p liq. °K			Water				
Bc t _c °C	1186.	5				Water in				
Cc	277.	5	c _p vap. 300°K	0.36664	2					
Cryos. A° const. B°	0.06002	2	400	0.46414	2					
t _e °C	-8.229	5	c _v vap.							
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:										
‡ at saturation pressure										
# at saturation pressure (triple point)										

NAME		cis-2-Butene		STRUCTURAL FORMULA	
				CH ₃ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula C ₄ H ₈	Molecular Weight 56.104		
F. P. °C	-138.910	2	dt/dP °C/mm		
F. P. 100%			25°C	0.0194	5
B. P. °C			BP	0.0345	2
760 mm	3.720	2	t _e	0.0352	5
100	-39.824	2	30 mm	0.4780	5
30	-58.94	2	ΔHm cal/g		
10	-73.42	2	ΔHv cal/g		
1	-97.2	5	25°C	94.5	2
Pressure mm 25°C	1604.0	5	30 mm	113.38	2
t _e	741.2	5	BP	99.46	5
Density g/ml 20°C	0.6213 [‡]	2	t _e	99.61	5
d _t 25	0.6154 [‡]	2	t _e (d, e)	99.61	5
d ₄ 30	0.6094	4	ΔHv/T _e	20.23	5
a	0.6464	4	d -59 to	100.29	5
b	-0.0010	4	e - 3 °C	0.2221	5
Ref. Index n _D 20°C			d'		
25			e'		
30			d _c g/ml	0.238	2
"C"			v _c ml/g	4.206	2
MR (Obs.)			t _c °C	155.	2
MR (Calc.) (nD-d/2)	20.205	5	P _c mm	31160.	2
Dielectric			PV/RT 25°C	0.8766	4
A -59 to	6.86926	2	30 mm	1.0000	5
B 541 °C	960.1	2	BP	0.9637	4
C	237.	2	t _e	0.9643	5
A* -59 to	1.1261	5	t _c	0.276	2
B* 13 °C	894.9	5	ΔHc kcal/m	605.73	2
K			ΔHf		
c			ΔFf		
t _k to °C			Viscosity centistokes		
t _x °C			η °C		
A' to °C			B ^v to °C		
B' °C			A ^v °C		
C' °C			(B ^v) to °C		
A'* to °C			(A ^v) °C		
B'* to °C			c _p liq. °K		
Ac 541 to	7.3023	5	c _p vap. 300 °K	0.33794	2
Bc t _c °C	1229.	5	400	0.43366	2
Cc °C	275.	5	c _v vap.		
Cryos. A°	0.04877	2			
consts. B°	0.0052	2			
t _e °C	3.07	5			
T _R = 0.75 T _c † at saturation pressure † grams/100 grams solvent					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		trans-2-Butene			STRUCTURAL FORMULA			
					CH ₃ CH=CHCH ₃			
Mole % Pur.	Ref.	Molecular Formula	C ₄ H ₈	Molecular Weight	56.104			
F. P. °C	-105.550	2			Ref.			
F. P. 100%						f	to	
B. P. °C						g	°K	
760 mm	0.88	2				h		
100	-42.69	2				f'	to	
30	-61.82	2				g'	°K	
10	-76.3	2				h'		
1	-100.1	5				m	300 to	
Pressure mm 25°C	1753.	4				n	600 °K	
t _e	729.7	5				o	0.0816	
Density g/ml 20°C	0.6042 [‡]	2					0.0011	
d ₄ ^t 25	0.5984 [‡]	2					-0.0625	
d ₄ ^t 30	0.5925	4				m'	700 to	
a	0.6291	4				n'	1000 °K	
b	-0.0010	4				o'	0.0851	
Ref. Index n _D 20°C							0.0011	
25							-0.0637	
30								
"C"						Surface tension dynes/cm. 20°C		
MR (Obs.)						γ	13.43	
MR (Calc.) (n _D -d/2)	20.205	5					30	
Dielectric							40	
A -62 to	6.86952	2				Parachor [P]		
B -49 °C	960.8	2					20°C	
C	240.	2					30	
A* -62 to	1.13404	5					40	
B* -10 °C	895.9	5					Sugd. 179.2	
K						Exp. L. l. %/wt. u.		
t _k to						Dispersion		
t _x °C						Flash Point °C		
A' to						Fire Point		
B' °C						M. Spec. Ultra V. X-Ray Dif. Infrared		
C'						Solubility in ⁺		
A** to						Acetone		
B** °C						Carbon tet.		
A _c 49 to	7.3082	5				Benzene		
B _c t _c °C	1231.	5				Ether		
C _c	278.	5				n-Heptane		
Cryos. A°	0.04177	2				Ethanol		
const. B°	0.0058	2				Water		
t _e °C	-0.183	5				Water in		
T _R = 0.75 T _c			‡ at saturation pressure			+ grams/100 grams solvent		
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula								
SOURCE: API								
PURIFICATION: API								
LITERATURE REFERENCES:								

NAME	2-Methylpropene		STRUCTURAL FORMULA								
	Isobutene		$\begin{array}{c} \text{CH}_3\text{C} = \text{CH}_2 \\ \\ \text{CH}_3 \end{array}$								
Mole % Pur.	Ref.	Molecular Formula	C_4H_8	Molecular Weight	56.104						
F. P. °C	-140.350	2	dt/dP			f			to		
F. P. 100%			°C/mm			g			°K		
B. P. °C			25°C	0.0145	4	h					
760 mm	-6.900	2	BP	0.0336	2	f'			to		
100	-49.309	2	t_e	0.0355	4	g'			°K		
30	-67.90	2	30 mm	0.4645	5	h'					
10	-81.95	2	ΔH_m cal/g			m			300 to	0.0498	4
1	-105.06	5	ΔH_v cal/g			n			600 °K	0.0012	4
Pressure mm 25°C	2278.	4	25°C	87.7	2	o				-0.0645	4
t_e	710.1	5	30 mm	107.14	5	m'			700 to	0.1217	4
Density g/ml 20°C	0.5942 ^f	2	BP	94.22	2	n'			1000 °K	0.0011	4
25	0.5879 ^f	2	t_e	94.59	4	o'				-0.0634	4
d ^t 30	0.5815	4	t_e (d, e)	94.59	4	Surface tension dynes/cm. 20°C					
d ^t 4		2	$\Delta H_v/T_e$	20.06	5					12.42	5
a	0.6219	4	d	-68 to	92.76					30	5
b	-0.0011	4	e	-9 to	0.2119					40	5
Ref. Index n _D 20°C			e'	to °C						10.04	5
25			d _c	g/ml	0.234					Parachor [P]	
30			v _c	ml/g	4.278					20°C	
"C"			t _c	°C	144.73					30	
MR (Obs.) MR (Calc.) (n _D -d/2)	20.205	5	P _c	mm	29982.					40	
Dielectric			PV/RT							Sugd.	179.2
A	-68 to	6.84134	25°C	0.9314	4	Exp. L. l. %/wt. u.					
B	39°C	923.2	30 mm	1.0000	5	Dispersion					
C		240.	BP	0.9629	4	Flash Point °C					
A*	-68 to	1.12232	t_e	0.9646	5	Fire Point					
B*	1°C	861.1	t_c	0.276	2	M Spec. Ultra V. X-Ray Dif. Infrared					
K			Viscosity centistokes °C			Solubility in +					
c						Acetone					
t _x						Carbon tet.					
t _x						Benzene					
A'	to					Ether					
B'	to					n-Heptane					
C'	to					Ethanol					
A*	to					Water					
B*	to					Water in					
Ac	39 to	7.2777	B ^v	to							
Bc	t _c °C	1183.	A ^v	to							
Cc		277.	(B ^v)	to							
Cryos. A°	0.04044	2	(A ^v)	°C							
const. B°	0.005	2	c _p liq.	°K							
t _e °C	-8.623	4	c _p vap. 300°K		0.38126	2					
			400		0.47358	2					
			c _v vap.								
TR = 0.75 T _c † at saturation pressure ‡ grams/100 grams solvent											
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula											
SOURCE: API											
PURIFICATION: API											
LITERATURE REFERENCES:											

NAME		1-Pentene		STRUCTURAL FORMULA			
				CH ₃ (CH ₂) ₂ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula C ₅ H ₁₀	Molecular Weight 70.130				
	Ref.						Ref.
F.P. °C	-165.220	2	dt/dP °C/mm		f	to	
F.P. 100%			25°C	0.04297	g	°K	
B.P. °C			BP	0.03797	h		
760 mm	29.968	2	t _e	0.0360	f'	to	
100	-17.92	2	t _e 30 mm	0.5247	g'	°K	
30	-38.91	2	ΔHm cal/g		h'		
10	-54.8	2	ΔHv cal/g		m	300 to	0.0283
1	-80.9	5	25°C	86.93	n	600 °K	0.0013
Pressure mm 25°C	648.8	4	30 mm	98.81	o		-0.0647
t _e	813.4	5	BP	86.24			
Density g/ml 20°C	0.64050	2	t _e	85.88	m'	700 to	0.1035
d ₄ ²⁵	0.63533	2	t _e (d, e)	85.88	n'	1000 °K	0.0011
d ₄ ³⁰	0.63012	4	ΔHv/T _e	19.74	o'		-0.0637
a	0.66168	4	d -39 to	91.71	Surface tension dynes/cm. 20°C		
b	-0.03954	4	e 32 °C	0.1825	γ		
Ref. Index n _D 20°C	1.37148	2	d' to		30 14.50		
25	1.36835	2	e' °C		40 13.45		
30	1.36512	4	d _v g/ml	0.227	Parachor [P]		
"C"	0.7764	4	v _c ml/g	4.409	20°C		
MR (Obs.)	24.854	2	t _c °C	188.	30		
MR (Calc.)	24.36	5	P _c mm	25113.	40		
MR (nD-d/2)	1.05123	2	PV/RT 25°C	0.9657	Sugd. 218.2		
Dielectric			30 mm	1.0000	Exp. L. l. %/wt. u.		
A -39 to	6.84650	2	BP	0.9600	Dispersion		
B 73 °C	1044.9	2	t _e	0.9581	Flash Point °C		
C	234.	2	t _c	0.270	Fire Point		
A* -39 to	1.16738	5	ΔHc kcal/m	754.25	M. Spec. Ultra V.		
B* 42 °C	974.8	5	ΔHf		X-Ray Dif. Infrared		
K			ΔFf		Solubility in +		
c			Viscosity centistokes		Acetone		
t _k to			η -20 °C	0.30	Carbon tet.		
t _x °C			-10	0.27	Benzene		
A to			0	0.24	Ether		
B' °C			B _v to		n-Heptane		
C'			A _v °C		Ethanol		
A** to °C			(B _v) to		Water		
B** °C			(A _v) °C		Water in		
Ac 73 to	7.2751	5	c _p liq. °K				
Bc t _c °C	1324.	5	c _p vap. 300°K	0.37516			
Cc	272.	5	400	0.47198			
Cryos. A° const. B°	0.05995	2	c _v vap.				
t _e °C	31.94	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:							

NAME		cis-2-Pentene		STRUCTURAL FORMULA	
				CH ₃ CH ₂ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₅ H ₁₀	Molecular Weight	70.130
F.P. °C	-151.390	Ref.			
F.P. 100%					
B.P. °C					
760 mm	36.942	2			
100	-11.42	2			
30	-32.66	2			
10	-48.7	2			
1	-75.2	5			
Pressure mm 25°C	494.6	5			
t _e	829.6	5			
Density g/ml 20°C	0.6556	2			
d ₄ ^t 25	0.6504	2			
d ₄ 30	0.6452	4			
a	0.6767	4			
b	-0.0398	4			
Ref. Index n _D 20°C	1.3830	2			
25	1.3798	2			
30	1.3766	4			
"C"	0.7808	4			
MR (Obs.)	24.95	2			
MR (Calc.)	24.36	5			
(n _D -d/2)	1.0552	2			
Dielectric					
A -33 to	6.87274	2			
B 82°C	1068.0	2			
C	231.	2			
A* -33 to	1.20088	5			
B* 50°C	1002.4	5			
K					
c					
t _x to					
t _x °C					
A' to					
B' °C					
C' °C					
A** to					
B** °C					
Ac 82 to	7.2973	5			
Bc t _c °C	1350.	5			
Cc °C	270.	5			
Cryos. A°	0.05768	2			
const. B°	0.0048	2			
t _e °C	39.52	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:					

NAME		trans-2-Pentene			STRUCTURAL FORMULA					
					CH ₃ CH ₂ CH=CHCH ₃					
Mole % Pur.	Ref.	Molecular Formula	C ₅ H ₁₀	Molecular Weight	70.130					
		Ref.			Ref.				Ref.	
F. P. °C	-140.244	2	dt/dP			f		to		
F. P. 100%			°C/mm			g		°K		
B. P. °C			25°C	0.0527	5	h				
760 mm	36.353	2	BP	0.03824	2					
100	-12.00	2	t _e	0.0358	5	f'		to		
30	-33.28	2	30 mm	0.5325	5	g'		°K		
10	-49.4	2	ΔHm cal/g			h'				
1	-76.0	5	ΔHv cal/g			m	300 to	0.0406	4	
Pressure mm 25°C	505.5	5	25°C	91.02	5	n	600 °K	0.0012	4	
t _e	828.0	5	30 mm	102.10	5	o		-0.0639	4	
Density g/ml 20°C	0.6482	2	BP	88.92	5	m'	700 to	0.0980	4	
d ₄ ²⁵	0.6431	2	t _e (d, e)	88.44	5	n'	1000 °K	0.0011	4	
d ₄ ³⁰	0.6379	4	ΔHv/T _e	19.88	5	o'		-0.0636	4	
a	0.6690	4	d -33 to	95.80	5	Surface tension dynes/cm. 20°C				
b	-0.0396	4	e -39 °C	0.1893	5	γ	30	16.38	5	
Ref. Index n _D 20°C	1.3793	2	e' to °C			40	15.29	5		
25	1.3761	2				30	14.23	5		
30	1.3729	4	d _c g/ml	0.237	4	Parachor [P] 20°C				
"C"	0.7825	4	v _c ml/g	4.216	4	30				
MR (Obs.)	25.02	2	t _c °C	199.	5	40				
MR (Calc.) (n _D -d/2)	24.36	5	P _c mm	26693.	5	Sugd.	218.2		5	
Dielectric			PV/RT 25°C	0.9653	5	Exp. L.l.%/wt. u.				
A -33 to	6.90575	2	30 mm	1.0000	5	Dispersion			132.	
B 81 °C	1084.0	2	BP	0.9560	5	Flash Point °C				
C	233.	2	t _e	0.9536	5	Fire Point				
A* -33 to	1.22421	5	t _c	0.268	5	M. Spec. Ultra V.				
B* 49 °C	1013.6	5	ΔHc kcal/m		751.66	2	X-Ray Dif. Infrared			
K			ΔHf			Solubility in +				
c			ΔFf			Acetone				
t _k to °C			Viscosity centistokes η °C			Carbon tet.				
t _x to °C			B _v to °C			Benzene				
A' to °C			A _v to °C			Ether				
B' to °C			(B _v) to °C			n-Heptane				
C' to °C			(A _v) °C			Ethanol				
A'*	to °C		c _p liq. °K			Water				
B'*	to °C		c _p vap. 30°K		0.37131	2	Water in			
Ac 81 to	7.3347	5	c _v vap.		0.46585	2				
Bc t _c °C	1370.	5								
Cc t _c °C	272.	5								
Cryos. A° const. B°	0.05685	2								
	0.0052	2								
t _e °C	38.86	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:										

NAME		2-Methyl-1-butene			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CH}_2\text{C} = \text{CH}_2$ $\quad \quad \quad $ $\quad \quad \quad \text{CH}_3$			
Mole % Pur.	Ref.	Molecular Formula	C_5H_{10}	Molecular Weight	70.130			
		Ref.			Ref.			
F. P. °C	-137.560	2	dt/dP			f		to
F. P. 100%			°C/mm			g		°K
B. P. °C			25°C	0.0449	5	h		
760 mm	31.163	2	BP	0.03778	2	f'		to
100	-16.54	2	t_e	0.0358	5	g'		°K
30	-37.50	2	30 mm	0.5239	5	h'		
10	-53.4	2						
1	-79.5	5	ΔHm cal/g					
Pressure mm 25°C	610.0	4	ΔHv cal/g			m		300 to
t_e	813.	5	25°C	88.15	5	n		600°K
Density g/ml 20°C	0.6504	2	30 mm	100.15	5	o		0.0201
d_4^{25}	0.6451	2	BP	86.99	5	0.0014		
d_4^{30}	0.6397	4	t_e	86.62	5	-0.0656		
			t_e (d, e)	86.62	5	m'		700 to
			$\Delta\text{Hv}/T_e$	19.83	5	n'		1000°K
a	0.6721	4	d	-38 to	5	0.1147		
b	-0.0398	4	e	33 °C	5	0.0011		
Ref. Index n_D 20°C	1.3778	2	e'	°C		-0.0637		
25	1.3746	2	d	g/ml	5	Surface tension		
30	1.3713	4	v	ml/g	5	dynes/cm. 20°C		
"C"	0.7769	4	c	°C	5	30		
MR (Obs.)	24.85	2	t_c	°C	5	40		
MR (Calc.)	24.36	5	P	mm	5	Sugd. 218.2		
(nD-d/2)	1.0526	2	PV/RT			Exp. L.l. %/wt.		
Dielectric			25°C	0.9618	5	u.		
A -38 to	6.87314	2	30 mm	1.0000	5	Dispersion		
B 75 °C	1053.8	2	BP	0.9560	5	133.		
C	233.	2	t_e	0.9541	5	Flash Point °C		
A* -38 to	1.20404	5	t_c	0.268	5	Fire Point		
B* 43 °C	986.94	5	ΔHc kcal/m	750.57	2	M Spec.		
K			ΔHf			Ultra V.		
c			ΔFf			X-Ray Dif.		
t_x to			Viscosity centistokes			Infrared		
t_x °C			η			Solubility in +		
A' to			B ^v to			Acetone		
B' °C			A ^v °C			Carbon tet.		
C' °C			(B ^v) to			Benzene		
A'* to			(A ^v) °C			Ether		
B'* °C			c_p liq. °K			n-Heptane		
Ac 75 to	7.3005	5	c_p vap. 300°K	0.38243	2	Ethanol		
Bc t_c °C	1334.	5	c_p vap. 400	0.48068	2	Water		
Cc t_c °C	271.	5	c_v vap.			Water in		
Cryos. A°	0.05167	2						
const. B°	0.0043	2						
t_e °C	33.12	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:								

NAME		3-Methyl-1-butene			STRUCTURAL FORMULA				
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_5H_{10}	Molecular Weight	70.130				
		Ref.			Ref.				Ref.
F.P. °C	-168.495	2	dt/dP			f		to	
F.P. 100%			°C/mm			g		°K	
B.P. °C			25°C	0.0326	5	h			
760 mm	20.061	2	BP	0.03721	2	f'		to	
100	-26.82	2	t_e	0.0363	5	g'		°K	
30	-47.3	2	30 mm	0.5128	5	h'			
10	-62.9	2	ΔH_m cal/g			m	300 to	0.0231	4
1	-88.3	5	ΔH_v cal/g			n	600 °K	0.0015	4
Pressure mm 25°C	902.	5	25°C	81.51	5	o		-0.0677	4
t_a	784.	5	30 mm	93.96	5				
Density g/ml 20°C	0.6272	2	BP	82.20	5	m'	700 to	0.1380	4
d_4^{25}	0.6219 $\frac{f}{\%}$	2	t_e (d, e)	81.96	5	n'	1000 °K	0.0011	4
d_4^{30}	0.6168 $\frac{f}{\%}$	4	$\Delta H_v/T_e$	19.54	5	o'		-0.0637	4
a	0.6490	4	d	-47 to	85.70	Surface tension dynes/cm. 20°C			
b	-0.00094	4	e	21 °C	0.1744	30 15.57 5			
Ref. Index n_D^{20}	1.3643	2	d'			40 14.50 5			
25	1.3611 $\frac{f}{\%}$	2	e'			30 13.45 5			
30	1.3587 $\frac{f}{\%}$	4	d_c g/ml		0.219	Parachor [P] 20°C			
"C"	0.7784	4	v_c ml/g	4.568	5	30			
MR (Obs.)	24.94	2	t_c °C	170.	5	40			
MR (Calc.)	24.36	5	P_c mm	23294.	5	Sugd. 218.2 5			
(nD-d/2)	1.0507	2	PV/RT			Exp. L. l. %/wt. u.			
Dielectric			25°C	0.9518	5	Dispersion			
A -47 to	6.82618	2	30 mm	1.0000	5	Flash Point °C			
B 60 °C	1013.474	2	BP	0.9550	5	Fire Point			
C	237.	2	t_e	0.9576	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
A* -47 to	1.16759	5	t_c	0.270	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in			
B* 31 °C	946.98	5	ΔH_c kcal/m		752.33				
K			ΔH_f						
t_k to °C			ΔF_f						
t_x to °C			Viscosity centistokes η °C						
A' to °C			B^v to °C						
B' to °C			A^v to °C						
C' to °C			(B^v) to °C						
A' * to °C			(A^v) °C						
B' * to °C			c_p liq. °K						
Ac 60 to	7.2588	5	c_p vap. 300°K		0.40596	2			
Bc t_c °C	1286.	5	c_p 400		0.50278	2			
Cc t_c °C	274.	5	c_v vap.						
Cryos. A° const. B°	0.05888	2							
t_e °C	0.0047	2							
t_e °C	20.93	5							
$T_R = 0.75 T_c^f$ at saturation pressure					+ grams/100 grams solvent				
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula									
SOURCE: API									
PURIFICATION: API									
LITERATURE REFERENCES:									

NAME		2-Methyl-2-butene		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}=\text{C} \begin{array}{l} \text{CH}_3 \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_5H_{10}	Molecular Weight	70.130
F. P. °C	-133.768	2	dt/dP °C/mm		
F. P. 100%			25°C	0.0566	5
B. P. °C			BP	0.03844	2
760 mm	38.568	2	t_e	0.0357	5
100	-10.06	2	30 mm	0.5360	5
30	-31.48	2	ΔHm cal/g		
10	-47.7	2	ΔHv cal/g		
1	-74.5	5	25°C	91.86	5
Pressure mm 25°C	466.1	5	30 mm	102.96	5
t_e	834.3	5	BP	89.73	5
Density g/ml 20°C	0.6623	2	t_e	89.21	5
d_t 25	0.6570	2	t_e (d, e)	89.21	5
d_4 30	0.6517	4	$\Delta\text{Hv}/T_e$	19.89	5
a	0.6838	4	d -31 to	97.01	5
b	-0.0210	4	e 41 °C	0.1889	5
Ref. Index n_D 20°C	1.3874	2	d' to		
25	1.3842	2	e' °C		
30	1.3809	4	d_c g/ml	0.242	5
"C"	0.7813	4	v_c ml/g	4.128	5
MR (Obs.)	24.95	2	t_c °C	204.	5
MR (Calc.)	24.36	5	P mm	27547.	5
(nD-d/2)	1.0563	2	PV/RT		
Dielectric			25°C	0.9645	5
A -31 to	6.91562	2	30 mm	1.0000	5
B 85°C	1095.088	2	BP	0.9560	5
C	233.	2	t_e	0.9534	5
A* -31 to	1.24011	5	t_c	0.268	5
B* 51°C	1026.4	5	ΔHc kcal/m	749.08	2
K			ΔHf		
c			ΔFf		
t_k to			Viscosity centistokes		
t_x °C			η °C		
A' to			BV to		
B' °C			AV °C		
C' °C			(B ^v) to		
A'* to			(A ^v) °C		
B'* °C			c_p liq. °K		
Ac 85 to	7.3453	5	c_p vap. 300°K	0.35962	2
Bc t_c °C	1385.	5	400	0.45530	2
Gc 272.		5	c_v vap.		
Cryos. A°	0.04703	2			
consts. B°	0.0048	2			
t_e °C	41.32	5			
$T_R = 0.75 T_c$					
REFERENCES:	1-Dow	2-API	3-Lit.	4-Calc. from det. data	5-Calc. by formula
SOURCE:	API				
PURIFICATION:	API				
LITERATURE REFERENCES:					

NAME		1-Hexene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₃ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₂	Molecular Weight	84.156
	Ref.				Ref.
F. P. °C	-139.819	2	dt/dP		
F. P. 100%			°C/mm		
B. P. °C			25°C	0.1267	5
760 mm	63.485	2	BP	0.04149	2
100	11.109	2	t _e	0.0362	5
30	-11.88	2	30 mm	0.5748	5
10	-29.3	2			
1	-57.9	5	ΔHm cal/g		
Pressure mm 25°C	187.2	5	ΔHv cal/g		
t _e	905.	5	25°C	88.33	5
			30 mm	93.50	5
Density g/ml 20°C	0.67317	2	BP	80.66	5
t _e	0.66848	2	t _e	79.72	5
d ^t 25	0.66377	4	t _e (d, e)	79.70	5
d ^t 30			ΔHv/T _e	19.60	5
a	0.69199	4	d -12 to	91.48	5
b	-0.03906	4	e 69 °C	0.1705	5
Ref. Index			d' to		
n _D 20°C	1.38788	2	e' °C		
25	1.38502	2	d _c g/ml	0.230	5
30	1.38219	4	v _c ml/g	4.342	5
"C"	0.7696	4	t _c °C	228.	5
MR (Obs.)	29.492	2	P _c mm	22668.	5
MR (Calc.)	28.978	5	PV/RT		
(nD-d/2)	1.05130	2	25°C	0.9857	5
			30 mm	1.0000	5
Dielectric			BP	0.9550	5
A -12 to	6.86572	2	t _e	0.9499	5
B 103 °C	1152.971	2	t _c	0.265	5
C	226.	2	ΔHc kcal/m	901.14	2
A* -12 to	1.23301	5	ΔHf		
B* 79 °C	1079.	5	ΔFi		
K			Viscosity centistokes		
c			η		
t _k to			-10°C	0.37	2
t _x °C			20	0.26	2
A' to			40	0.22	2
B' °C			60	0.19	2
C' °C			B _v to		
A'' to			A _v °C		
B'' °C			(B _v) to		
Ac 103 to	7.2845	5	(A _v) °C		
Bc t _c °C	1445.	5	c _p liq. °K		
Cc °C	265.	5	c _p vap. 300°K	0.37763	2
Cryos. A°			400	0.47566	2
consts. B°			c _v vap.		
t _e °C	69.08	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		cis-2-Hexene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₂ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₂	Molecular Weight	84.156
F. P. °C	-141.135	2			
F. P. 100%					
B. P. °C					
760 mm	68.84	2		0.1530	5
100	15.85	4		0.041	2
30	-7.46	4		0.0361	5
10	-25.13	5		0.5832	5
1	-54.23	5			
Pressure mm 25°C	151.	5			
t _e	919.	5			
Density g/ml 20°C	0.6869	2			
d ^t 25	0.6823	2			
d ⁴ 30	0.6777	4			
a	0.7053	4			
b	-0.0389	4			
Ref. Index n _D 20°C	1.3977	2			
25	1.3948	2			
30	1.3920	4			
"C"	0.7722	4			
MR (Obs.)	29.55	2			
MR (Calc.)	28.978	5			
(n _D -d/2)	1.0542	2			
Dielectric					
A -7 to	6.89962	5			
B 110°C	1184.6	5			
C	226.	5			
A* -7 to	1.26086	5			
B* 85°C	1109.3	5			
K					
c					
t _x to					
t _x °C					
A' to					
B' °C					
C'					
A'* to					
B'* °C					
Ac 110 to	7.32029	5			
Bc t _c °C	1484.	5			
Cc t _c °C	266.	5			
Cryos. A° const. B°					
t _e °C	75.01	5			
dt/dP °C/mm 25°C					
BP					
t _e 30 mm					
ΔHm cal/g					
ΔHv cal/g 25°C	89.40	5			
30 mm	95.30	5			
BP	82.33	5			
t _e	81.31	5			
t _e (d, e)	81.28	5			
ΔHv/T _e	19.65	5			
d -7 to	94.03	5			
e °C	0.1700	5			
d' -75 to					
e' °C					
d _c g/ml	0.238	5			
v _c ml/g	4.202	5			
t _c °C	238.	5			
P _c mm	23801.	5			
PV/RT 25°C	0.9847	5			
30 mm	1.0000	5			
BP	0.9540	5			
t _e	0.9485	5			
t _c	0.264	5			
ΔHc kcal/m	899.54	2			
ΔHf					
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	0.35874	2			
400	0.45867	2			
c _v vap.					
f to					
g °K					
h to					
f' °K					
g' to					
h' °K					
m 300 to	0.0155	4			
n 600 °K	0.0013	4			
o	-0.0636	4			
m' 700 to	0.0978	4			
n' 1000 °K	0.0011	4			
o'	-0.0636	4			
Surface tension dynes/cm. 20°C	19.39	5			
30	18.34	5			
40	17.31	5			
Parachor [P] 20°C					
30					
40					
50					
Supd.	257.3	5			
Exp. L.l./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					
T _R = 0.75 T _c					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		trans-2-Hexene		STRUCTURAL FORMULA		
				CH ₃ (CH ₂) ₂ CH=CH CH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₂	Molecular Weight 84.156			
	Ref.			Ref.	Ref.	
F. P. °C	-132.970	2	dt/dP °C/mm		f to	
F. P. 100%			25°C	0.1480	g °K	
B. P. °C			BP	0.041	h	
760 mm	67.87	2	t _e	0.0361	f' to	
100	15.01	4	30 mm	0.5818	g' °K	
30	-8.25	4	ΔHm cal/g		h'	
10	-25.87	5	ΔHv cal/g		m 300 to 0.0582	
1	-54.90	5	25°C	89.70	n 600 °K 0.0012	
Pressure mm 25°C	157.	5	30 mm	94.98	o -0.0631	
t _e	916.	5	BP	82.05	m' 700 to 0.0760	
Density g/ml 20°C	0.6784	2	t _e (d, e)	81.04	n' 1000 °K 0.0012	
d ₄ ^t 25	0.6738	2	ΔHv/T _e	81.02	o' -0.0642	
d ₄ ^t 30	0.6692	4	d -8 to	93.58	Surface tension dynes/cm. 20°C	
a	0.6968	4	e 74 °C	0.1698	γ	18.44
b	-0.0389	4	d'		30	17.43
Ref. Index n _D 20°C	1.3935	2	e'		40	16.45
25	1.3907	2	d _c g/ml	0.235	Parachor [P]	
30	1.3879	4	v _c ml/g	4.257	20°C	
"C"	0.7741	4	t _c °C	236.	30	
MR (Obs.)	29.64	2	P _c mm	23399.	40	
MR (Calc.)	28.978	5	PV/RT 25°C	0.9937	Sugd.	257.3
(n _D -d/2)	1.0543	2	30 mm	1.0000	Exp. L. l. %/wt. u.	
Dielectric			BP	0.9540	Dispersion	
A -8 to	6.89830	5	t _e	0.9485	Flash Point °C	
B 108 °C	1181.0	5	t _c	0.264	Fire Point	
C	226.	5	ΔHc kcal/m	898.54	M. Spec. Ultra V.	
A* -8 to	1.26070	5	ΔHf		X-Ray Dif.	
B* 84 °C	1106.0	5	ΔFf		Infrared	
K			Viscosity centistokes		Solubility in +	
t _k to °C			η °C		Acetone	
t _x to °C					Carbon tet.	
A' to °C					Benzene	
B' to °C					Ether	
C'					n-Heptane	
A'' to °C					Ethanol	
B'' to °C					Water	
C''					Water in	
Ac 108 to °C	7.3188	5	B _v to °C			
Bc t _c °C	1479.	5	A _v to °C			
Cc	266.	5	(B _v) to °C			
Cryos. A° const. B°			(A _v) °C			
t _e °C	73.93	5	c _p liq. °K			
T _R = 0.75 T _c			c _p vap. 300K	0.37763		
			400	0.47174		
			c _v vap.			

+ grams/100 grams solvent

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

SOURCE: API

PURIFICATION: API

LITERATURE REFERENCES:

NAME		cis-3-Hexene		STRUCTURAL FORMULA	
				CH ₃ CH ₂ CH=CHCH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₂	Molecular Weight	84.156
F.P. °C	-137.820	2			
F.P. 100%					
B.P. °C					
760 mm	66.44	2		dt/dP °C/mm	0.1410
100	13.75	4		25°C	0.041
30	-9.43	4		BP	0.0361
10	-26.98	5		t _e	0.5797
1	-55.90	5		30 mm	
Pressure mm 25°C	166.	5		ΔHm cal/g	
t _e	912.	5		ΔHv cal/g	
Density g/ml 20°C	0.6796	2		25°C	88.52
d _t 25	0.6749	2		30 mm	94.47
d ₄ 30	0.6702	4		BP	81.62
				t _e	80.64
				t _e (d, e)	80.62
				ΔHv/T _e	19.64
a	0.6984	4		d -94 to	92.87
b	-0.0391	4		e -72 °C	0.1694
				d'	
				e'	
Ref. Index n _D 20°C	1.3947	2		d _c g/ml	0.236
25	1.3920	2		v _c ml/g	4.245
30	1.3889	4		t _c °C	233.
"C"	0.7749	4		P _c mm	23329.
MR (Obs.)	29.67	2		PV/RT	
MR (Calc.)	28.978	5		25°C	0.9879
(nD-d/2)	1.0549	2		30 mm	1.0000
Dielectric				BP	0.9540
A -94 to	6.89493	5		t _e	0.9487
B 107 °C	1175.4	5		t _c	0.264
C	226.	5		ΔHc kcal/m	899.54
A* -94 to	1.25194	5		ΔHf	
B* 82 °C	1097.1	5		ΔFf	
K				Viscosity centistokes	
c				η °C	
t _k					
t _x					
A' to				B' to	
B' °C				A'v °C	
C' °C				(B'v) to	
A'* to				(A'v) °C	
B'* °C				c _p liq. °K	
Ac 107 to	7.3156	5		c _p vap. 300°K	0.35303
Bc t _c °C	1472.	5		400	0.45748
Cc t _c °C	266.	5		c _v vap.	
Cryos. A°					
const. B°					
t _e °C	72.33	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:					

NAME		trans-3-Hexene		STRUCTURAL FORMULA		
				CH ₃ CH ₂ CH=CHCH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₂	Molecular Weight 84.156			
F. P. °C	-113.430	2				
F. P. 100%						
B. P. °C						
760 mm	67.08	2	dt/dP °C/mm			
100	14.30	4	25°C	0.1441	5	
30	-8.91	4	BP	0.041	2	
10	-26.50	5	t _e	0.0361	5	
1	-55.47	5	30 mm	0.5807	5	
			ΔHm cal/g			
Pressure mm 25°C	162.	5	ΔHv cal/g			
t _e	914.	5	25°C	88.86	5	
			30 mm	94.68	5	
Density g/ml 20°C	0.6772	2	BP	81.80	5	
d ^t 25	0.6725	2	t _e	80.81	5	
d ⁴ 30	0.6678	4	t _e (d, e)	80.78	5	
			ΔHv/T _e	19.64	5	
a	0.6961	4	d	-9 to	93.17	5
b	-0.0391	4	e	73 °C	0.1696	5
Ref. Index			d'	to		
n _D 20°C	1.3943	2	e'	°C		
25	1.3916	2	d	g/ml	0.234	5
30	1.3886	4	v	ml/g	4.270	5
"C"	0.7770	4	t	°C	234.	5
MR (Obs.)	29.75	2	P _c mm	23237.	5	
MR (Calc.)	28.978	5	PV/RT			
(n _D -d/2)	1.0557	2	25°C	0.9888	5	
			30 mm	1.0000	5	
Dielectric			BP	0.9540	5	
A -9 to	6.89575	5	t _e	0.9486	5	
B 107 °C	1177.7	5	t _c	0.264	5	
C	226.	5	ΔHc kcal/m	898.54	2	
A* -9 to	1.25454	5	ΔHf			
B* 83 °C	1100.5	5	ΔFf			
K			Viscosity centistokes			
c			η			
t _k to						
t _x °C						
A' to			B ^v to			
B' °C			A ^v °C			
C'			(B ^v) to			
A'* to			(A ^v) °C			
B'* °C			c _p liq. °K			
Ac 107 to	7.3162	5	c _p vap. 300°K	0.37906	2	
Bc t _c °C	1475.	5	400	0.47768	2	
Cc t _c	266.	5	c _v vap.			
Cryos. A° const. B°						
t _e °C	73.05	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:						

NAME		2-Methyl-1-pentene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₂ C = CH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₂	Molecular Weight 84.156		
F.P. °C	-135.720	Ref.			
F.P. 100%		2			
B.P. °C			dt/dP °C/mm		
760 mm	60.7	2	25°C	0.1163	5
100	8.77	4	BP	0.0413	2
30	-14.06	4	t _e	0.0361	5
10	-31.35	5	30 mm	0.5710	5
1	-59.83	5			
Pressure mm 25°C			ΔHm cal/g		
t _e	206.	5	ΔHv cal/g		
	896.	5	25°C	85.91	5
Density g/ml 20°C	0.6799	2	30 mm	92.57	5
d ₄ ²⁵	0.6751	2	BP	80.01	5
d ₄ ³⁰	0.6720	4	t _e	79.15	5
		2	t _e (d, e)	79.13	5
		2	ΔHv/T _e	19.64	5
a	0.7010	4	d -14 to	90.21	5
b	-0.0393	4	e -66 °C	0.1680	5
			d' to		
Ref. Index n _D 20°C	1.3920	2	e' °C		
25	1.3891	2	d c g/ml	0.237	5
30	1.3856	4	v c ml/g	4.223	5
"C"	0.7666	4	t c °C	225.	5
MR (Obs.)	29.47	2	P c mm	23164.	5
MR (Calc.)	28.978	5	PV/RT		
(n _D -d/2)	1.0506	2	25°C	0.9817	5
			30 mm	1.0000	5
Dielectric			BP	0.9540	5
A -14 to	6.88772	5	t _e	0.9492	5
B 100°C	1154.7	5	t _c	0.265	5
C	227.	5	ΔHc kcal/m	897.54	2
A* -14 to	1.25060	5	ΔHf		
B* 76°C	1076.8	5	ΔFf		
K			Viscosity centistokes		
c			η °C		
t _x to					
t _x °C					
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v) to		
A'* to °C			(A ^v) °C		
B'* to °C			c _p liq. °K		
Ac 100 to	7.30907	5	c _p vap 300°K	0.38690	2
Bc t _c °C	1447.	5	400	0.48481	2
Cc °C	267.	5	c _v vap.		
Cryos. A° const. B°					
t _e °C	65.92	5			
TR = 0.75 T _c					
REFERENCES:	1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula				
SOURCE:	API				
PURIFICATION:	API				
LITERATURE REFERENCES:					

NAME		3-Methyl-1-pentene		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}=\text{CH}_2$	
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156
		Ref.			Ref.
F. P. °C	-153.0	2	dt/dP		
F. P. 100%			°C/mm		
B. P. °C			25°C	0.0936	5
760 mm	54.14	2	BP	0.040	2
100	3.06	4	t_e	0.0362	5
30	-19.38	4	30 mm	0.5612	5
10	-36.38	5	$\Delta\text{Hm cal/g}$		
1	-64.34	5	$\Delta\text{Hv cal/g}$		
Pressure mm 25°C	264.	5	25°C	83.10	5
t_e	877.	5	30 mm	90.36	5
Density g/ml 20°C	0.6675	2	BP	78.99	5
d_4^{25}	0.6628	2	t_e	77.39	5
d_4^{30}	0.6581	4	t_e (d, e)	77.38	5
a	0.6865	4	$\Delta\text{Hv}/T_e$	19.63	5
b	-0.0390	4	d -19 to	87.36	5
Ref. Index n_D 20°C	1.3842	2	e 59 °C	0.1546	5
25	1.3814	2	d' to		
30	1.3786	4	e' °C		
"C"	0.7691	4	d_c g/ml	0.234	5
MR (Obs.)	29.49	2	v_c ml/g	4.276	5
MR (Calc.)	28.978	5	t_c °C	213.	5
(nD-d/2)	1.0504	2	P_c mm	22329.	5
Dielectric			PV/RT		
A -19 to	6.87729	5	25°C	0.9798	5
B 92 °C	1130.4	5	30 mm	1.0000	5
C	229.	5	BP	0.9540	5
A* -19 to	1.26723	5	t_e	0.9498	5
B* 69 °C	1062.0	5	t_c	0.265	5
K			$\Delta\text{Hc kcal/m}$	900.08	2
t_k to			ΔHf		
t_x °C			ΔFf		
A' to			Viscosity centistokes		
B' °C			η		
C' °C					
A** to			B_v to		
B** °C			A_v °C		
Ac 92 to	7.2989	5	(B_v) to		
Bc t_c °C	1417.	5	(A_v) °C		
Cc	267.	5	c_p liq. °K		
Cryos. A° const. B°			c_p vap. 300°K	0.41376	2
t_e °C	58.61	5	400	0.52759	2
			c_v vap.		
+ grams/100 grams solvent					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		4-Methyl-1-pentene			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CHCH}_2\text{CH}=\text{CH}_2$ CH_3			
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156			
F. P. °C	-153.63	2	dt/dP			f	to	
F. P. 100%			°C/mm			g	°K	
B. P. °C			25°C	0.0928	5	h		
760 mm	53.88	2	BP	0.0404	2	f'	to	
100	2.84	4	t_e	0.0361	5	g'	°K	
30	-19.58	4	30 mm	0.5607	5	h'		
10	-36.57	5				m	300 to	-0.0583
1	-64.51	5	$\Delta\text{Hm cal/g}$			n	600 °K	0.0015
Pressure mm 25°C	267.	5	$\Delta\text{Hv cal/g}$	82.95	5	o		-0.0657
t_e	877.	5	25°C	90.29	5	m'	700 to	0.0700
Density g/ml 20°C	0.6642	2	30 mm	78.14	5	n'	1000 °K	0.0012
d_t 25	0.6594	2	BP	77.41	5	o'		-0.0642
d_4 30	0.6546	4	t_e (d, e)	77.40	5			
			$\Delta\text{Hv}/T_e$	19.65	5			
a	0.6836	4	d	-20 to	87.05	5	Surface tension	
b	-0.0392	4	e	58 °C	0.1653	5	dynes/cm. 20°C	16.90
Ref. Index n_D 20°C	1.3828	2	d'				30	15.90
25	1.3799	2	e'				40	14.91
30	1.3770	4	d				Parachor [P]	
"C"	0.7703	4	d_c g/ml	0.233	5	20°C		
MR (Obs.)	29.54	2	v_c ml/g	4.295	5	30		
MR (Calc.)	28.978	5	t_c °C	212.	5	40		
(n_D -d/2)	1.0507	2	P _c mm	22185.	5	Sugd.	257.3	5
Dielectric			PV/RT			Exp. L.l. %/wt.		
A -20 to	6.87757	5	25°C	0.9807	5	u.		
B 91°C	1130.0	5	30 mm	1.0000	5	Dispersion	124.	2
C	229.	5	BP	0.9550	5	Flash Point °C		
A* -20 to	1.25996	5	t_e	0.9509	5	Fire Point		
B* 68°C	1059.0	5	t_c	0.265	5	M Spec.		
K			$\Delta\text{Hc kcal/m}$	899.44	2	Ultra V.		
t_k to			ΔHf			X-Ray Dif.		
t_x °C			ΔFf			Infrared		
A' to			Viscosity centistokes			Solubility in +		
B' °C			η °C			Acetone		
C' °C			B ^v to			Carbon tet.		
A'* to			A ^v °C			Benzene		
B'* °C			(B ^v) to			Ether		
Ac 91 to	7.2991	5	(A ^v) °C			n-Heptane		
Bc t_c °C	1415.	5	c_p liq. °K			Ethanol		
Cc °C	267.	5	c_p vap. 300°K	0.36171	2	Water		
Cryos. A° const. B°			c_p vap. 400	0.46224	2	Water in		
t_e °C	58.35	5	c_v vap.					
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: API								
PURIFICATION: API								
LITERATURE REFERENCES:								

NAME		2-Methyl-2-pentene			STRUCTURAL FORMULA				
					$\text{CH}_3\text{CH}_2\text{CH}=\text{C} \begin{matrix} \text{CH}_3 \\ \text{CH}_3 \end{matrix}$				
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156				
		Ref.			Ref.				
F.P. °C	-135.070	2	dt/dP °C/mm			f	to		
F.P. 100%			25°C		0.1451	g	°K		
B.P. °C			BP		0.0418	h			
760 mm	67.29	2	t_e		0.0362	f'	to		
100	14.48	4	30 mm		0.5811	g'	°K		
30	-8.75	4				h'			
10	-26.36	5	$\Delta\text{Hm cal/g}$			m	300 to		
1	-55.34	5	$\Delta\text{Hv cal/g}$			n	600 °K		
Pressure mm 25°C	160.	5	25°C		88.87	o	-0.0144		
t_e	914.	5	30 mm		94.73		0.0014		
Density g/ml 20°C	0.6863	2	BP		81.84		-0.0658		
d_4^{25}	0.6815	2	t_e (d, e)		80.84	m'	700 to		
d_4^{30}	0.6767	4	$\Delta\text{Hv}/T_e$		80.82	n'	1000 °K		
a	0.7055	4	d -9 to		93.24	o'	0.0644		
b	-0.0393	4	e 73 °C		0.1695		0.0012		
Ref. Index n_D 20°C	1.4004	2	d' to				-0.0642		
25	1.3976	2	e' °C			Surface tension dynes/cm. 20°C			
30	1.3945	4	d_c g/ml		0.237	30			
"C"	0.7778	4	v_c ml/g		4.216	40			
MR (Obs.)	29.75	2	t_c °C		235.	Sugd. 257.3			
MR (Calc.)	28.978	5	P_c mm		23580.	Parachor [P] 20°C			
(nD-d/2)	1.0573	4	PV/RT 25°C		0.9837	30			
Dielectric			30 mm		1.0000	40			
A -9 to	6.89488	5	BP		0.9540	Dispersion			
B 108 °C	1178.1	5	t_e		0.9486	Flash Point °C			
C	226.	5	t_c		0.264	Fire Point			
A* -9 to	1.25698	5	$\Delta\text{Hc kcal/m}$		896.14	M. Spec. Ultra V.			
B* 83 °C	1101.9	5	ΔHf			X-Ray Dif.			
K			ΔFf			Infrared			
t_k to			Viscosity centistokes			Solubility in +			
t_x °C			°C			Acetone			
A' to			B^v to			Carbon tet.			
B' °C			A^v °C			Benzene			
C'			(B^v) to			Ether			
A** to			(A^v) °C			n-Heptane			
B** °C			c_p liq. °K			Ethanol			
A ₁ 108 to	7.3157	5	400		0.36147	Water			
B ₁ t_c °C	1476.	5	c_p vap. 300°K		0.46343	Water in			
C ₁ 266.	266.	5	400						
Cryos. A° const. B°			c_v vap.						
t_e °C	73.28	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:									

NAME		3-Methyl-cis-2-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{C} = \text{CHCH}_3$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156		
		Ref.			Ref.	Ref.	
F.P. °C	-138.445	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C	70.45	2	25°C	0.1627	5	h	
760 mm	17.21	4	BP	0.0421	4	f'	to
100	-6.21	4	t _e	0.0362	5	g'	°K
30	-23.95	4	30 mm	0.5859	5	h'	
10	-53.19	4	ΔHm cal/g			m	300 to
1			ΔHv cal/g			n	600 °K
Pressure mm 25°C	140.97	4	25°C	89.77	5	o	-0.0144
t _e	923.5	4	30 mm	95.77	5		0.0014
Density g/ml 20°C	0.6986	2	BP	82.73	5		-0.0658
d ₄ ^t 25	0.6942	2	t _e	81.67	5	m'	700 to
d ₄ ^t 30	0.6898	4	t _e (d, e)	81.64	5	n'	1000 °K
			ΔHv/T _e	19.64	5	o'	0.0644
a	0.7162	4	d	-6 to	94.71	5	Surface tension
b	-0.03855	4	e	-77 to	0.1701	5	dynes/cm. 20°C
Ref. index n _D 20°C	1.4045	2	d'				30
25	1.4018	2	e'				40
30	1.3990	4	d	g/ml	0.242	5	20°C
"C"	0.7715	5	v _c	ml/g	4.140	5	30
MR (Obs.)	29.49	2	t _c	°C	243.	5	40
MR (Calc.)	28.978	5	P _c	mm	24391.	5	Sugd.
(nD-d/2)	1.0552	2	PV/RT				257.3
Dielectric			25°C	0.9815	5	Exp. L. l. %/wt. u.	
A	-6 to	5	30 mm	1.0000	5	Dispersion	131.
B	114°C	5	BP	0.9540	5	Flash Point °C	
C	1189.5	5	t _e	0.9483	5	Fire Point	
	225.6	5	t _c	0.264	5	M Spec.	
A*	-6 to	5	ΔHc kcal/m	896.78	2	Ultra V.	
B*	87°C	5	ΔHf			X-Ray Dif.	
K	1113.9	5	ΔFf			Infrared	
c			Viscosity centistokes			Solubility in +	
t _k			η			Acetone	
t _x						Carbon tet.	
A'	to					Benzene	
B'	°C					Ether	
C'						n-Heptane	
A**	to		B ^v	to		Ethanol	
B**	°C		A ^v	°C		Water	
Ac	114 to	5	(B ^v)	to		Water in	
Bc	t _c °C	5	(A ^v)	°C			
Cc	266.4	5	c _p liq.	°K			
Cryos. A°			c _p vap. 300°K	0.36147	2		
const. B°			400	0.46343	2		
t _e °C	76.82	5	c _v vap.				
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		3-Methyl-trans-2-pentene			STRUCTURAL FORMULA				
					$\text{CH}_3\text{CH}_2\text{C} = \text{CHCH}_3$ $\quad \quad \quad $ $\quad \quad \quad \text{CH}_3$				
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156				
		Ref.			Ref.				Ref.
F. P. °C	-134.840	2	dt/dP			f	to		
F. P. 100%			°C/mm			g	°K		
B. P. °C			25°C		0.1468	5			
760 mm	67.63	2	BP		0.0418	5			
100	14.77	4	t_e		0.0362	5			
30	-8.48	4	30 mm		0.5816	5			
10	-26.09	5							
1	-55.11	5	$\Delta\text{Hm cal/g}$						
Pressure mm 25°C	158.	5	$\Delta\text{Hv cal/g}$		89.07	5			
t_e	915.	5	25°C		94.85	5			
			30 mm		82.38	5			
Density g/ml 20°C	0.6942	2	BP		80.94	5			
t 25	0.6898	2	t_e		80.92	5			
d_4 30	0.6854	4	t_e (d, e)		80.92	5			
			$\Delta\text{Hv}/T_e$		19.64	5			
a	0.7119	4	d		-8 to	93.46	5	Surface tension	
b	-0.0386	4	e		74 °C	0.1638	5	dynes/cm. 20°C	
Ref. Index n_D 20°C	1.4016	2	d'		to			30	
25	1.3989	2	e'		°C			40	
30	1.3962	4						18.15	
"C"	0.7712	4	d		g/ml	0.241	5	Parachor [P]	
MR (Obs.)	29.49	2	v		ml/g	4.151	5	20°C	
MR (Calc.)	28.978	5	c		°C	238.	5	30	
(nD-d/2)	1.0545	4	t		mm	24093.	5	40	
Dielectric			P _c					Sugd. 257.3	
A	-8 to	5	PV/RT		25°C	0.9823	5	Exp. L. l. %/wt.	
B	110°C	5	25°C		30 mm	1.0000	5	u.	
C	226.	5	BP			0.9540	5	Dispersion	
A*	-8 to	5	t_e			0.9486	5	Flash Point °C	
B*	84°C	5	t_c			0.264	5	Fire Point	
K			$\Delta\text{Hc kcal/m}$			896.78	2	M. Spec.	
c			ΔHf					Ultra V.	
t_k			ΔFf					X-Ray Dif.	
t_x			Viscosity					Infrared	
A'	to		centistokes					Solubility in ⁺	
B'	°C		η					Acetone	
C'								Carbon tet.	
A**	to							Benzene	
B**	°C							Ether	
								n-Heptane	
								Ethanol	
								Water	
								Water in	
Ac	110 to	5	B^v		to				
Bc	t_c °C	5	A^v		°C				
Cc	266.	5	(B^v)		to				
			(A^v)		°C				
			c _p liq.		°K				
Cryos. A°			c _p vap.		300°K	0.36147	2		
consts. B°			400			0.46343	2		
t_e °C	73.66	5	c _v vap.						
$T_R = 0.75 T_C$									
+ 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:									

NAME		4-Methyl-cis-2-pentene				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156					
F.P. °C	-134.430	2		dt/dP °C/mm		f		to		Ref.
F.P. 100%				25°C	0.1005	5		°K		
B.P. °C				BP	0.0406	5	h			
760 mm	56.30	2		t_e	0.0361	5	f'		to	
100	4.96	4		30 mm	0.5643	5	g'		°K	
30	-17.60	4		$\Delta\text{Hm cal/g}$			h'			
10	-34.69	5		$\Delta\text{Hv cal/g}$			m	300 to	-0.0000	4
1	-62.82	5		25°C	83.81	5	n	600 °K	0.0015	4
Pressure mm 25°C	243.	5		30 mm	91.13	5	o		-0.067	4
t_e	883.	5		BP	78.78	5				
Density g/ml 20°C	0.6690	2		t_e	78.01	5	m'	700 to	0.1236	4
d_4^{25}	0.6642	2		t_e (d, e)	77.99	5	n'	1000 °K	0.0011	4
d_4^{30}	0.6593	4		$\Delta\text{Hv}/T_e$	19.64	5	o'		-0.0636	4
a	0.6884	4		d -18 to	88.19	5	Surface tension dynes/cm. 20°C			
b	-0.0392	4		e 61	0.1671	5	30			17.41
Ref. Index $n_D^{20^\circ\text{C}}$				e' °C			40			16.38
25	1.3880	2		d g/ml	0.234	5	Sugd.			15.37
30	1.3849	2		v_c ml/g	4.265	5	257.3			5
"C"	0.7746	4		t_c °C	217.	5	Parachor [P]			
MR (Obs.)	29.68	2		P_c mm	22487.	5	20°C			
MR (Calc.)	28.978	5		PV/RT			30			
(nD-d/2)	1.0535	4		25°C	0.9764	5	40			
Dielectric				30 mm	1.0000	5	Exp. L. l. %/wt. u.			
A -18 to	6.88274	5		BP	0.9540	5	Dispersion			126.
B 94°C	1139.0	5		t_e	0.9496	5	Flash Point °C			
C	228.	5		t_c	0.264	5	Fire Point			
A* -18 to	1.25914	5		$\Delta\text{Hc kcal/m}$	897.84	2	M Spec. Ultra V.			
B* 71°C	1064.5	5		ΔHf			X-Ray Dif.			
K				ΔFf			Infrared			
c				Viscosity centistokes			Solubility in +			
t_x				η °C			Acetone			
t_x							Carbon tet.			
A' to							Benzene			
B' °C							Ether			
C' °C							n-Heptane			
A** to							Ethanol			
B** °C							Water			
Ac 94 to	7.3041	5					Water in			
Bc t_c °C	1427.	5								
Cc °C	267.	5								
Cryos. A° const. B°										
t_e °C	61.01	5		c_p liq. °K						
				c_p vap. 300 °K	0.38108	2				
				400	0.48125	2				
				c_v vap.						
$T_R = 0.75 T_c$										
										+ 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		4-Methyl-trans-2-pentene			STRUCTURAL FORMULA					
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}=\text{CHCH}_3$					
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156					
F. P. °C	-140.810	2				f		to		
F. P. 100%						g		°K		
B. P. °C						h				
760 mm	58.55	2			0.1083	5				
100	6.91	4			0.0409	4				
30	-15.78	4			0.0361	5	f'		to	
10	-32.98	5			0.5677	5	g'		°K	
1	-61.28	5					h'			
Pressure mm 25°C	224.	5					m	300 to	0.0441	4
t_e	889.	5			84.88	5	n	600 °K	0.0014	4
Density g/ml 20°C	0.6686	2			91.88	5	o		-0.0663	4
d_4^{25}	0.6638	2			79.41	5				
d_4^{30}	0.6590	4			BP	5	m'	700 to	0.1393	4
a	0.6879	4			t_e	5	n'	1000 °K	0.0011	4
b	-0.0392	4			t_e (d, e)	5	o'		-0.0636	4
Ref. Index n_D^{20}	1.3889	2			$\Delta H_v/T_e$	5				
25	1.3859	2								
30	1.2831	4								
"C"	0.7768	4			d -10 to	5	Surface tension dynes/cm. 20°C			
MR (Obs.)	29.76	2			e 70 °C	5	γ	30	17.37	5
MR (Calc.)	29.441	5			d'	5		40	16.35	5
(nD-d/2)	1.0546	4			e'	5			15.35	5
Dielectric					d_c g/ml	5	Parachor [P]			
A -20 to	6.88584	5			v_c ml/g	5	20°C			
B 97 °C	1147.1	5			t_c °C	5	30			
C	227.9	5			P_c mm	5	40			
A* -20 to	1.25965	5					Sugd. 257.3			
B* 70 °C	1073.8	5			PV/RT	5	Exp. L. l. %/wt.			
K					25°C	5	u.			
t_c					30 mm	5	Dispersion			
t_k to					BP	5	128.			
t_x °C					t_e	5	Flash Point °C			
A' to					t_c	5	Fire Point			
B' °C					ΔH_c kcal/m	2	M. Spec.			
C' °C					ΔH_f		Ultra V.			
A** to					ΔF_f		X-Ray Dif.			
B** °C					Viscosity centistokes		Infrared			
Cc 97 to	7.3069	5			η		Solubility in +			
Bc t_c °C	1437.	5					Acetone			
Cc °C	267.	5			B^v to		Carbon tet.			
					A^v °C		Benzene			
					(B^v) to		Ether			
					(A^v) °C		n-Heptane			
					c_p liq. °K		Ethanol			
					c_p vap. 300°K	2	Water			
					400	2	Water in			
					c_v vap.					
t_e °C	63.52	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:										

NAME		2-Ethyl-1-butene		STRUCTURAL FORMULA	
				$\text{CH}_3(\text{CH}_2)_2\text{C}=\text{CH}_2$ C_6H_{12}	
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156
F.P. °C	-131.530	2	dt/dP °C/mm		
F.P. 100%			25°C	0.1328	5
B.P. °C	64.66	2	BP	0.0415	4
760 mm	12.22	4	t _e	0.0361	5
100	-10.84	4	30 mm	0.5769	5
30	-28.32	5	ΔHm cal/g		
10	-57.10	5	ΔHv cal/g		
1			25°C	87.83	5
Pressure mm 25°C	177.	5	30 mm	93.91	5
t _e	907.	5	BP	81.15	5
Density g/ml 20°C	0.6894	2	t _e	80.21	5
d ^t 25	0.6847	2	t _e (d, e)	80.19	5
d ₄ 30	0.6800	4	ΔHv/T _e	19.65	5
a	0.7083	4	d -5 to	92.08	5
b	-0.0391	4	e 75 °C	0.1690	5
Ref. Index n _D 20°C	1.3969	2	d _e		
25	1.3941	2	e'		
30	1.3912	4	d _c g/ml	0.240	5
"C"	0.7680	4	v _c ml/g	4.15	5
MR (Obs.)	29.390	2	t _c °C	232.	5
MR (Calc.)	29.441	5	P _c mm	23699.	5
(nD-d/2)	1.0522	2	PV/RT		
Dielectric			25°C	0.9844	5
A -5 to	6.89411	5	30 mm	1.0000	5
B 106 °C	1169.4	5	BP	0.9540	5
C	226.7	5	t _e	0.9488	5
A* -5 to	1.26041	5	t _c	0.263	5
B* 90 °C	1094.9	5	ΔHc kcal/m	898.18	2
K			ΔHf		
c			ΔFf		
t _k to			Viscosity centistokes		
t _x °C			η °C		
A' to			BV to		
B' °C			AV °C		
C' °C			(BV) to		
A* to			(AV) °C		
B* °C			c _p liq. °K		
Ac 106 to	7.3153	5	c _p vap 300°K	0.38120	2
Bc t _c °C	1466.	5	400	0.48363	2
Cc °C	267.	5	c _v vap.		
Cryos. A° const. B°					
t _e °C	70.34	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:					

NAME		2, 3-Dimethyl-1-butene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} = \text{CH}_2 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156		
		Ref.			Ref.		
F. P. °C	-157.27	2	dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	0.0985	5	h	
760 mm	55.67	2	BP	0.0406	4	f'	to
100	4.41	4	t _e	0.0361	5	g'	to °K
30	-18.11	4	30 mm	0.5633	5	h'	
10	-35.17	5	ΔHm cal/g			m	300 to
1	-63.25	5	ΔHv cal/g			n	600 °K
Pressure mm 25°C	249.	5	25°C	84.74	5	o	0.0285
t _e	881.	5	30 mm	90.92	5		0.0015
Density g/ml 20°C	0.6779	2	BP	78.61	5		-0.0675
d ₄ ^t 25	0.6731	2	t _e	77.85	5	m'	700 to
d ₄ ^t 30	0.6682	4	t _e (d, e)	77.84	5	n'	1000 °K
			ΔHv/T _e	19.64	5	o'	0.1113
a	0.6973	4	d -15 to	87.90	5	Surface tension dynes/cm. 20°C	
b	-0.0392	4	e 70 °C	0.1669	5	γ	18.35
Ref. Index n _D 20°C	1.3904	2	d' to			30	17.28
25	1.3874	2	e' °C			40	16.23
30	1.3845	4	d _c g/ml	0.238	5	Parachor [P] 20°C	
"C"	0.7689	4	v _c ml/g	4.20	5	30	
MR (Obs.)	29.45	2	t _c °C	217.	5	40	
MR (Calc.) (nD-d/2)	29.441	5	P _c mm	22833.	5	Sugd.	257.3
	1.0515	2	PV/RT			Exp. L. l. %/wt. u.	
Dielectric			25°C	0.9919	5	Dispersion	
A -15 to	6.88200	5	30 mm	1.0000	5	129.	
B 94 °C	1136.7	5	BP	0.9540	5	Flash Point °C	
C	228.4	5	t _e	0.9497	5	Fire Point	
A* -15 to	1.25939	5	t _c	0.264	2	M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 80 °C	1063.9	5	ΔHc kcal/m	896.32	2	Solubility in +	
K			ΔHf			Acetone	
c			ΔFi			Carbon tet.	
t _k to			Viscosity centistokes			Benzene	
t _x °C			η			Ether	
A' to						n-Heptane	
B' °C			B _v to			Ethanol	
C'			A _v °C			Water	
A** to			(B _v) to			Water in	
B** °C			(A _v) °C				
Ac 94 to	7.3038	5	c _p liq. °K				
Bc t _c °C	1425.	5	c _p vap. 300°K	0.40924	2		
Cc	267.	5	400	0.50620	2		
Cryos. A° const. B°			c _v vap.				
t _e °C	60.31	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:							

NAME		3, 3-Dimethyl-1-butene		STRUCTURAL FORMULA		
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \text{---} \text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{12}	Molecular Weight	84.156	
		Ref.			Ref.	
F.P. °C	-115.20	2	dt/dP °C/mm		f to	
F.P. 100%			25°C	0.0619	5	g °K
B.P. °C			BP	0.0392	4	h
760 mm	41.24	2	t_e	0.0363	5	f' to
100	-8.26	4	t_e (d, e)			g' °K
30	-29.96	4	ΔHm cal/g			h'
10	-46.38	5				
1	-73.36	5	ΔHv cal/g			
Pressure mm 25°C	425.9	5	25°C	77.42	5	m 300 to
t_e	841.0	5	30 mm	85.87	5	n 600°K
Density g/ml 20°C	0.6529	2	BP	74.36	5	o
d_t 25	0.6479	2	t_e	73.87	5	
d_4 30	0.6429	4	$\Delta\text{Hv}/T_e$	19.58	5	m' 700 to
a	0.6732	4	d -30 to	81.02	5	n' 1000°K
b	-0.0493	4	e 50 °C	0.1616	5	o'
Ref. Index n_D 20°C	1.3760	2	e' °C			
25	1.3730	2	d_c g/ml	0.230	5	
30	1.3699	4	v_c ml/g	4.348	5	
"C"	0.7705	4	t_c °C	192.	5	
MR (Obs.)	29.58	2	P_c mm	21009.	5	
MR (Calc.)	29.441	5	PV/RT			
(nD-d/2)	1.0495	2	25°C	0.9752	5	Exp. L. l. %/wt. u.
Dielectric			30 mm	1.0000	5	Dispersion
A -30 to	6.84763	5	BP	0.9550	5	Flash Point °C
B 76°C	1080.6	5	t_e	0.9521	5	Fire Point
C	231.	5	t_c	0.265	5	
A* -30 to	1.24167	5	ΔHc kcal/m	896.85	2	M Spec.
B* 54°C	1010.1	5	ΔHf			Ultra V.
K			ΔFf			X-Ray Dif.
c			Viscosity centistokes			Infrared
t_k to			η °C			Solubility in +
t_x °C						Acetone
A' to						Carbon tet.
B' °C						Benzene
C' °C						Ether
A'* to						n-Heptane
B'* °C						Ethanol
Ac 76 to	7.2704	5				Water
Bc t_c °C	1356.	5				Water in
Gc t_c °C	268.	5				
Cryos. A° const. B°			c_p liq. °K			
t_e °C	44.29	5	c_p vap. 300°K	0.36112	2	
			c_p vap. 400	0.46224	2	
			c_v vap.			
$T_R = 0.75 T_c$						+ 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:						

NAME		2,3-Dimethyl-2-butene			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} = \text{C} - \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₂	Molecular Weight 84.156					
		Ref.			Ref.			
F.P. °C	-74.280	2	dt/dP °C/mm		f	to		
F.P. 100%			25°C	0.1776	5	g	°K	
B.P. °C			BP	0.0424	4	h		
760 mm	73.21	2	t _e	0.0361	5	f'	to	
100	19.63	4	30 mm	0.5899	5	g'	°K	
30	-3.95	4	ΔHm cal/g			h'		
10	-21.82	5	ΔHv cal/g			m	300 to	0.0464
1	-51.26	5	25°C	90.14	5	n	600 °K	0.0011
Pressure mm 25°C	127.	5	30 mm	96.73	5	o		-0.0628
t _e	931.	5	BP	83.55	5			
Density g/ml 20°C	0.7080	2	t _e	82.44	5	m'	700 to	0.0157
d ₄ ^t 25	0.7034	2	t _e (d, e)	82.41	5	n'	1000 °K	0.0013
d ₄ ^t 30	0.6988	4	ΔHv/T _e	19.65	5	o'		-0.0648
a	0.7264	4	d	-10 to	96.06	5	Surface tension dynes/cm. 20°C	
b	-0.0390	4	e	90 °C	0.1708	5	γ	21.90
Ref. Index n _D 20°C	1.4122	2	d'	to			30	20.75
25	1.4094	2	e'	°C			40	19.63
30	1.4065	4	d				Parachor [P]	
"C"	0.7750	4	v _c g/ml	0.246	5		20°C	
MR (Obs.)	29.59	2	v _c ml/g	4.06	5		30	
MR (Calc.)	29.441	5	t _c °C	248.	5		40	
(nD-d/2)	1.0582	2	P _c mm	24865.	5		Sugd.	257.3
Dielectric			PV/RT				Exp. L. l. %/wt. u.	
A -10 to	6.90393	5	25°C	0.9725	5		Dispersion	132.
B 118 °C	1200.1	5	30 mm	1.0000	5		Flash Point °C	
C	225.	5	BP	0.9540	5		Fire Point	
A* -10 to	1.25993	5	t _e	0.9481	5		M. Spec.	
B* 90 °C	1124.0	5	t _c	0.264	5		Ultra V.	
K			ΔHc kcal/m	895.19	2		X-Ray Dif.	
c			ΔHf				Infrared	
t _k to			ΔFf				Solubility in +	
t _x °C			Viscosity centistokes				Acetone	
A' to			η				Carbon tet.	
B' °C							Benzene	
C' °C			B ^v to				Ether	
A** to			A ^v °C				n-Heptane	
B** °C			(B ^v) to				Ethanol	
Ac 118 to	7.3249	5	(A ^v) °C				Water	
Bc t _c °C	1506.	5	c _p liq. °K				Water in	
Cc	266.	5	c _p vap. 300°K	0.36397	2			
Cryos. A° const. B°			c _p vap. 400	0.45867	2			
t _e °C	79.91	5	c _v vap.					
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:								

NAME		1-Heptene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₄ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182
F. P. °C	-119.029	2	dt/dP °C/mm		
F. P. 100%			25°C	0.3655	5
B. P. °C	93.643	2	BP	0.04447	4
760 mm	37.418	2	t _e	0.03624	5
100	12.68	2	30 mm	0.6189	5
30	-6.07	2			
10	-36.95	5	ΔHm cal/g		
1			25°C	87.79	5
Pressure mm	56.33	5	30 mm	89.09	5
25°C	987.5	5	BP	76.31	5
t _e			t _e	74.93	5
Density g/ml	0.69698	2	t _e (d, e)	74.87	5
20°C	0.69267	2	ΔHv/T _e	19.57	5
d _t 25	0.68829	4	d 10 to	91.10	5
d ₄ 30		2	e 110 °C	0.1579	5
			d' °C		
a	0.71432	4	e' °C		
b	-0.03855	4	d _c g/ml	0.235	5
Ref. Index	1.39980	2	v _c ml/g	4.247	5
n _D 20°C	1.39713	2	t _c °C	262.	5
25	1.39451	4	P mm	20813.	5
30		2	PV/RT		
"C"	0.7648	4	25°C	0.9966	5
MR (Obs.)	34.135	2	30 mm	1.0000	5
MR (Calc.)	34.059	5	BP	0.9520	5
(n _D -d/2)	1.05131	2	t _e	0.9441	5
			t _c	0.260	5
Dielectric			ΔHc kcal/m	1048.05	2
A 10 to	6.90069	2	ΔHf		
B 128 °C	1257.505	2	ΔFf		
C	219.18	2	Viscosity centistokes		
A* 10 to	1.30572	5	η		
B* 113 °C	1179.6	5	0 °C	0.44	2
K			20	0.35	2
c			40	0.29	2
t _k °C			80	0.22	2
t _x °C			B ^v to		
A' °C			A ^v °C		
B' °C			(B ^v) to		
C' °C			(A ^v) °C		
A'* to			c _p liq. °K		
B'* °C			c _p vap. 300°K	0.37960	2
Ac 128 to	7.3119	5	c _v vap. 400	0.47840	2
Bc t _c °C	1560.	5			
Cc t _c °C	259.	5			
Cryos. A°					
const. B°					
t _e °C	102.75	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. 31

NAME		cis-2-Heptene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃ CH=CHCH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₇ H ₁₄	Molecular Weight 98.182				
		Ref.					Ref.
F.P. °C			dt/dP °C/mm		f	to	
F.P. 100%			25°C	0.4366	g	°K	
B.P. °C			BP	0.0449	h		
760 mm	98.5	2	t _e	0.0362	f'	to	
100	41.62	4	t _e (d, e)	0.6280	g'	°K	
30	16.53	4	ΔHm cal/g		h'		
10	-2.50	5	ΔHv cal/g		m	to	
1	-33.90	5	25°C	90.00	n	°K	
Pressure mm 25°C	45.64	5	30 mm	90.19	o		
t _e	1001.	5	BP	77.53			
Density g/ml 20°C	0.708	2	t _e	76.09	m'	to	
d ₄ 25	0.704	2	t _e (d, e)	76.04	n'	°K	
d ₄ 30	0.700	4	ΔHv/T _e	19.59	o'		
a	0.724	4	d _e 12 to	92.74	Surface tension dynes/cm. 20°C		
b	-0.038	4	e 115 °C	0.1544	γ	30	20.79
Ref. Index n _D 20°C	1.406	2	d'			40	19.84
25	1.403	2	e'		Parachor [P] 20°C		
30	1.401	4	d _c g/ml	0.247		30	
"C"	0.7640	4	v _c ml/g	4.054		40	
MR (Obs.)	34.0	2	t _c °C	272.		Sugd.	296.2
MR (Calc.)	34.059	5	P _c mm	21783.		Exp. L. l. %/wt. u.	
(nD-d/2)	1.052	2	PV/RT 25°C	0.9976		Dispersion	122.
Dielectric			30 mm	1.0000		Flash Point °C	
A 12 to	6.93647	5	BP	0.9515		Fire Point	
B 135 °C	1292.9	5	t _e	0.9432		M. Spec. Ultra V. X-Ray Dif. Infrared	
C	220.	5	t _c	0.255		Solubility in +	
A* 12 to	1.33477	5	ΔHc kcal/m	1046.45		Acetone	
B* 118 °C	1213.1	5	ΔHf			Carbon tet.	
K			ΔFf			Benzene	
t _k to			Viscosity centistokes			Ether	
t _x °C			η °C			n-Heptane	
A' to			B ^v to			Ethanol	
B' °C			A ^v °C			Water	
C'			(B ^v) to			Water in	
A** to °C			(A ^v) °C				
B** to °C			c _p liq. °K				
Ac 135 to	7.3513	5	c _p vap. °K				
Bc t _c °C	1605.	5	c _v vap.				
Cc t _c °C	261.	5					
Cryos. A° const. B°							
t _e °C	108.18	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:							

NAME		trans-2-Heptene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₃ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182
F.P. °C	-109.480	Ref.	2	dt/dP °C/mm	
F.P. 100%				25°C	0.4274 5
B.P. °C	97.95	2		BP	0.0449 4
760 mm	41.12	4		t _e	0.0362 5
100	16.06	4		30 mm	0.6273 5
30	-2.96	5		ΔHm cal/g	
10	-34.31	5		ΔHv cal/g	
1				25°C	90.18 5
Pressure mm 25°C	46.55	5		30 mm	89.99 5
t _e	999.3	5		BP	77.35 5
Density g/ml 20°C	0.7012	2		t _e	75.91 5
d ₄ ^t 25	0.6969	2		t _e (d, e)	75.87 5
d ₄ ^t 30	0.6926	4		ΔHv/T _e	19.57 5
a	0.7183	4		d 16 to	92.46 5
b	-0.0385	4		e 108 °C	0.1543 5
Ref. Index n _D 20°C	1.4045	2		d' °C	
25	1.4020	2		e' °C	
30	1.3992	4		d _c g/ml	0.243 5
"C"	0.7687	4		v _c ml/g	4.120 5
MR (Obs.)	34.28	2		t _c °C	269. 5
MR (Calc.)	34.059	5		P _c mm	21316. 5
(n _D -d/2)	1.0539	2		PV/RT 25°C	0.9972 5
Dielectric				30 mm	1.0000 5
A 16 to	6.93364	5		BP	0.9515 5
B 134 °C	1290.2	5		t _e	0.9433 5
C	220.	5		t _c	0.255 5
A* 16 to	1.33255	5		ΔHc kcal/m	1045.45 2
B* 118 °C	1210.5	5		ΔHf	
K				ΔFf	
c				Viscosity centistokes	
t _k °C				η °C	
t _x °C				B ^v to	
A' to				A ^v °C	
B' °C				(B ^v) to	
C' °C				(A ^v) °C	
A** to				c _p liq. °K	
B** °C				c _p vap. °K	
Ac 134 to	7.3482	5		c _v vap.	
Bc t _c °C	1600.	5			
Cc °C	261.	5			
Cryos. A° const. B°					
t _e °C	107.57	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:					

NAME		cis-3-Heptene			STRUCTURAL FORMULA		
					CH ₃ CH ₂ CH=CH(CH ₂) ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₇ H ₁₄	Molecular Weight 98.182				
	Ref.			Ref.			Ref.
F. P. °C			dt/dP °C/mm		f		
F. P. 100%			25°C	0.3945	g		
B. P. °C			BP	0.0447	h		
760 mm	95.75	2	t _e	0.0362	f'		
100	39.21	4	30 mm	0.6239	g'		
30	14.29	4	ΔHm cal/g		h'		
10	-4.62	5			m		
1	-35.81	5	ΔHv cal/g		n		
Pressure mm 25°C	52.36	5	25°C	87.77	o		
t _e	993.0	5	30 mm	89.36			
Density g/ml 20°C	0.7030	2	BP	76.83			
d ₄ ^t 25	0.6987	2	t _e	75.44	m'		
d ₄ ^t 30	0.6944	4	t _e (d, e)	75.39	n'		
			ΔHv/T _e	19.58	o'		
a	0.7202	4	d _e 14 to	91.56	Surface tension dynes/cm. 20°C		
b	-0.0385	4	e _e 105 °C	0.1539	30 19.22		
Ref. Index n _D 20°C	1.4059	2	d _e '		40 18.26		
25	1.4033	2	e _e '		Parachor [P] 20°C		
30	1.4006	4	d _c g/ml	0.244	30		
"C"	0.7692	4	v _c ml/g	4.096	40		
MR (Obs.)	34.30	2	t _c °C	266.	Sugd. 296.2		
MR (Calc.)	34.059	5	P _c mm	21322.	Exp. L. l. %/wt. u.		
(nD-d/2)	1.0544	2	PV/RT		Dispersion 122.		
Dielectric			25°C	0.9983	Flash Point °C		
A 14 to	6.93161	5	30 mm	1.0000	Fire Point		
B 131 °C	1282.3	5	BP	0.9515	M. Spec. Ultra V.		
C	221.	5	t _e	0.9435	X-Ray Dif. Infrared		
A* 14 to	1.33298	5	t _c	0.255	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 115 °C	1203.1	5	ΔHc kcal/m	1046.45			
K			ΔHf				
t _k to °C			ΔFf				
t _x to °C			Viscosity centistokes °C				
A' to °C			η				
B' to °C			B _v to °C				
C' to °C			A _v to °C				
A** to °C			(B _v) to °C				
B** to °C			(A _v) °C				
A _c 131 to °C	7.3464	5	c _p liq. °K				
B _c t _c °C	1591.	5	c _p vap. °K				
C _c t _c °C	261.	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	105.09	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:							

NAME		trans-3-Heptene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂ CH=CHCH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C	-136.63	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.3933	5	h	
760 mm	95.67	2	BP	0.0447	4	f'	to
100	39.13	4	t _e	0.0362	5	g'	°K
30	14.04	4	30 mm	0.6239	5	h'	
10	-4.70	5	ΔHm cal/g			m	to
1	-35.88	5	25°C			n	°K
Pressure mm 25°C	52.50	5	30 mm	83.77	5	o	
t _e	993.	5	BP	89.22	5	m'	to
Density g/ml 20°C	0.6981	2	t _e	76.79	5	n'	°K
d ₄ ²⁵	0.6938	2	t _e (d, e)	75.40	5	o'	
d ₄ ³⁰	0.6895	4	ΔHv/T _e	75.37	5	Surface tension dynes/cm. 20°C	
a	0.7152	4	d 10 to	91.36	5	30	19.65
b	-0.0385	4	e 110 °C	0.1523	5	40	18.68
Ref. Index n _D 20°C	1.4043	2	d' to			40	17.79
25	1.4017	2	e' °C			Parachor [P] 20°C	
30	1.3989	4	d c g/ml			30	
"C"	0.7717	4	v c ml/g	266.	5	40	
MR (Obs.)	34.42	2	t _c °C	21116.	5	Sugd.	296.2
MR (Calc.)	34.059	2	P c mm			Exp. L. l. %/wt. u.	
(n _D -d/2)	1.0553	5	PV/RT			Dispersion	124.
Dielectric			25°C	0.9984	5	Flash Point °C	
A 10 to	6.93075	5	30 mm	1.0000	5	Fire Point	
B 131°C	1281.8	5	BP	0.9515	5	M Spec. Ultra V.	
C	221.	5	t _e	0.9435	5	X-Ray Dif.	
A* 10 to	1.32366	5	t _c	0.255	5	Infrared	
B* 115°C	1200.5	5	ΔHc kcal/m	1045.45	2	Solubility in +	
K			ΔHf			Acetone	
c			ΔFf			Carbon tet.	
t _x to			Viscosity centistokes			Benzene	
t _x °C			η °C			Ether	
A' to			B ^v to			n-Heptane	
B' °C			A ^v °C			Ethanol	
A'* to			(B ^v) to			Water	
B'* °C			(A ^v) °C			Water in	
Ac 131 to	7.3454	5	c _p liq. °K				
Bc t _c °C	1590.	5	c _p vap. °K				
Cc t _c °C	261.	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	105.03	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:							

NAME		2-Methyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\text{C}=\text{CH}_2$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C	-102.840	2	dt/dP °C/mm			f	to
F. P. 100%			25°C		0.3442	g	°K
B. P. °C			BP		0.0443	h	
760 mm	92.00	2	t_e		0.03624	f'	to
100	35.93	4	30 mm		0.6184	g'	°K
30	11.22	4				h'	
10	-7.52	5				m	to
1	-38.42	5	$\Delta\text{Hm cal/g}$			n	°K
Pressure mm 25°C	60.48	5	$\Delta\text{Hv cal/g}$		89.66	o	
t_e	982.3	5	25°C		88.25		
Density g/ml 20°C	0.7030	2	BP		75.88	m'	to
t_2	0.6986	2	t_e (d, e)		74.56	n'	°K
d_4^{30}	0.6942	4	$\Delta\text{Hv}/T_e$		19.57	o'	
a	0.7206	4	d	5 to °C	89.97	Surface tension dynes/cm. 20°C	
b	-0.0387	4	e	110 to °C	0.1531	y	20.20
Ref. Index			d'	to °C			30
n_D 20°C	1.4034	2	e'				40
25	1.4007	2	d_c g/ml			Parachor [P] 20°C	
30	1.3979	4	v_c ml/g		261.		30
"C"	0.7647	4	t_c °C				40
MR (Obs.)	34.11	2	P_c mm		21115.		Sugd. 296.2
MR (Calc.)	34.059	5				Exp. L. l. %/wt. u.	
($n_D-d/2$)	1.0520	2	PV/RT 25°C		0.9962		Dispersion
Dielectric			30 mm		1.0000		125.
A 5 to	6.92518	5	BP		0.9515	Flash Point °C	
B 127 °C	1268.0	5	t_e		0.9438	Fire Point	
C	221.52	5	t_c		0.255	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 5 to	1.33076	5	$\Delta\text{Hc kcal/m}$		1044.44	Solubility in +	
B* 110 °C	1189.4	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t_k to °C			η °C			Ether	
t_x to °C						n-Heptane	
A' to °C						Ethanol	
B' to °C						Water	
C' to °C						Water in	
A'* to °C			B^v to °C				
B'* to °C			(B^v) to °C				
Acl127 to °C	7.3403	5	(A^v) °C				
Bc t_c °C	1574.	5	c_p liq. °K				
Cc	261.	5	c_p vap. °K				
Cryos. A° const. B°			c_v vap.				
t_e °C	100.88	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:							

NAME		3-Methyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{CH}=\text{CH}_2$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.2587	g	°K	
B. P. °C			BP	0.0435	h		
760 mm	84.	2	t_e	0.0362	f'	to	
100	28.99	4	30 mm	0.6063	g'	°K	
30	4.76	4			h'		
10	-13.61	5					
1	-43.90	5					
Pressure mm 25°C	83.37	5	$\Delta\text{Hm cal/g}$		m	to	
t_e	960.	5	25°C	83.03	n	°K	
Density g/ml 20°C	0.695	2	30 mm	85.97	o		
d_4^{25}	0.691	2	BP	73.99			
d_4^{30}	0.687	4	t_e	72.82	m'	to	
			t_e (d, e)	72.79	n'	°K	
			$\Delta\text{Hv}/T_e$	19.58	o'		
a	0.7108	4	d 5 to	86.69	Surface tension dynes/cm. 20°C		
b	-0.0377	4	e -92 °C	0.1512	19.29		
			d' to		30 18.40		
			e' °C		40 17.54		
Ref. Index n_D 20°C	1.397	2	d c g/ml	0.241	Parachor [P]		
25	1.394	2	v c ml/g	4.142	20°C		
30	1.392	4	t c °C	249.	30		
"C"	0.7619	4	P c mm	20818.	40		
MR (Obs.)	34.0	2			Sugd. 296.2		
MR (Calc.)	34.059	5	PV/RT		Exp. L.l. %/wt. u.		
(nD-d/2)	1.049	2	25°C	0.9956	Dispersion		
			30 mm	1.0000	120.		
			BP	0.9520	Flash Point °C		
			t_e	0.9450	Fire Point		
			t_c	0.260	M Spec. Ultra V. X-Ray Dif. Infrared		
			$\Delta\text{Hc kcal/m}$	1046.98	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
			ΔHf				
			ΔFf				
			Viscosity centistokes °C				
			η				
			B ^v to				
			A ^v °C				
			(B ^v) to				
			(A ^v) °C				
			c _p liq. °K				
			c _p vap. °K				
			c _v vap.				
t_e °C	91.92	5					
$T_R = 0.75 T_c$							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		4-Methyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C	-141.45	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	0.2851	5	h	
760 mm	86.73	2	BP	0.0437	4		
100	31.38	4	t _e	0.0362	5	f'	to
30	6.99	4	30 mm	0.6103	5	g'	°K
10	-11.51	5	ΔH _m cal/g			h'	
1	-42.00	5					
Pressure mm 25°C	74.69	5	ΔH _v cal/g			m	to
t _e	967.8	5	25°C	84.06	5	n	°K
			30 mm	86.78	5	o	
Density g/ml 20°C	0.6985	2	BP	74.68	5	m'	to
d ₄ 25	0.6942	2	t _e	73.46	5	n'	°K
d ₄ 30	0.6899	4	t _e (d, e)	73.43	5	o'	
			ΔH _v /T _e	19.59	5		
a	0.7156	4	d 7 to	87.84	5	Surface tension dynes/cm. 20°C	
b	-0.0384	4	e 95 °C	0.1517	5	γ	19.68
Ref. Index n _D 20°C	1.4000	2	d'			30	18.71
25	1.3973	2	e'			40	17.76
30	1.3947	4	d _c g/ml	0.241	5	Parachor [P] 20°C	
"C"	0.7635	4	v _c ml/g	4.152	5	30	
MR (Obs.)	34.08	2	t _c °C	252.	5	40	
MR (Calc.)	34.059	5	P _c mm	20890.	5	Sugd.	296.2
(n _D -d/2)	1.0508	2	PV/RT			Exp. L. l. %/wt. u.	
Dielectric			25°C	0.9945	5	Dispersion	
A 7 to	6.92084	4	30 mm	1.0000	5	120.	
B 121 °C	1249.38	4	BP	0.9520	5	Flash Point °C	
C	222.52	4	t _e	0.9448	5	Fire Point	
A*	7 to	5	t _c	0.260	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B*	105 °C	5	ΔH _c kcal/m	1046.98	2	Solubility in +	
K			ΔH _f			Acetone	
c			ΔF _i			Carbon tet.	
t _k to			Viscosity centistokes			Benzene	
t _k °C			η			Ether	
A' to						n-Heptane	
B' °C			B _v to			Ethanol	
C'			A _v °C			Water	
A'*	to		(B _v) to			Water in	
B'*	°C		(A _v) °C				
Ac 121 to	7.3364	5	c _p liq. °K				
Bc t _c °C	1551.	5	c _p vap. °K				
Cc	262.	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	94.98	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:							

NAME		5-Methyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_2)_2\text{CH}=\text{CH}_2$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.2710	5	g	
B.P. °C			BP	0.0436	4	h	
760 mm	85.31	2	t_e	0.0362	5	f'	to °K
100	30.13	4	t_e (d, e)			g'	
30	5.82	4	ΔHm cal/g			h'	
10	-12.61	5	ΔHv cal/g			m	to °K
1	-42.99	5	25°C	83.45	5	n	
Pressure mm 25°C	79.11	5	30 mm	86.35	5	o	
t_e	963.7	5	BP	74.31	5	m'	to °K
Density g/ml 20°C	0.6920	2	t_e	73.11	5	n'	
d_4^{25}	0.6876	2	$\Delta\text{Hv}/T_e$	73.08	5	o'	
d_4^{30}	0.6832	4	d 0 to	87.23	5	Surface tension dynes/cm. 20°C	
a	0.7095	4	e 100 °C	0.1515	5	y	18.96
b	-0.0386	4	d'			30	17.99
Ref. Index n_D			e'			40	17.05
25	1.3966	2	d _c g/ml	0.249	5	Parachor [P] 20°C	
30	1.3940	2	v _c ml/g	4.202	5	30	
30	1.3911	4	t _c °C	249.	5	40	
"C"	0.7645	4	P _c mm	20522.	5	Sugd.	296.2
MR (Obs.)	34.12	2	PV/RT			Exp. L. l. %/wt. u.	
MR (Calc.)	34.059	5	25°C	0.9941	5	Dispersion	
(nD-d/2)	1.0506	2	30 mm	1.0000	5	Flash Point °C	
Dielectric			BP	0.9520	5	Fire Point °C	
A 0 to	6.91781	4	t_e	0.9449	5	M Spec. Ultra V. X-Ray Dif. Infrared	
B 119 °C	1243.80	4	t_c	0.260	5	Solubility in +	
C	222.79	4	ΔHc kcal/m	1046.34	2	Acetone	
A* 0 to	1.33013	5	ΔHf			Carbon tet.	
B* 100 °C	1166.27	5	ΔFf			Benzene	
K			Viscosity centistokes			Ether	
c			η °C			n-Heptane	
t_k						Ethanol	
t_x						Water	
A'						Water in	
B'							
C'							
A'*							
B'*							
Ac 119 to	7.3332	5	(B ^v) to				
Bc t_c °C	1544.	5	(A ^v) °C				
Cc t_c °C	262.	5	c _p liq. °K				
Cryos. A°			c _p vap. °K				
const. B°			c _v vap.				
t_e °C	93.39	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:							

NAME		2-Methyl-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{CH}=\overset{\text{CH}_3}{\text{C}}\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182		
F. P. °C	-130.350	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.3897	5	h	
760 mm	95.41	2	BP	0.0446	4		
100	38.91	4	t _e	0.0362	5	f'	to
30	14.01	4	30 mm	0.6234	5	g'	°K
10	-48.87	5	ΔHm cal/g			h'	
1	-36.05	5	ΔHv cal/g			m	to
Pressure mm 25°C	52.60	5	25°C	87.56	5	n	°K
t _e	991.4	5	30 mm	89.26	5	o	
Density g/ml 20°C	0.7082	2	BP	76.71	5		
d ₄ ²⁵	0.7038	2	t _e	75.32	5	m'	to
d ₄ ³⁰	0.6994	4	t _e (d, e)	75.27	5	n'	°K
			ΔHv/T _e	19.57	5	o'	
a	0.7257	4	d	14 to	5	Surface tension dynes/cm. 20°C	
b	-0.0386	4	e	110 °C	5	γ	20.81
Ref. Index n _D 20°C	1.4106	2	d'	to °C			19.79
25	1.4079	2	e'				18.79
30	1.4052	4				Parachor [P]	
"C"	0.7719	4	d _v g/ml	0.242	5		20°C
MR (Obs.)	34.39	2	v _c ml/g	4.13	5		30
MR (Calc.)	34.059	5	t _c °C	266.	5		40
(n _D -d/2)	1.0565	2	P _c mm	21467.	5		Sugd. 296.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A 14 to	6.93104	4	25°C	0.9972	5	Dispersion	
B 132 °C	1281.02	4	30 mm	1.0000	5	127.	
C	220.87	4	BP	0.9510	5	Flash Point °C	
A* 14 to	1.33367	5	t _e	0.9430	5	Fire Point	
B* 110 °C	1202.03	5	t _c	0.259	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHc kcal/m	1043.04	2	Solubility in +	
t _k to			ΔHf			Acetone	
t _x °C			ΔFf			Carbon tet.	
A' to			Viscosity centistokes			Benzene	
B' °C			η			Ether	
C'						n-Heptane	
A** to			B _v to			Ethanol	
B** °C			A _v °C			Water	
Ac 132 to	7.3460	5	(B _v) to			Water in	
Bc t _c °C	1590.	5	(A _v) °C				
Cc t _c °C	261.	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	104.69	5	c _v vap.				
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:							

NAME		3-Methyl-cis-2-hexene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₂ C = CHCH ₃ CH ₃			
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182			
		Ref.			Ref.			
F. P. °C			dt/dP °C/mm			f	to	
F. P. 100%			25°C	0.3700	5	g	°K	
B. P. °C			BP	0.0445	4	h		
760 mm	94.	2	t _e	0.0363	5	f'	to	
100	37.68	4	30 mm	0.6214	5	g'	°K	
30	12.85	4	ΔHm cal/g			h'		
10	-5.98	5	ΔHv cal/g			m	to	
1	-37.04	5	25°C	86.96	5	n	°K	
Pressure mm 25°C	55.75	5	30 mm	88.84	5	o		
t _e	987.4	5	BP	76.35	5	m'	to	
Density g/ml 20°C	0.7120	2	t _e	74.99	5	n'	°K	
d _t 25	0.7080	2	t _e (d, e)	74.95	5	o'		
d _t 30	0.7039	4	ΔHv/T _e	19.57	5			
a	0.7282	4	d 5 to	90.81	5	Surface tension dynes/cm. 20°C		
b	-0.0380	4	e 115 °C	0.1539	5	30	21.26	
Ref. Index n _D 20°C	1.410	2	d'			40	20.29	
25	1.407	2	e'				19.34	
30	1.405	4	d	g/ml	0.245	5	Parachor [P] 20°C	
"C"	0.7667	4	v _c	ml/g	4.08	5	30	
MR (Obs.)	34.2	2	t _c	°C	266.	5	40	
MR (Calc.)	34.059	5	P _c	mm	21745.	5	Sugd.	296.2
(n _D -d/2)	1.054	2	PV/RT 25°C		0.9967	5	Exp. L. l. %/wt. u.	
Dielectric			30 mm		1.0000	5	Dispersion	
A 5 to	6.92821	4	BP		0.9510	5	127.	
B 131 °C	1275.50	4	t _e		0.9431	5	Flash Point °C	
C	221.14	4	t _c		0.259	5	Fire Point	
A* 5 to	1.33242	5	ΔHc kcal/m	1043.68	2	M Spec. Ultra V.		
B* 115 °C	1196.77	5	ΔHf			X-Ray Dif.		
K			ΔFf			Infrared		
c			Viscosity centistokes			Solubility in +		
t _x to			η °C			Acetone		
t _x °C			B ^v to			Carbon tet.		
A' to			A ^v °C			Benzene		
B' °C			(B ^v) to			Ether		
C' °C			(A ^v) °C			n-Heptane		
A'* to			c _p liq. °K			Ethanol		
B'* °C			c _p vap. °K			Water		
Ac 131 to	7.3437	5	c _v vap.			Water in		
Bc t _c °C	1585.	5						
Cc °C	262.	5						
Cryos. A° const. B°								
t _e °C	103.11	5						
TR = 0.75 T _c			+ grams/100 grams solvent					
REFERENCES: 1-Dew 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula								
SOURCE: API								
PURIFICATION: API								
LITERATURE REFERENCES:								

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NAME		3-Methyl-trans-2-hexene			STRUCTURAL FORMULA	
					$\text{CH}_3(\text{CH}_2)_2\text{C} = \underset{\text{CH}_3}{\text{CH}}\text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182	
		Ref.			Ref.	Ref.
F.P. °C			dt/dP °C/mm			f
F.P. 100%			25°C	0.3700	5	g
B.P. °C			BP	0.0445	4	h
760 mm	94.	2	t_e	0.0363	5	f'
100	37.68	4	30 mm	0.6214	5	g'
30	12.85	4	ΔH_m cal/g			h'
10	-5.98	5				m
1	-37.04	5	ΔH_v cal/g			n
Pressure mm 25°C	55.75	5	25°C	86.96	5	o
t_e	987.4	5	30 mm	88.84	5	
Density g/ml 20°C	0.7120	2	BP	76.35	5	m'
d ₄ 25	0.7080	2	t_e	74.99	5	n'
d ₄ 30	0.7039	4	t_e (d, e)	74.95	5	o'
a	0.7282	4	$\Delta H_v/T_e$	19.57	5	
b	-0.0380	4	d ₅ to °C	90.81	5	Surface tension dynes/cm. 20°C
Ref. Index n _D 20°C	1.410	2	d ₁₁₅ to °C	0.1539	5	21.26
25	1.407	2	d ₁ to °C			30 20.29
30	1.405	4	e' to °C			40 19.34
"C"	0.7667	4	d _c g/ml	0.245	5	Parachor [P] 20°C
MR (Obs.)	34.2	2	v _c ml/g	4.08	5	30
MR (Calc.) (nD-d/2)	34.059	5	t _c °C	266.	5	40
Dielectric			P _c mm	21745.	5	Sugd. 296.2
A 5 to	6.92821	4	PV/RT 25°C	0.9967	5	Exp. L. l. %/wt. u.
B 131 °C	1275.50	4	30 mm	1.0000	5	Dispersion 127.
C	221.14	4	BP	0.9510	5	Flash Point °C
A* 5 to	1.33242	5	t_e	0.9431	5	Fire Point
B* 115 °C	1196.77	5	t _c	0.259	5	M. Spec. Ultra V. X-Ray Dif. Infrared
K			ΔH_c kcal/m	1043.68	2	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
c			ΔH_f			
t _k to °C			ΔF_f			
t _x to °C			Viscosity centistokes η °C			
A' to °C			B ^v to °C			
B' to °C			A ^v to °C			
C' to °C			(B ^v) to °C			
A ^{1*} to °C			(A ^v) °C			
B ^{1*} to °C			c _p liq. °K			
Ac 131 to °C	7.3437	5	c _p vap. °K			
B _c t _c °C	1585.	5	c _v vap.			
C _c t _c °C	262.	5				
Cryos. A° const. B°						
t _e °C	103.11	5				
TR = 0.75 Tc		+ grams/100 grams solvent				
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula						
SOURCE:		API				
PURIFICATION:		API				
LITERATURE REFERENCES:						

NAME		4-Methyl-cis-2-hexene			STRUCTURAL FORMULA	
					$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}=\text{CHCH}_3$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182	
		Ref.			Ref.	Ref.
F. P. °C			dt/dP °C/mm			f to °K
F. P. 100%			25°C	0.2900	5	g to °K
B. P. °C			BP	0.0440	4	h to °K
760 mm	87.37	2	t _e	0.0364	5	f' to °K
100	31.74	4	30 mm	0.6122	5	g' to °K
30	7.27	4	ΔHm cal/g			h' to °K
10	-11.3	5	ΔHv cal/g			m to °K
1	-41.8	5	25°C	84.01	5	n to °K
Pressure mm 25°C	73.49	5	30 mm	86.69	5	o to °K
t _e	969.6	5	BP	74.50	5	m' to °K
Density g/ml 20°C	0.6996	2	t _e	73.26	5	n' to °K
d _t 25	0.6953	2	t _e (d, e)	73.23	5	o' to °K
d ₄ 30	0.6910	4	ΔHv/T _e	19.50	5	
a	0.7168	4	d 0 to	87.80	5	Surface tension dynes/cm. 20°C
b	-0.0385	4	e 110 °C	0.1521	5	30
Ref. Index n _D 20°C	1.4024	2	d' to °C			40
25	1.3997	2	e' to °C			19.81
30	1.3971	4	d _c g/ml	0.238	5	18.83
"C"	0.7667	4	v _c ml/g	4.20	5	17.87
MR (Obs.)	34.20	2	t _c °C	254.	5	Parachor [P] 20°C
MR (Calc.) (nD-d/2)	1.0526	2	P _c mm	20630.	5	30
Dielectric			PV/RT 25°C	0.9948	5	40
A 0 to	6.89863	4	30 mm	1.0000	5	Sugd. 296.2
B 122 °C	1243.0	4	BP	0.9520	5	Exp. L. l. %/wt. u.
C	222.	4	t _e	0.9446	5	Dispersion
A* 0 to	1.30908	5	t _c	0.260	5	Flash Point °C
B* 110 °C	1165.33	5	ΔHc kcal/m	1045.38	2	Fire Point
K			ΔHf			M Spec. Ultra V.
c			ΔFf			X-Ray Dif.
t _k to °C			Viscosity centistokes °C			Infrared
t _x to °C			η			Solubility in + Acetone
A' to °C			B ^v to °C			Carbon tet.
B' to °C			A ^v to °C			Benzene
C' to °C			(B ^v) to °C			Ether
A** to °C			(A ^v) to °C			n-Heptane
B** to °C			c _p liq. °K			Ethanol
Ac 122 to	7.3136	5	c _p vap. °K			Water
Bc t _c °C	1545.	5	c _v vap.			Water in
Gc t _c °C	261.	5				
Cryos. A° const. B°						
t _e °C	95.74	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:						

NAME		4-Methyl-trans-2-hexene				STRUCTURAL FORMULA					
						CH ₃ CH=CHCH(CH ₃)CH ₂ CH ₃					
Mole % Pur.		Ref.	Molecular Formula C ₇ H ₁₄	Molecular Weight 98.182							
		Ref.			Ref.	Ref.					
F.P. °C	-126.5	2				f		to			
F.P. 100%						g		°K			
B.P. °C						h					
760 mm	87.6	2			0.2920	5					
100	31.9	4			0.0441	4					
30	7.40	4			0.0364	5	f'		to		
10	-11.2	5			0.6129	5	g'		°K		
1	-41.7	5					h'				
Pressure mm 25°C	72.99	5					m		to		
t _e	970.3	5					n		°K		
Density g/ml 20°C	0.6975	2					o				
d ₄ ^t 25	0.6932	2					m'		to		
d ₄ ^t 30	0.6889	4					n'		°K		
							o'				
a	0.7146	4	d	7	to	87.80	5	Surface tension dynes/cm. 20°C			
b	-0.0384	4	e	96	°C	0.1519	5	γ	30	19.57	5
Ref. Index n _D 20°C	1.4023	2	d'		to				40	18.61	5
25	1.3997	2	e'		°C					17.66	5
30	1.3970	4						Parachor [P] 20°C			
"C"	0.7688	4	d	g/ml		0.236	5		30		
MR (Obs.)	34.30	2	v _c	ml/g		4.244	5		40		
MR (Calc.)	34.059	5	t _c	°C		254.	5		Sugd.	296.2	5
(n _D -d/2)	1.0536	2	P _c	mm		20512.	5	Exp. L. l. %/wt. u.			
Dielectric			PV/RT				5	Dispersion		124.	2
A 7 to	6.89566	4	25°C			0.9943	5	Flash Point °C			
B 122 °C	1243.0	4	30 mm			1.0000	5	Fire Point			
C	222.	4	BP			0.9520	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
A* 7 to	1.30573	5	t _c			0.9446	5	Solubility in +			
B* 106 °C	1165.24	5	t _c			0.260	5	Acetone			
K			ΔH _c	kcal/m		1044.38	2	Carbon tet.			
c			ΔH _f					Benzene			
t _k --- to			ΔF _f					Ether			
t _x --- °C			Viscosity centistokes η					n-Heptane			
A' --- to								Ethanol			
B' --- °C								Water			
C'								Water in			
A'*	to		B ^v --- to								
B'*	°C		A ^v --- °C								
Ac _l 122 to	7.3106	5	(B ^v) --- to								
Bc _l t _c °C	1545.	5	(A ^v) --- °C								
Cc _l t _c °C	261.	5	c _p liq. °K								
Cryos. A° const. B°			c _p vap. °K								
t _e °C	96.01	5	c _v vap.								
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:											

NAME		5-Methyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.3119	5	g	°K
B.P. °C			BP	0.0462	4	h	
760 mm	91.	2	t_e	0.0379	5	f'	to
100	33.0	4	30 mm	0.6301	5	g'	°K
30	7.77	4	$\Delta\text{Hm cal/g}$			h'	
10	-11.3	5	$\Delta\text{Hv cal/g}$			m	to
1	-42.5	5	25°C	82.01	5	n	°K
Pressure mm 25°C	70.05	5	30 mm	84.52	5	o	
t_e	980.8	5	BP	72.46	5	m'	to
Density g/ml 20°C	0.700	2	t_e	71.17	5	n'	°K
25	0.696	2	t_e (d, e)	71.13	5	o'	
d ₄ 30	0.692	4	$\Delta\text{Hv}/T_e$	18.71	5	Surface tension dynes/cm. 20°C	
a	0.7161	4	d 0 to	85.65	5	30	19.85
b	-0.0379	4	e 110 °C	0.1449	5	40	18.94
Ref. Index n_D 20°C	1.400	2	d' to			40	18.04
25	1.397	2	e' °C			Parachor [P] 20°C	
30	1.395	4	d c g/ml	0.215	5	30	
"C"	0.7619	4	v c ml/g	4.64	5	40	
MR (Obs.)	34.0	2	t c °C	260.	5	Sugd.	296.2
MR (Calc.)	34.059	5	P c mm	18614.	5	Exp. L.l. %/wt. u.	
(nD-d/2)	1.050	2	PV/RT 25°C	0.9956	5	Dispersion	122.
Dielectric			30 mm	1.0000	5	Flash Point °C	
A 0 to	6.75578	4	BP	0.9520	5	Fire Point	
B 127 °C	1212.86	4	t_e	0.9441	5	M Spec. Ultra V.	
C	222.	4	t_c	0.255	5	X-Ray Dif.	
A* 0 to	1.16082	5	$\Delta\text{Hc kcal/m}$	1044.74	2	Infrared	
B* 110 °C	1133.96	5	ΔHf			Solubility in +	
K			ΔFf			Acetone	
c			Viscosity centistokes			Carbon tet.	
t_x to			η °C			Benzene	
t_x °C			B ^v to			Ether	
A' to			A ^v °C			n-Heptane	
C' °C			(B ^v) to			Ethanol	
A'* to			(A ^v) °C			Water	
B'* °C			c _p liq. °K			Water in	
Ac 127 to	7.1733	5	c _p vap. °K				
Bc t _c °C	1522.	5	c _v vap.				
Cc °C	264.	5					
Cryos. A° const. B°							
t_e °C	100.21	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:							

NAME		5-Methyl-trans-2-hexene			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}_2\text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182			
F. P. °C		Ref.	dt/dP °C/mm		Ref.	f to		
F. P. 100%			25°C	0.2618	5	g °K		
B. P. °C			BP	0.0458	4	h		
760 mm	86.	2	t _e	0.0381	5	f' to		
100	28.55	4	t _e (d, e)	0.6226	5	g' °K		
30	3.58	4	ΔHm cal/g			h'		
10	-15.2	5	ΔHv cal/g			m to		
1	-46.0	5	25°C	79.92	5	n °K		
Pressure mm 25°C	85.52	5	30 mm	83.02	5	o		
t _e	966.5	5	BP	71.01	5	m' to		
Density g/ml 20°C	0.700	2	t _e	69.81	5	n' °K		
d ^t 25	0.696	2	t _e (d, e)	69.76	5	o'		
d ⁴ 30	0.692	4	ΔHv/T _e	18.63	5	Surface tension dynes/cm. 20°C		
a	0.7161	4	d _c g/ml	83.54	5	γ	19.85	5
b	-0.0379	4	v _c ml/g	0.1456	5	30	18.93	5
Ref. Index			t _c °C			40	18.02	5
n _D 20°C	1.400	2	P _c mm	18186.	5	Parachor [P] 20°C		
25	1.397	2				30		
30	1.395	4				40		
"C"	0.7619	4				Sugd.	296.2	5
MR (Obs.)	34.0	2	PV/RT			Exp. L. l. %wt.		
MR (Calc.)	34.059	5	25°C	0.9942	5	u.		
(nD-d/2)	1.050	2	30 mm	1.0000	5	Dispersion	124.	2
Dielectric			BP	0.9520	5	Flash Point °C		
A 0 to	6.72252	4	t _e	0.9445	5	Fire Point		
B 121 °C	1183.25	4	t _c	0.258	5	M. Spec.		
C	222.	4				Ultra V.		
A* 0 to	1.13430	5	ΔHc kcal/m	1043.74	2	X-Ray Dif.		
B* 110 °C	1105.83	5	ΔHf			Infrared		
K			Viscosity centistokes			Solubility in +		
c			η °C			Acetone		
t _k to						Carbon tet.		
t _x °C						Benzene		
A' to			B ^v to			Ether		
B' °C			A ^v °C			n-Heptane		
C' °C			(B ^v) to			Ethanol		
A'* to			(A ^v) °C			Water		
B'* °C			c _p liq. °K			Water in		
Ac 121 to	7.1390	5	c _p vap. °K					
Bc t _c °C	1486.	5	c _v vap.					
Cc t _c °C	263.	5						
Cryos. A°								
const. B°								
t _e °C	94.60	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:								

NAME		2-Methyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}=\text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.2618	5	g	°K
B.P. °C			BP	0.0458	4	h	
760 mm	86.	2	t_e	0.0381	5	f'	to
100	28.6	4	30 mm	0.6226	5	g'	°K
30	3.58	4	$\Delta\text{Hm cal/g}$			h'	
10	-15.2	5	$\Delta\text{Hv cal/g}$			m	to
1	-46.0	5	25°C	79.89	5	n	°K
Pressure mm 25°C	85.52	5	30 mm	83.02	5	o	
t_e	966.5	5	BP	71.01	5	m'	to
Density g/ml 20°C	0.694	2	t_e	69.80	5	n'	°K
25	0.690	2	t_e (d, e)	69.76	5	o'	
d ^t 30	0.686	4	$\Delta\text{Hv}/T_e$	18.63	5	Surface tension dynes/cm. 20°C	
a	0.710	4	d -5 to	83.54	5	30	19.17
b	-0.0379	4	e 110 °C	0.1457	5	40	18.28
Ref. Index n_D 20°C	1.399	2	d' to			40	17.40
25	1.396	2	e' °C			Parachor [P] 20°C	
30	1.394	4	d _c g/ml			30	
"C"	0.7667	4	v _c ml/g	252.	5	40	
MR (Obs.)	34.2	2	t _c °C	17992.	5	Sugd.	296.2
MR (Calc.)	34.059	5	P _c mm			Exp. L.l. %/wt. u.	
(nD-d/2)	1.052	2	PV/RT 25°C	0.9938	5	Dispersion	122.
Dielectric			30 mm	1.0000	5	Flash Point °C	
A -5 to	6.72252	4	BP	0.9520	5	Fire Point	
B 121 °C	1183.25	4	t_e	0.9445	5	M Spec.	
C	222.	4	t _c			Ultra V.	
A* -5 to	1.13430	5	$\Delta\text{Hc kcal/m}$	1044.74	2	X-Ray Dif.	
B* 110 °C	1105.83	5	ΔHf			Infrared	
K			ΔFf			Solubility in +	
c			Viscosity centistokes			Acetone	
t _k to			η °C			Carbon tet.	
t _x °C			B ^v to			Benzene	
A' to			A ^v °C			Ether	
B' °C			(B ^v) to			n-Heptane	
C' °C			(A ^v) °C			Ethanol	
A'* to			c _p liq. °K			Water	
B'* °C			c _p vap. °K			Water in	
Ac 121 to	7.1388	5	c _v vap.				
Bc t _c °C	1486.	5					
Cc °C	263.	5					
Cryos. A° const. B°							
t _e °C	94.60	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:							

NAME		2-Methyl-trans-3-hexene				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH} \\ \\ \text{CH}=\text{CHCH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182					
		Ref.			Ref.					
F. P. °C			dt/dP			f		to		
F. P. 100%			°C/mm			g		°K		
B. P. °C			25°C	0.2618	5	h				
760 mm	86.	2	BP	0.0458	4	g'		to		
100	28.6	4	t _e	0.0381	5	h'		°K		
30	3.58	4	30 mm	0.6226	5	m				
10	-15.2	5	ΔHm cal/g			n		to		
1	-46.0	5				o		°K		
Pressure mm 25°C	85.52	5	ΔHv cal/g			m'		to		
t _e	966.5	5	25°C	79.89	5	n'		°K		
			30 mm	83.02	5	o'				
Density g/ml 20°C	0.694	2	BP	71.01	5	Surface tension dynes/cm. 20°C				
t _e	0.690	2	t _e	69.80	5	γ			19.17	5
d ₄ ^t	0.686	4	t _e (d, e)	69.76	5				30	18.28
			ΔHv/T _e	18.63	5				40	17.40
a	0.710	4	d _e	-5 to	83.54	Parachor [P]				
b	-0.0379	4	d _e	110 °C	0.1457	20°C				
Ref. Index n _D 20°C	1.399	2	d _e	to		30				
25	1.396	2	e'	°C		40				
30	1.394	4	v _c g/ml			Sugd. 296.2				
"C"	0.7667	4	v _c ml/g	252.	5	Exp. L. l. %/wt.				
MR (Obs.)	34.2	2	t _c °C			u.				
MR (Calc.)	34.059	5	P _c mm	17992.	5	Dispersion				
(n _D -d/2)	1.052	2	PV/RT			124.				
			25°C	0.9938	5	Flash Point °C				
Dielectric			30 mm	1.0000	5	Fire Point				
A -5 to	6.72252	4	BP	0.9520	5	M. Spec.				
B 121 °C	1183.25	4	t _e	0.9445	5	Ultra V.				
C	222.	4	t _c			X-Ray Dif.				
A* -5 to	1.13430	5	ΔHc kcal/m	1044.74	2	Infrared				
B* 110 °C	1105.83	5	ΔHf			Solubility in +				
K			ΔFf			Acetone				
t _c			Viscosity centistokes			Carbon tet.				
t _k to			η			Benzene				
t _x °C						Ether				
A' to			B ^v to			n-Heptane				
B' °C			A ^v °C			Ethanol				
C' °C			(B ^v) to			Water				
A** to			(A ^v) °C			Water in				
B** °C			c _p liq. °K							
Ac 121 to	7.1388	5	c _p vap. °K							
Bc t _c °C	1486.	5	c _v vap.							
Cc t _c °C	263.	5								
Cryos. A° const. B°										
t _e °C	94.60	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. 48

NAME		3-Methyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}=\text{C}\begin{array}{l} \\ \text{CH}_3 \end{array}\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.3640	5	g	°K
B.P. °C			BP	0.0465	4	h	
760 mm	95.35	2	t_e	0.0378	5	f'	to
100	36.9	4	30 mm	0.6358	5	g'	°K
30	11.46	4				h'	
10	-7.8	5				m	to
1	-39.3	5	$\Delta\text{Hm cal/g}$			n	°K
Pressure mm 25°C	58.69	5	$\Delta\text{Hv cal/g}$			o	
t_e	993.	5	25°C	83.98	5		
			30 mm	85.99	5		
Density g/ml 20°C	0.7132	2	BP	73.66	5	m'	to
d ^t 25	0.7089	2	t_e	72.28	5	n'	°K
d ^t 30	0.7046	4	t_e (d, e)	72.23	5	o'	
			$\Delta\text{Hv}/T_e$	18.76	5		
a	0.7303	4	d 0 to	87.67	5	Surface tension dynes/cm. 20°C	
b	-0.0384	4	e 115 °C	0.1469	5	y	21.40 5
Ref. Index n_D 20°C	1.4123	2	e' to			30	20.38 5
25	1.4096	2	e' °C			40	19.37 5
30	1.4070	4	d _c g/ml			Parachor [P]	
"C"	0.7695	4	v _c ml/g			20°C	
MR (Obs.)	34.28	2	t_c °C	268.	5	30	
MR (Calc.)	34.059	2	P _c mm	19203.	5	40	
(nD-d/2)	1.0557	5	PV/RT			Sugd.	296.2 5
Dielectric			25°C	0.9968	5	Exp. L.I. %/wt. u.	
A 0 to	6.77018	4	30 mm	1.0000	5	Dispersion	
B 133 °C	1230.40	4	BP	0.9515	5	127.	2
C	221.	4	t_e	0.9432	5	Flash Point °C	
A* 0 to	1.17140	5	t_c			Fire Point	
B* 115 °C	1151.0	5	$\Delta\text{Hc kcal/m}$	1043.68	2	M Spec.	
K			ΔHf			Ultra V.	
t_c			ΔFf			X-Ray Dif.	
t_k to			Viscosity centistokes			Infrared	
t_x °C			η °C			Solubility in +	
A' to			B ^v to			Acetone	
B' °C			A ^v °C			Carbon tet.	
C' °C			(B ^v) to			Benzene	
A'* to °C			(A ^v) °C			Ether	
B'* to °C			c _p liq. °K			n-Heptane	
Ac 133 to	7.1872	5	c _p vap. °K			Ethanol	
Bc t_c °C	1543.	5	c _v vap.			Water	
Cc t_c °C	263.	5				Water in	
Cryos. A* const. B*							
t_e °C	105.07	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:							

NAME		3-Methyl-trans-3-hexene				STRUCTURAL FORMULA				
						$\text{CH}_3\text{CH}_2\text{CH}=\text{C}\begin{matrix} \text{CH}_2\text{CH}_3 \\ \text{CH}_3 \end{matrix}$				
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182					
		Ref.			Ref.	Ref.				
F. P. °C				dt/dP °C/mm		f		to		
F. P. 100%				25°C	0.3413	g		°K		
B. P. °C				BP	0.0464	h				
760 mm	93.55	2		t	0.0379	f'		to		
100	35.3	4		e	0.6330	g'		°K		
30	9.95	4		30 mm		h'				
10	-9.2	5		ΔHm cal/g						
1	-40.5	5				m		to		
Pressure mm 25°C				ΔHv cal/g		n		°K		
t _e	63.13	5		25°C	83.22	o				
	987.5	5		30 mm	85.44					
Density g/ml 20°C				BP	73.14					
d ₄ ^t 25	0.7099	2		t _e	71.79	m'		to		
d ₄ ^t 30	0.7056	2		t _e (d, e)	71.74	n'		°K		
	0.7013	4		ΔHv/T _e	18.73	o'				
a	0.7271	4		d 0 to	86.91					
b	-0.0385	4		e 110 °C	0.1472				Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C				d' to					30	21.01
25	1.4107	2		e' °C					40	19.99
30	1.4083	2		d _c g/ml						5
"C"	0.7702	4		v _c ml/g	265.					5
MR (Obs.)	34.32	2		t _c °C					Parachor [P] 20°C	
MR (Calc.)	34.059	5		P _c mm	18933.				30	
(n _D -d/2)	1.0558	2		PV/RT					40	296.2
				25°C					Sugd.	5
Dielectric				30 mm					Exp. L. l. %/wt. u.	
A 0 to	6.75851	4		BP	0.9963				Dispersion	127.
B 130 °C	1219.73	4		t _e	1.0000				Flash Point °C	
C	221.	4		e	0.9515				Fire Point	
A* 0 to	1.16211	5		t _e	0.9433				M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 110 °C	1140.86	5		ΔHc kcal/m	1043.68					
K				ΔHf						
c				ΔFf					Solubility in +	
t _k to				Viscosity centistokes η °C					Acetone	
t _x °C									Carbon tet.	
A' to									Benzene	
B' °C									Ether	
C' °C									n-Heptane	
A* to °C									Ethanol	
B* to °C									Water	
									Water in	
Ac 130 to	7.1751	5								
Bc t _c °C	1530.	5								
Cc t _c °C	263.	5								
Cryos. A° const. B°										
t _e °C	103.05	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:										

NAME		2-Ethyl-1-pentene		STRUCTURAL FORMULA	
				$\text{CH}_3(\text{CH}_2)_2\text{C}=\text{CH}_2$ C_7H_{14}	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182
		Ref.			Ref.
F. P. °C			dt/dP °C/mm		f to °K
F. P. 100%			25°C	0.3468	5
B. P. °C			BP	0.0464	4
760 mm	94.	2	t_e	0.0379	5
100	35.7	4	30 mm	0.6337	5
30	10.33	4	ΔH_m cal/g		
10	-8.8	5	ΔH_v cal/g		
1	-40.2	5	25°C	83.41	5
Pressure mm 25°C	61.99	5	30 mm	85.58	5
t_e	988.8	5	BP	73.27	5
Density g/ml 20°C	0.708	2	t_e	71.91	5
d_t 25	0.704	2	t_e (d, e)	71.86	5
d_4 30	0.700	4	$\Delta H_v/T_e$	18.74	5
a	0.724	4	d 0 to	87.10	5
b	-0.038	4	e 110 °C	0.1471	5
Ref. Index n_D 20°C	1.405	2	d' to °C		
25	1.402	2	e' to °C		
30	1.399	4	d_c g/ml		
"C"	0.7622	4	v_c ml/g	266.	5
MR (Obs.)	34.0	2	t_c °C		
MR (Calc.)	34.059	5	P_c mm	19065.	5
(nD-d/2)	1.051	2	PV/RT 25°C	0.9963	5
Dielectric			30 mm	1.0000	5
A 0 to	6.76143	4	BP	0.9515	5
B 131 °C	1222.4	4	t_e	0.9433	5
C	221.	4	ΔH_c kcal/m	1045.08	2
A* 0 to	1.16444	5	ΔH_f		
B* 110 °C	1143.39	5	ΔF_f		
K			Viscosity centistokes		
c			η °C		
t_k to °C					
t_x to °C					
A' to °C					
B' to °C					
C' to °C					
A** to °C			B ^v to °C		
B** to °C			A ^v to °C		
Ac 131 to	7.1782	5	(B ^v) to °C		
Bc t_c °C	1534.	5	(A ^v) to °C		
Cc t_c °C	263.	5	c_p liq. °K		
Cryos. A° const. B°			c_p vap. °K		
t_e °C	103.56	5	c_v vap.		
$T_R = 0.75 T_c$					
+ 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:					

NAME		3-Ethyl-1-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{C}_2\text{H}_5)\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula C_7H_{14}	Molecular Weight 98.182				
	Ref.			Ref.		Ref.	
F. P. °C	-127.4	2			f	to	
F. P. 100%					g	°K	
B. P. °C					h		
760 mm	85.13	2	0.2520	5			
100	27.4	4	0.0461	4			
30	2.34	4	0.0384	5	f'	to	
10	-16.5	5	0.6244	5	g'	°K	
1	-47.3	5			h'		
Pressure mm 25°C	90.06	5			m	to	
t_e	964.1	5			n	°K	
Density g/ml 20°C	0.6962	2			o		
d_4^{25}	0.6917	2			m'	to	
d_4^{30}	0.6872	4			n'	°K	
a	0.7142	4			o'		
b	-0.0388	4			Surface tension dynes/cm. 20°C		
Ref. Index n_D^{20}	1.3980	2			30	19.42	
25	1.3954	2			40	18.41	
30	1.3928	4				17.42	
"C"	0.7624	4			Parachor [P] 20°C		
MR (Obs.)	34.04	2			30		
MR (Calc.)	34.059	5			40		
(nD-d/2)	1.0499	2			Sugd.	296.2	
Dielectric					Exp. L. l. %/wt. u.		
A -5 to	6.70122	4			Dispersion 121.		
B 119 °C	1177.18	4			Flash Point °C		
C	223.	4			Fire Point		
A* -5 to	1.11300	5			M. Spec. Ultra V.		
B* 105 °C	1099.41	5			X-Ray Dif. Infrared		
K					Solubility in +		
t_k to					Acetone		
t_x °C					Carbon tet.		
A' to					Benzene		
B' °C					Ether		
C' °C					n-Heptane		
A** to					Ethanol		
B** °C					Water		
A _c 119 to	7.1192	5			Water in		
B _c t_c °C	1481.	5					
C _c °C	265.	5					
Cryos. A°							
const. B°							
t_e °C	93.70	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:							

NAME		2, 3-Dimethyl-1-pentene		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}_2\text{CH} \begin{array}{l} \diagup \text{C} = \text{CH}_2 \\ \diagdown \text{CH}_3 \end{array} \text{CH}_3$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182
F. P. °C	-134.8	2			
F. P. 100%					
B. P. °C					
760 mm	84.26	2	dt/dP °C/mm	0.2466	5
100	27.0	4	25°C BP	0.0457	4
30	2.07	4	t_e	0.0381	5
10	-16.7	5	30 mm	0.6209	5
1	-47.4	5			
Pressure mm 25°C			ΔHm cal/g		
t_e	91.70	5	ΔHv cal/g		
	961.5	5	25°C	79.05	5
			30 mm	82.33	5
			BP	70.53	5
Density g/ml 20°C	0.7051	2	t_e	69.37	5
d_4^{25}	0.7008	2	t_e (d, e)	69.33	5
d_4^{30}	0.6965	4	$\Delta\text{Hv}/T_e$	18.62	5
a	0.7223	4	d -5 to	82.63	5
b	-0.0384	4	e 105 °C	0.1435	5
Ref. Index n_D^{20}	1.4033	2	d' to		
25	1.4007	2	e' °C		
30	1.3981	4	d c g/ml		
"C"	0.7623	4	v c ml/g	250.	5
MR (Obs.)	34.00	2	t_c °C	18171.	5
MR (Calc.)	34.059	5	P_c mm		
(nD-d/2)	1.0508	2	PV/RT		
Dielectric			25°C	0.9933	5
A -5 to	6.72442	4	30 mm	1.0000	5
B 120 °C	1181.0	4	BP	0.9520	5
C	223.	4	t_e	0.9446	5
A* -5 to	1.13745	5	t_c		
B* 105 °C	1103.49	5	ΔHc kcal/m	1043.42	2
K			ΔHf		
c			ΔFf		
t_k to			Viscosity centistokes		
t_x °C			η °C		
A' to					
B' °C			B' to		
C' °C			A' °C		
A** to			(B') to		
B** °C			(A') °C		
Ac 120 to	7.1424	5	c_p liq. °K		
Bc t_c °C	1485.	5	c_p vap. °K		
Cc t_c °C	265.	5	c_v vap.		
Cryos. A°					
const. B°					
t_e °C	92.65	5			
$T_R = 0.75 T_c$					
REFERENCES:	1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula				
SOURCE:	API				
PURIFICATION:	API				
LITERATURE REFERENCES:					

NAME		2, 4-Dimethyl-1-pentene				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}_2\text{C} = \text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182					
		Ref.			Ref.					
F. P. °C	-123.8	2	dt/dP °C/mm			f	to			
F. P. 100%			25°C		0.2261	g	°K			
B. P. °C			BP		0.0454	h				
760 mm	81.64	2	t_e		0.0381	f'	to			
100	24.7	4	30 mm		0.6173	g'	°K			
30	-0.04	4	ΔHm cal/g			h'				
10	-18.7	5	ΔHv cal/g			m	to			
1	-49.2	5	25°C		78.00	n	°K			
Pressure mm 25°C	101.2	5	30 mm		81.55	o				
t_e	954.0	5	BP		69.95	m'	to			
Density g/ml 20°C	0.6943	2	t_e		68.84	n'	°K			
d^t_{25}	0.6898	2	t_e (d, e)		68.81	o'				
d^t_{30}	0.6853	4	ΔHv/ T_e		18.62	Surface tension dynes/cm. 20°C				
a	0.7124	4	d 0 to		81.54	19.20		5		
b	-0.0388	4	e 95 °C		0.1420	30		5		
Ref. Index n_D 20°C	1.3986	2	d' to			40		5		
25	1.3959	2	e'			Parachor [P] 20°C				
30	1.3952	4	d_c g/ml		245.	30				
"C"	0.7656	4	v_c ml/g			40				
MR (Obs.)	34.18	2	t_c °C		17719.	Sugd. 296.2				
MR (Calc.)	34.059	2	P_c mm			Exp. L. l. %/wt. u.				
($n_D-d/2$)	1.0514	5	PV/RT 25°C		0.9917	Dispersion				
Dielectric			30 mm		1.0000	125.				
A 0 to	6.72933	4	BP		0.9520	Flash Point °C				
B 115 °C	1176.26	4	t_e		0.9449	Fire Point				
C	224.	4	t_c			M. Spec. Ultra V. X-Ray Dif. Infrared				
A* 0 to	1.14483	5	ΔHc kcal/m		1042.74	Solubility in +				
B* 100 °C	1098.95	5	ΔHf			Acetone				
K			ΔFf			Carbon tet.				
c			Viscosity centistokes			Benzene				
t_k to °C			η °C			Ether				
t_x to °C			B^v to °C			n-Heptane				
A' to °C			A^v to °C			Ethanol				
B' to °C			(B^v) to °C			Water				
C' to °C			(A^v) °C			Water in				
A* to °C			c_p liq. °K							
B* to °C			c_p vap. °K							
A _c 115 to °C	7.1479	5	c_v vap.							
B _c t_c °C	1477.	5								
C _c t_c °C	265.	5								
Cryos. A° const. B°										
t_e °C	89.69	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:										

NAME		3,3-Dimethyl-1-pentene		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}_3 \end{array} \text{CH}=\text{CH}_2$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182
F.P. °C	-134.3	Ref.			
F.P. 100%					
B.P. °C	77.54	2	dt/dP °C/mm	0.1965	5
760 mm	20.96	4	25°C	0.0452	4
100	-3.59	4	BP	0.0383	5
30	-22.1	5	t_e	0.6116	5
10	-52.2	5	30 mm		
1			ΔH_m cal/g		
Pressure mm 25°C	119.2	5	ΔH_v cal/g	76.14	5
t_e	942.9	5	25°C	80.18	5
Density g/ml 20°C	0.6974	2	30 mm	68.68	5
d_4^{25}	0.6932	2	BP	67.63	5
d_4^{30}	0.6890	4	t_e	67.60	5
			t_e (d, e)	18.53	5
			$\Delta H_v/T_e$		
a	0.7143	4	d -10 to	79.67	5
b	-0.0382	4	e 100 °C	0.1418	5
			d'		
			e' °C		
Ref. Index n_D 20°C	1.3984	2	d c g/ml		
25	1.3958	2	v c ml/g		
30	1.3932	4	t c °C	240.	5
"C"	0.7619	4	P c mm	17499.	5
MR (Obs.)	34.01	2	PV/RT		
MR (Calc.) (nD-d/2)	34.059	5	25°C	0.9909	5
	1.0497	2	30 mm	1.0000	5
Dielectric			BP	0.9525	5
A -10 to	6.69410	4	t_e	0.9458	5
B 111 °C	1149.86	4	t_c		
C	224.	4	ΔH_c kcal/m	1044.77	2
A* -10 to	1.11439	5	ΔH_f		
B* 100 °C	1073.58	5	ΔF_f		
K			Viscosity centistokes		
c			η °C		
t_k to					
t_x °C					
A' to			B' v to		
B' °C			A' v °C		
C' °C			(B' v) to		
A** to			(A' v) °C		
B** °C			c_p liq. °K		
Ac 111 to	7.1122	5	c_p vap. °K		
Bc t_c °C	1447.	5	c_v vap.		
Cc t_c °C	265.	5			
Cryos. A°					
const. B°					
t_e °C	85.13	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:					

NAME		3, 4-Dimethyl-1-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \text{ CH} \text{ CH}=\text{CH}_2 \\ \quad \\ \text{CH}_3 \text{ CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.2208	g	°K	
B. P. °C			BP	0.0454	h		
760 mm	81.	2	t_e	0.0382	f'	to	
100	24.1	4	30 mm	0.6168	g'	°K	
30	-0.69	4	ΔH_m cal/g		h'		
10	-19.3	5	ΔH_v cal/g		m	to	
1	-49.8	5	25°C	78.34	n	°K	
Pressure mm 25°C	104.2	5	30 mm	81.22	o		
t_e	952.2	5	BP	69.65	m'	to	
Density g/ml 20°C	0.701	2	t_e (d, e)	68.55	n'	°K	
d_t 25	0.697	2	$\Delta H_v/T_e$	18.58	o'		
d_4 30	0.693	4	d -1 to	81.13	Surface tension dynes/cm. 20°C		
a	0.717	4	e -89 to	0.1417	30		
b	-0.038	4	e' to °C		40		
Ref. Index n_D 20°C	1.3995	2	d_c g/ml	0.210	Parachor [P] 20°C		
25	1.3969	2	v_c ml/g	4.769	30		
30	1.3946	4	t_c °C	246.	40		
"C"	0.7599	4	P_c mm	17980.	Sugd. 296.2		
MR (Obs.)	33.9	2	PV/RT 25°C		Exp. L. l. %/wt. u.		
MR (Calc.)	34.059	5	30 mm		Dispersion 120.		
(nD-d/2)	1.0490	2	BP		Flash Point °C		
Dielectric			t_e		Fire Point		
A -1 to	6.71798	4	t_c		M. Spec. Ultra V. X-Ray Dif. Infrared		
B 116 °C	1170.33	4	ΔH_c kcal/m		Solubility in +		
C	224.	4	ΔH_f		Acetone		
A* -1 to	1.13434	5	ΔF_f		Carbon tet.		
B* 99 °C	1093.21	5	Viscosity centistokes η °C		Benzene		
K			B _v to °C		Ether		
c			A _v to °C		n-Heptane		
t_k to °C			(B _v) to °C		Ethanol		
t_x to °C			(A _v) to °C		Water		
A' to °C			c _p liq. °K		Water in		
B' to °C			c _p vap. °K				
C' to °C			c _v vap.				
A** to °C							
B** to °C							
Ac 116 to °C	7.1370	5					
Bc t_c °C	1472.	5					
Cc	265.	5					
Crys. A° const. B°							
t_e °C	88.99	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:							

NAME		4,4-Dimethyl-1-pentene		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \\ \\ \text{CH}_2\text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182
		Ref.		Ref.	
F.P. °C	-136.600	2	dt/dP °C/mm		
F.P. 100%			25°C	0.1663	5
B.P. °C	72.49	2	BP	0.0448	4
760 mm	16.43	4	t _e	0.0384	5
100	-7.87	4	30 mm	0.6049	5
30	-26.13	5			
10	-55.93	5	ΔHm cal/g		
1					
Pressure mm 25°C	144.6	5	ΔHv cal/g		
t _e	928.4	5	25°C	73.95	5
Density g/ml 20°C	0.6827	2	30 mm	78.52	5
d ^t 25	0.6785	2	BP	67.25	5
d ₄ 30	0.6743	4	t _e	66.30	5
			t _e (d, e)	66.27	5
			ΔHv/T _e	18.46	5
a	0.6995	4	d -15 to	77.42	5
b	-0.0381	4	e -90 °C	0.1403	5
			d' -90 to		
Ref. Index n _D 20°C	1.3918	2	e' °C		
25	1.3892	2	d _c g/ml	0.201	5
30	1.3867	4	v _c ml/g	4.985	5
"C"	0.7661	4	t _c °C	230.	5
MR (Obs.)	34.23	2	P _c mm	16735.	5
MR (Calc.) (nD-d/2)	34.059	5	PV/RT		
	1.0504	2	25°C	0.9880	5
Dielectric			30 mm	1.0000	5
A -15 to	6.67374	4	BP	0.9525	5
B 105 °C	1128.36	4	t _e	0.9462	5
C	225.	4	t _c	0.261	5
A* -15 to	1.09996	5	ΔHc kcal/m	1043.65	2
B* 90 °C	1052.99	5	ΔHf		
K			ΔFf		
c			Viscosity centistokes °C		
t _k to			η		
t _x °C					
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v) to		
A** to			(A ^v) °C		
B** °C			c _p liq. °K		
Ac 105 to	7.0920	5	c _p vap. °K		
Bc t _c °C	1421.	5			
Cc °C	265.	5	c _v vap.		
Cryos. A° const. B°					
t _e °C	79.47	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:					

NAME		3-Ethyl-2-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{C} = \text{CH}=\text{CH}_3$ C_2H_5		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
F.P. °C		Ref.			Ref.		
F.P. 100%							
B.P. °C							
760 mm	96.01	2		dt/dP °C/mm		f	to
100	37.51	4		25°C	0.3725	g	°K
30	11.98	4		BP	0.0465	h	
10	-7.27	5		t_e	0.0378	5	
1	-38.83	5		30 mm	0.6369	5	
				ΔH_m cal/g			
Pressure mm 25°C	57.19	5		ΔH_v cal/g			
t_e	993.9	5		25°C	84.20	5	
				30 mm	86.15	5	
Density g/ml 20°C	0.7204	2		BP	73.79	5	
d_4^{25}	0.7159	2		t_e	72.40	5	
d_4^{30}	0.7114	4		t_e (d, e)	72.35	5	
				$\Delta H_v/T_e$	18.76	5	
a	0.7384	4		d 12 to	87.92	5	
b	-0.0389	4		e 106 °C	0.1472	5	
Ref. Index n_D^{20}	1.4148	2		d' to			
25	1.4122	2		e' °C			
30	1.4094	4					
"C"	0.7662	4		d_c g/ml	0.217	5	
MR (Obs.)	34.11	2		v_c ml/g	4.598	5	
MR (Calc.)	34.059	5		t_c °C	270.	5	
(nD-d/2)	1.0546	2		P_c mm	19361.	5	
Dielectric				PV/RT			
A 5 to	6.77291	4		25°C	0.9967	5	
B 134°C	1233.83	4		30 mm	1.0000	5	
C	221.	4		BP	0.9510	5	
A* 5 to	1.17411	5		t_e	0.9426	5	
B* 116°C	1154.43	5		t_c	0.258	5	
K				ΔH_c kcal/m	1044.30	2	
t_k to				ΔH_f			
t_x °C				ΔF_f			
A' to				Viscosity centistokes			
B' °C				η °C			
C' °C							
A** to				B^v to			
B** °C				A^v °C			
A ^c 134 to	7.1903	5		(B^v) to			
B _c t_c °C	1548.	5		(A^v) °C			
C _c t_c °C	264.	5		c_p liq. °K			
Cryos. A° const. B°				c_p vap. °K			
t_e °C	105.79	5		c_v vap.			
$T_R = 0.75 T_c$							
+ 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:							

NAME		2,3-Dimethyl-2-pentene		STRUCTURAL FORMULA	
				$\text{CH}_3\text{CH}_2\text{C}=\text{C}\text{CH}_3$ CH_3CH_3	
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182
F.P. °C	-118.3	2			
F.P. 100%					
B.P. °C	97.46	2	dt/dP °C/mm	0.3878	5
760 mm	38.46	4	25°C	0.0470	4
100	12.75	4	BP	0.0381	5
30	-6.63	5	t _e	0.6412	5
10	-38.37	5	30 mm		
1			ΔHm cal/g		
Pressure mm 25°C	54.94	5	ΔHv cal/g	84.24	5
t _e	998.2	5	25°C	86.03	5
Density g/ml 20°C	0.7277	2	30 mm	73.68	5
d ₄ ^t 25	0.7234	2	BP	72.27	5
d ₄ ^t 30	0.7190	4	t _e	72.22	5
			t _e (d, e)	18.64	5
			ΔHv/T _e		
a	0.7450	4	d 5 to	87.89	5
b	-0.0385	4	e 115 °C	0.1458	5
			d'		
			e' °C		
Ref. Index n _D 20°C	1.4208	2	d _c g/ml		
25	1.4182	2	v _c ml/g		
30	1.4156	4	t _c °C	273.	5
"C"	0.7688	4	P _c mm	19410.	5
MR (Obs.)	34.20	2	PV/RT		
MR (Calc.)	34.059	5	25°C	0.9970	5
(nD-d/2)	1.0570	2	30 mm	1.0000	5
Dielectric			BP	0.9510	5
A 5 to	6.75429	4	t _e	0.9424	5
B 137 °C	1233.55	4	t _c		
C	221.	4	ΔHc kcal/m	1041.82	2
A* 5 to	1.15351	5	ΔHf		
B* 115 °C	1153.70	5	ΔFf		
K			Viscosity centistokes		
c			η °C		
t _k to					
t _x °C					
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v) to		
A** to			(A ^v) °C		
B** °C			c _p liq. °K		
Ac 137 to	7.1726	5	c _p vap. °K		
Bc t _c °C	1551.	5	c _v vap.		
Cc t _c °C	264.	5			
Cryos. A°					
const. B°					
t _e °C	107.50	5			
T _R = 0.75 T _c					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		2, 4-Dimethyl-2-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{C} = \text{CHCH} \begin{matrix} \text{CH}_3 \\ \end{matrix} \text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
F. P. °C				dt/dP °C/mm		f	to
F. P. 100%				25°C		g	°K
B. P. °C				BP	0.2398	5	
760 mm	83.44	2		t _e	0.0456	4	
100	26.25	4		t _e 30 mm	0.0381	5	
30	1.39	4			0.6196	5	
10	-17.33	5		ΔHm cal/g			
1	-47.94	5					
Pressure mm 25°C	94.68	5		ΔHv cal/g			
t _e	959.2	5		25°C	78.72	5	
				30 mm	82.09	5	
Density g/ml 20°C	0.6955	2		BP	70.30	5	
t	0.6912	2		t _e	69.15	5	
d ₄	0.6869	4		t _e (d, e)	69.11	5	
				ΔHv/T _e	18.60	5	
a	0.7126	4		d -10 to	82.29	5	
b	-0.0384	4		e 105 °C	0.1437	5	
Ref. Index n _D 20°C	1.4040	2		d' to			
25	1.4013	2		e' °C			
30	1.3986	4		d _c g/ml	0.208	5	
"C"	0.7741	4		v _c ml/g	4.81	5	
MR (Obs.)	34.52	2		t _c °C	248.	5	
MR (Calc.) (nD-d/2)	34.059	5		P _c mm	17809.	5	
	1.0562	2					
Dielectric				PV/RT			
A -10 to	6.71947	4		25°C	0.9930	5	
B 118 °C	1176.32	4		30 mm	1.0000	5	
C	223.	4		BP	0.9520	5	
A* -10 to	1.13362	5		t _e	0.9447	5	
B* 105 °C	1099.06	5		t _e	0.259	5	
K				ΔHc kcal/m	1041.34	2	
t _k to				ΔHf			
t _x °C				ΔFf			
A' to				Viscosity centistokes			
B' °C				η			
C' °C							
A* to				B ^v to			
B* °C				A ^v °C			
				(B ^v) to			
Ac 118 to	7.1369	5		(A ^v) °C			
Bc t _c °C	1478.	5		c _p liq. °K			
Cc t _c °C	264.	5		c _p vap. °K			
Cryos. A° const. B°				c _v vap.			
t _e °C	91.73	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. 60

NAME		3,4-Dimethyl-cis-2-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \text{ C} = \text{CH} \text{ CH}_3 \\ \quad \\ \text{CH}_3 \text{ CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.2711	5	g	to °K
B.P. °C			BP	0.0459	4	h	to °K
760 mm	87.	2	t_e	0.0380	5	f'	to °K
100	29.43	4	t_e (d, e)			g'	to °K
30	4.36	4	ΔH_m cal/g			h'	to °K
10	-14.5	5	ΔH_v cal/g			m	to °K
1	-45.4	5	25°C	80.23	5	n	to °K
Pressure mm 25°C	82.28	5	30 mm	83.15	5	o	to °K
t_e	969.4	5	BP	71.33	5	m'	to °K
Density g/ml 20°C	0.713	2	t_e	70.12	5	n'	to °K
d_4^{25}	0.709	2	$\Delta H_v/T_e$	70.09	5	o'	to °K
d_4^{30}	0.705	4	d -5 to	83.78	5	Surface tension dynes/cm. 20°C	
a	0.7290	4	e 105 °C	0.1430	5	30	21.37
b	-0.0378	4	d' to °C			40	20.40
Ref. Index n_D^{20}	1.407	2	e'				19.45
25	1.404	2	d_c g/ml	0.216	5	Parachor [P]	
30	1.401	4	v_c ml/g	4.63	5	20°C	
"C"	0.7604	4	t_c °C	256.	5	30	
MR (Obs.)	33.9	2	P_c mm	18790.	5	40	296.2
MR (Calc.) (nD-d/2)	34.059	5	PV/RT			Sugd.	5
	1.050	2	25°C	0.9944	5	Exp. L.l. %/wt. u.	
			30 mm	1.0000	5	Dispersion	
Dielectric			BP	0.9520	5	127.	2
A -5 to	6.74284	4	t_e	0.9444	5	Flash Point °C	
B 124 °C	1197.23	4	t_c	0.259	5	Fire Point	
C	223.	4	ΔH_c kcal/m	1042.02	2	M Spec. Ultra V. X-Ray Dif. Infrared	
A* -5 to	1.15215	5	ΔH_f			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 105 °C	1118.91	5	ΔF_f				
K			Viscosity centistokes η °C				
c			B^v to °C				
t_k to °C			A^v to °C				
t_x to °C			(B ^v) to °C				
A' to °C			(A ^v) to °C				
B' to °C			c_p liq. °K				
C' to °C			c_p vap. °K				
A'* to °C			c_v vap.				
B'* to °C							
Ac 124 to	7.1618	5					
Bc t_c °C	1506.	5					
Cc t_c °C	265.	5					
Cryos. A° const. B°							
t_e °C	95.72	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:							

NAME		3,4-Dimethyl-trans-2-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}=\text{C}=\text{CHCH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.2711	5	g	°K
B. P. °C			BP	0.0459	4	h	
760 mm	87.	2	t _e	0.03801	5	f'	to
100	29.43	4	t _e 30 mm	0.6251	5	g'	°K
30	4.36	5	ΔHm cal/g			h'	
10	-14.53	4				m	to
1	-45.44	4	ΔHv cal/g			n	°K
Pressure mm 25°C	82.28	4	25°C	80.23	5	o	
t _e	969.36	4	30 mm	83.15	5		
Density g/ml 20°C	0.713	2	BP	71.33	5	m'	to
d ₄ ^t 25	0.709	2	t _e	70.12	5	n'	°K
d ₄ ^t 30	0.7050	4	t _e (d, e)	70.09	5	o'	
			ΔHv/T _e	18.66	5	Surface tension dynes/cm. 20°C	
a	0.7290	4	d _e -5 to	83.78	5	γ	21.37
b	-0.0378	4	e _e 96 °C	0.1430	5		30 20.40
Ref. Index n _D 20°C	1.407	2	d'				40 19.45
25	1.404	2	e'			Parachor [P]	
30	1.402	4	d _c g/ml	0.216	5		20°C
"C"	0.7604	5	v _c ml/g	4.633	5		30
MR (Obs.)	33.9	2	t _c °C	256.	5		40
MR (Calc.)	34.059	5	P _c mm	18790.	5		Sugd. 296.2
(n _D -d/2)	1.050	2	PV/RT			Exp. L. l. %/wt. u.	
Dielectric			25°C	0.9939	5	Dispersion	
A -5 to	6.74284	4	30 mm	1.0000	5	127.	
B 124 °C	1197.23	4	BP	0.9520	5	Flash Point °C	
C	223.	4	t _e	0.9444	5	Fire Point	
A* -5 to	1.15215	5	t _e	0.259	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 105 °C	1118.91	5	ΔHc kcal/m	1042.02	2	Solubility in +	
K			ΔHf			Acetone	
c			ΔFf			Carbon tet.	
t _k °C			Viscosity centistokes			Benzene	
t _k °C			η			Ether	
A' °C						n-Heptane	
B' °C			B _v to			Ethanol	
C' °C			A _v °C			Water	
A* to °C			(B _v) to			Water in	
B* to °C			(A _v) °C				
Ac 124 to	7.1618	5	c _p liq. °K				
Bc t _c °C	1505.5	5	c _p vap. °K				
Gc t _c °C	265.11	5	c _v vap.				
Cryos. A° const. B°							
t _e °C	95.72	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:							

NAME		4,4-Dimethyl-cis-2-pentene		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \text{---} \text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182
F. P. °C	-135.46	Ref.	2	dt/dP °C/mm	
F. P. 100%				25°C	0.2165 5
B. P. °C	80.42	2	2	BP	0.0454 4
760 mm	23.53	4	4	t_e	0.0382 5
100	-1.19	4	4	30 mm	0.6160 5
30	-19.80	5	5	ΔHm cal/g	
10	-50.21	5	5	ΔHv cal/g	
1				25°C	77.16 5
Pressure mm 25°C	106.6	5	5	30 mm	81.03 5
t_e	950.6	5	5	BP	69.46 5
Density g/ml 20°C	0.6996	2	2	t_e	68.37 5
d_t 25	0.6952	2	2	t_e (d, e)	68.34 5
d_4 30	0.6908	4	4	$\Delta\text{Hv}/T_e$	18.57 5
a	0.7172	4	4	d -10 to	80.87 5
b	-0.0386	4	4	e -88 °C	0.1418 5
Ref. Index n_D 20°C	1.4024	2	2	d' to	
25	1.3998	2	2	e' °C	
30	1.3970	4	4	d_c g/ml	0.208 5
"C"	0.7667	4	4	v_c ml/g	4.819 5
MR (Obs.)	34.20	2	2	t_c °C	244. 5
MR (Calc.)	34.059	5	5	P mm	17725. 5
(nD-d/2)	1.0526	2	2	PV/RT	
Dielectric				25°C	0.9915 5
A -10 to	6.71324	4	4	30 mm	1.0000 5
B 115 °C	1166.67	4	4	BP	0.9520 5
C	224.	4	4	t_e	0.9450 5
A* -10 to	1.13040	5	5	t_c	0.260 5
B* 95 °C	1089.71	5	5	ΔHc kcal/m	1042.05 2
K				ΔHf	
c				ΔFf	
t_k to				Viscosity centistokes	
t_x °C				η °C	
A' to					
B' °C				B' to	
C' °C				A' °C	
A* to				(B ^v) to	
B* °C				(A ^v) °C	
Ac 115 to	7.1319	5	5	c_p liq. °K	
Bc t_c °C	1467.	5	5	c_p vap. °K	
Cc t_c °C	265.	5	5	c_v vap.	
Cryos. A° const. B°					
t_e °C	88.34	5	5		
$T_R = 0.75 T_c$					
REFERENCES:	1-Dow	2-API	3-Lit.	4-Calc. from det. data	5-Calc. by formula
SOURCE:	API				
PURIFICATION:	API				
LITERATURE REFERENCES:					

NAME		4,4-Dimethyl-trans-2-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₇ H ₁₄	Molecular Weight	98.182		
		Ref.			Ref.		
F. P. °C	-115.235	2	dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	0.1913	5	h	
760 mm	76.75	2	BP	0.0451	4		
100	20.24	4	t _e	0.0383	5	f'	to
30	-4.27	4	30 mm	0.6105	5	g'	to °K
10	-22.7	5	ΔHm cal/g			h'	
1	-52.8	5	ΔHv cal/g			m	to
Pressure mm 25°C	122.9	5	25°C	75.80	5	n	to °K
t _e	940.6	5	30 mm	79.93	5	o	
Density g/ml 20°C	0.6889	2	BP	68.43	5	m'	to
d ₄ ^t 25	0.6845	2	t _e	67.40	5	n'	to °K
d ₄ ^t 30	0.6801	4	t _e (d, e)	67.37	5	o'	
a	0.7066	4	ΔHv/T _e	18.51	5	Surface tension dynes/cm. 20°C	
b	-0.0386	4	d -10 to °C	79.33	5	γ	18.60
Ref. Index n _D 25°C	1.3982	2	e 95 to °C	0.1420	5		17.64
20	1.3953	2	d'				40
30	1.3928	4	e'			Parachor [P]	
"C"	0.7709	4	d _e g/ml	0.203	5		20°C
MR (Obs.)	34.41	2	v _c ml/g	4.928	5		30
MR (Calc.)	34.059	5	t _c °C	237.	5		40
(nD-d/2)	1.0538	2	P _c mm	17097.	5		Sugd. 296.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A -10 to	6.68799	4	25°C	0.9908	5	Dispersion	
B 110 °C	1145.0	4	30 mm	1.0000	5	124.	
C	224.	4	BP	0.9525	5	Flash Point °C	
A* -10 to	1.10939	5	t _e	0.9458	5	Fire Point	
B* 95 °C	1069.0	5	t _c	0.260	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
K			ΔHc kcal/m	1041.05	2	Solubility in +	
c			ΔHf			Acetone	
t _k to °C			ΔFf			Carbon tet.	
t _x to °C			Viscosity centistokes η °C			Benzene	
A' to °C			B _v to °C			Ether	
B' to °C			A _v to °C			n-Heptane	
C' to °C			(B _v) to °C			Ethanol	
A'* to °C			(A _v) to °C			Water	
B'* to °C			c _p liq. °K			Water in	
Ac 110 to °C	7.1055	5	c _p vap. °K				
Bc t _c °C	1440.	5	c _v vap.				
Cc t _c °C	265.	5					
Cryos. A° const. B°							
t _e °C	84.25	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:							

NAME		2-Ethyl-3-methyl-1-butene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} = \text{CH}_2 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.2906	5	g	
B.P. °C	89.	2	BP	0.0460	4	h	
760 mm	31.23	4	t _e	0.0380	5	f'	to °K
100	6.07	4	30 mm	0.6272	5	g'	
30	-12.9	5	ΔHm cal/g			h'	
10	-43.9	5	ΔHv cal/g			m	to °K
1			25°C	81.09	5	n	
Pressure mm 25°C	75.95	5	30 mm	83.90	5	o	
t _e	975.1	5	BP	71.87	5		
Density g/ml 20°C	0.715	2	t _e	70.61	5	m'	to °K
d ^t 25	0.711	2	t _e (d, e)	70.57	5	n'	
d ₄ 30	0.707	4	ΔHv/T _e	18.68	5	o'	
a	0.7310	4	d -5 to	84.78	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 110 °C	0.1450	5	y	21.61
Ref. Index n _D 20°C	1.410	2	d' to °C				20.64
25	1.407	2	e'				19.68
30	1.405	4	d _c g/ml	0.216	5	Parachor [P]	
"C"	0.7635	4	v _c ml/g	4.624	5	20°C	
MR (Obs.)	34.0	2	t _c °C	259.	5	30	
MR (Calc.) (nD-d/2)	34.059	5	P _c mm	18932.	5	40	
Dielectric	1.052	2	PV/RT			Sugd.	296.2
A -5 to	6.74138	4	25°C	0.9949	5	Exp. L.l. %/wt. u.	
B 125 °C	1200.64	4	30 mm	1.0000	5	Dispersion	
C	222.	4	BP	0.9520	5	125.	2
A* -5 to	1.14911	5	t _e	0.9442	5	Flash Point °C	
B* 110 °C	1122.32	5	t _c	0.259	5	Fire Point	
K			ΔHc kcal/m	1043.42	2	M Spec. Ultra V.	
c			ΔHf			X-Ray Dif.	
t _k to °C			ΔFf			Infrared	
t _x to °C			Viscosity centistokes η °C			Solubility in +	
A' to °C			B ^v to °C			Acetone	
B' to °C			A ^v to °C			Carbon tet.	
C' to °C			(B ^v) to °C			Benzene	
A'* to °C			(A ^v) to °C			Ether	
B'* to °C			c _p liq. °K			n-Heptane	
Ac 125 to	7.1591	5	c _p vap. °K			Ethanol.	
Bc t _c °C	1509.	5	c _v vap.			Water	
Cc t _c °C	264.	5				Water in	
Cryos. A° const. B°							
t _e °C	97.97	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:							

NAME		2, 3, 3-Trimethyl-1-butene				STRUCTURAL FORMULA			
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} = \text{C} = \text{CH}_2 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_7H_{14}	Molecular Weight	98.182				
		Ref.			Ref.				
F. P. °C	-109.85	2	dt/dP			f	to		
F. P. 100%			°C/mm			g	°K		
B. P. °C			25°C		0.1987	5			
760 mm	77.87	2	BP		0.0452	4			
100	21.26	4	t _e		0.0383	5	f'		
30	-3.31	4	30 mm		0.6121	5	g'		
10	-21.79	5					to		
1	-51.98	5	ΔHm cal/g			h'	°K		
Pressure mm 25°C	117.6	5	ΔHv cal/g			m	to		
t _e	943.3	5	25°C		76.23	5	°K		
			30 mm		80.29	5			
Density g/ml 20°C	0.7050	2	BP		68.75	5	m'		
t _t 25	0.7005	2	t _e		67.70	5	n'		
d ₄ 30	0.6960	4	t _e (d, e)		67.67	5	to		
			ΔHv/T _e		18.53	5	°K		
a	0.7230	4	d		-10 to	79.82	5	Surface tension	
b	-0.0388	4	e		-95 °C	0.1422	5	dynes/cm. 20°C	
Ref. Index			d'		to °C			20.40	
n _D 20°C	1.4029	2	d _c g/ml		0.209	5	30		19.35
25	1.4000	2	v _c ml/g		4.789	5	40		18.32
30	1.3973	4	t _c °C		241.	5			
"C"	0.7617	4	P _c mm		17662.	5	Sugd.		296.2
MR (Obs.)	33.98	2	PV/RT				Exp. L. l. %/wt.		
MR (Calc.)	34.059	5	25°C		0.9903	5	u.		
(nD-d/2)	1.0504	2	30 mm		1.0000	5	Dispersion		124.
Dielectric			BP		0.9520	5	Flash Point °C		
A -10 to	6.69701	4	t _e		0.9452	5	Fire Point		
B 115 °C	1152.0	4	t _c		0.259	5	M. Spec.		
C	224.	4	ΔHc kcal/m		1042.08	2	Ultra V.		
A* -10 to	1.11770	5	ΔHf				X-Ray Dif.		
B* 95 °C	1075.8	5	ΔFf				Infrared		
K			Viscosity				Solubility in +		
c			centistokes				Acetone		
t _k to			η				Carbon tet.		
t _x °C							Benzene		
A' to							Ether		
B' °C							n-Heptane		
C'							Ethanol		
A'* to							Water		
B'* °C							Water in		
Ac 115 to	7.1153	5	B ^v to						
Bc t _c °C	1450.	5	A ^v °C						
Cc t _c °C	265.	5	(B ^v) to						
			(A ^v) °C						
Cryos. A°			c _p liq. °K						
const. B°			c _p vap. °K						
t _e °C	85.48	5	c _v vap.						
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: API									
PURIFICATION: API									
LITERATURE REFERENCES:									

NAME		1-Octene		STRUCTURAL FORMULA			
				CH ₃ (CH ₂) ₅ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
F. P. °C	-101.736	2	dt/dP °C/mm			f to	
F. P. 100%			25°C	1.0436	5	g °K	
B. P. °C	121.280	2	BP	0.04711	4	h	
760 mm	61.630	2	t _e	0.03622	5	f' to	
100	35.33	4	30 mm	0.6583	5	g' °K	
30	15.38	2	ΔHm cal/g			h'	
10	-17.5	5	ΔHv cal/g			m 300 to	0.0250
1			25°C	86.82	5	n 600 °K	0.0013
Pressure mm 25°C	17.38	5	30 mm	85.36	5	o	-0.0649
t _e	1064.	5	BP	72.70	5		
Density g/ml 20°C	0.71492	2	t _e	70.95	5	m' 700 to	0.1070
d ^t 25	0.71085	2	t _e (d, e)	70.86	5	n' 1000 °K	0.0011
d ₄ 30	0.70677	4	ΔHv/T _e	19.56	5	o'	-0.0638
a	0.73118	4	d 25 to	90.56	5	Surface tension dynes/cm. 20°C	
b	-0.03809	4	e 134 °C	0.1473	5	γ	20.79
Ref. Index n _D 20°C	1.40870	2	d' to			30	19.86
25	1.40620	2	e' °C			40	18.94
30	1.40376	4	d _c g/ml	0.240	5	Parachor [P] 20°C	
"C"	0.7613	4	v _c ml/g	4.173	5	30	
MR (Obs.)	38.778	2	t _c °C	292.	5	40	
MR (Calc.) (nD-d/2)	1.05124	2	P _c mm	19197.	5	Sugd.	335.2
Dielectric			PV/RT 25°C	1.0000	5	Exp. L.l. %/wt. u.	
A 0 to	6.93263	2	30 mm	1.0000	5	Dispersion	116.8
B 151 °C	1353.5	2	BP	0.9500	5	Flash Point °C	
C	212.764	2	t _e	0.9396	5	Fire Point	
A* 25 to	1.37023	5	t _c	0.255	5	M Spec. Ultra V. X-Ray Dif. Infrared	
B* 140 °C	1272.1	5	Viscosity centistokes			Solubility in +	
K			η 40 °C	0.382	2	Acetone	
t _c to			60	0.316	2	Carbon tet.	
t _x °C			80	0.270	2	Benzene	
A' to			100	0.234	2	Ether	
B' °C			B ^v 20 to	429.70	5	n-Heptane	
C' °C			A ^v 60 °C	2.20988	5	Ethanol	
A** to			(B ^v) 60 to	409.49	5	Water	
B** °C			(A ^v) 110 °C	2.27184	5	Water in	
Ac 151 to	7.3370	5	c _p liq. °K				
Bc t _c °C	1664.	5	c _p vap. 300°K	0.38117	2		
Cc t _c °C	252.	5	400	0.48045	2		
Cryos. A° const. B°			c _v vap.				
t _e °C	133.78	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:							

NAME		cis-2-Octene			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₄ CH=CHCH ₃				
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208				
F.P. °C	-100.2	2	dt/dP °C/mm			f		to	
F.P. 100%			25°C	1.1514	5	g		°K	
B.P. °C			BP	0.04870	5	h			
760 mm	125.64	2	t _e	0.03714	5	f'		to	
100	64.12	4	30 mm	0.6758	5	g'		°K	
30	37.93	4	ΔHm cal/g			h'			
10	16.52	5	ΔHv cal/g			m		to	
1	-17.84	5	25°C	85.12	5	n		°K	
Pressure mm	16.067	5	30 mm	84.10	5	o			
t _e	1076.47	5	BP	71.86	5				
Density g/ml	0.7243	2	t _e	70.08	5	m'		to	
25	0.7201	2	t _e (d, e)	70.01	5	n'		°K	
d ₄	0.7159	4	ΔHv/T _e	19.08	5	o'			
a	0.7411	4	d 38 to	89.23	5	Surface tension dynes/cm. 20°C			
b	-0.0384	4	e 140 °C	0.1382	5	γ	21.91		1
Ref. Index n _D			d' 20 to	87.21	5		30	20.90	
20°C	1.4150	2	e' 38 °C	0.0838	5		40	19.93	1
25	1.4125	2	d _c g/ml	0.25	5	Parachor [P]			
30	1.4099	4	v _c ml/g	4.006	5	20°C	335.21		4
"C"	0.7624	4	t _c °C	300.	5	30	335.23		4
MR (Obs.)	38.794	4	P _c mm	18399.	5	40	335.21		4
MR (Calc.)	38.677	5	PV/RT			Sugd.	335.2		5
(nD-d/2)	1.0529	2	25°C	1.0000	5	Exp. L. l. %/wt.			
Dielectric			30 mm	1.0000	5	u.			
A 38 to	6.87711	5	BP	0.9495	5	Dispersion	118.		2
B 157 °C	1361.3	5	t _e	0.9386	5	Flash Point °C			
C	215.	4	t _c	0.254	5	Fire Point			
A* 38 to	1.30761	5	ΔHc kcal/m			M. Spec.			
B* 150 °C	1277.39	5	ΔHf			Ultra V.			
K			ΔFf			X-Ray Dif.			
t _k to			Viscosity centistokes			Infrared			
t _x °C			η			Solubility in +			
A' 20 to	7.26268	5	B ^v to			Acetone			
B' 38 °C	1562.64	5	A ^v °C			Carbon tet.			
C'	233.	5	(B ^v) to			Benzene			
A'* 20 to	1.65772	5	(A ^v) °C			Ether			
B'* 38 °C	1463.16	5	c _p liq. °K			n-Heptane			
Acl 157 to	7.28738	5	c _p vap. °K			Ethanol			
Bc ₁ t _c °C	1683.60	5	c _v vap.			Water			
Cc	256.69	5				Water in			
Cryos. A°									
consts. B°									
t _e °C	139.03	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:									

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		trans-2-Octene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₄ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208
F. P. °C	-87.7	2	dt/dP °C/mm		
F. P. 100%			25°C	1.1227	5
B. P. °C			BP	0.0487	4
760 mm	125.0	2	t _e	0.0372	5
100	63.55	4	30 mm	0.6748	5
30	36.56	4	ΔHm cal/g		
10	16.02	5	ΔHv cal/g		
1	-18.28	5	25°C	84.90	5
Pressure mm 25°C	16.52	5	30 mm	83.94	5
t _e	1075.	5	BP	71.69	5
Density g/ml 20°C	0.7199	2	t _e	69.92	5
d ^t 25	0.7157	2	t _e (d, e)	69.84	5
d ₄ 30	0.7115	4	ΔHv/T _e	19.06	5
a	0.7367	4	d 37 to	89.00	5
b	-0.0384	4	e 138 °C	0.1385	5
Ref. Index n _D 20°C	1.4132	2	d' 25 to	87.00	5
25	1.4107	2	e' 37 °C	0.0836	5
30	1.4081	4	d _c g/ml	0.225	5
"C"	0.7639	4	v _c ml/g	4.44	5
MR (Obs.)	38.88	2	t _c °C	299.	5
MR (Calc.)	38.677	5	P _c mm	18206.	5
(nD-d/2)	1.0533	2	PV/RT		
Dielectric			25°C	1.0000	5
A 37 to	6.87364	4	30 mm	1.0000	5
B 156 °C	1357.6	4	BP	0.9495	5
C	215.	4	t _e	0.9386	5
A* 37 to	1.30491	5	t _c	0.254	5
B* 148 °C	1273.8	5	ΔHc kcal/m		
K			ΔHf		
c			ΔFf		
t _k --- to			Viscosity centistokes		
t _x --- °C			η °C		
A' 25 to	7.25977	5	B ^v to		
B' 37 °C	1558.8	5	A ^v --- °C		
C'	233.	5	(B ^v) to		
A'* 25 to	1.66269	5	(A ^v) °C		
B'* 37 °C	1461.4	5	c _p liq. °K		
Ac 156 to	7.2835	5	c _p vap. °K		
Bc t _c °C	1678.	5	c _v vap.		
Cc t _c °C	256.	5			
Cryos. A° const. B°					
t _e °C	138.31	5			
T _R = 0.75 T _c					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		cis-3-Octene				STRUCTURAL FORMULA	
						CH ₃ (CH ₂) ₃ CH=CHCH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula C ₈ H ₁₆	Molecular Weight 112.208				
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	1.0317	g	°K	
B. P. °C			BP	0.0485	h		
760 mm	122.9	2	t _e	0.0372	f'	to	
100	61.66	4	t _e (d, e)	0.6726	g'	°K	
30	34.76	4	ΔHm cal/g		h'		
10	14.28	5	ΔHv cal/g		m	to	
1	-19.91	5	25°C	84.02	n	°K	
Pressure mm 25°C	18.16	5	30 mm	83.24	o		
t _e	1069.	5	BP	71.17			
Density g/ml 20°C	0.721	2	t _e	69.46	m'	to	
d ⁴ ₂₅	0.717	2	t _e (d, e)	69.39	n'	°K	
d ⁴ ₃₀	0.713	4	ΔHv/T _e	19.05	o'		
a	0.7370	4	d 35 to	87.99	Surface tension dynes/cm. 20°C		
b	-0.0380	4	e 136 °C	0.1369	γ	21.51	
Ref. Index n _D 20°C	1.4135	2	d' 25 to	86.04	30	20.56	
25	1.4111	2	e' 35 °C	0.0807	40	19.64	
30	1.4087	4	d _c g/ml	0.228	Parachor [P] 20°C		
"C"	0.7633	4	v _c ml/g	4.393	30		
MR (Obs.)	38.8	2	t _c °C	297.	40		
MR (Calc.) (n _D -d/2)	38.677	5	P _c mm	18324.	Sugd.	335.2	
	1.053	2	PV/RT 25°C	1.0000	Exp. L. l. %/wt. u.		
Dielectric			30 mm	1.0000	Dispersion 119.		
A 35 to	6.87423	4	BP	0.9495	Flash Point °C		
B 155 °C	1353.4	4	t _e	0.9388	Fire Point		
C	216.	4	t _c	0.254	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 35 to	1.30707	5	ΔHc kcal/m		Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 146 °C	1269.7	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes η °C				
t _k to °C							
t _x to °C							
A' 25 to	7.26164	5	B ^v to °C				
B' 35 °C	1554.6	5	A ^v to °C				
C'	234.	5	(B ^v) to °C				
A'* 25 to	1.65709	5	(A ^v) to °C				
B'* 35 °C	1454.9	5	c _p liq. °K				
Ac 155 to	7.2856	5	c _p vap. °K				
Bc t _c °C	1675.	5	c _v vap.				
Cc t _c °C	258.	5					
Cryos. A° const. B°							
t _e °C	135.95	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:							

NAME		trans-3-Octene			STRUCTURAL FORMULA	
					CH ₃ (CH ₂) ₃ CH=CHCH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208	
F.P. °C	-110.	2				
F.P. 100%						
B.P. °C						
760 mm	123.3	2		1.0480	5	f to
100	62.01	4		0.0485	4	g °K
30	35.09	4		0.0372	5	h
10	14.59	5		0.6732	5	f' to
1	-19.63	5				g' °K
						h'
Pressure mm 25°C	17.85	5				m to
t _e	1070.	5				n °K
Density g/ml 20°C	0.7152	2				o
d ₄ ^t 25	0.7110	2				m' to
d ₄ ^t 30	0.7068	4				n' °K
						o'
a	0.7320	4				
b	-0.0384	4				Surface tension dynes/cm. 20°C
Ref. Index n _D 20°C	1.4126	2				30 20.83 5
25	1.4102	2				40 19.86 5
30	1.4075	4				18.92 5
"C"	0.7679	4				Parachor [P] 20°C
MR (Obs.)	39.09	2				30
MR (Calc.)	38.677	5				40
(nD-d/2)	1.0550	2				Sugd. 335.2 5
Dielectric						Exp. L.l.%/wt. u.
A 35 to	6.87632	4				Dispersion 121. 2
B 153°C	1355.7	4				Flash Point °C
C	216.	4				Fire Point
A* 35 to	1.30868	5				M Spec. Ultra V. X-Ray Dif. Infrared
B* 146°C	1271.9	5				Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
K						
c						
t _k to						
t _x °C						
A' 25 to	7.26338	5				
B' 35°C	1557.0	5				
C'	234.	5				
A'* 25 to	1.65858	5				
B'* 35°C	1457.2	5				
Ac 153 to	7.2873	5				
Bc t _c °C	1676.	5				
Cc t _c °C	257.	5				
Cryos. A° const. B°						
t _e °C	136.40	5				
T _R = 0.75 T _c						
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula						
SOURCE: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		cis-4-Octene				STRUCTURAL FORMULA	
						CH ₃ (CH ₂) ₂ CH=CH(CH ₂) ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C	-118.7	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	1.0168	5	h	
760 mm	122.54	2	BP	0.0485	4	f'	to
100	61.33	4	t _e	0.0372	5	g'	°K
30	34.45	4	30 mm	0.6721	5	h'	
10	13.98	5	ΔHm cal/g			m	to
1	-20.18	5	ΔHv cal/g			n	°K
Pressure mm 25°C	18.46	5	25°C	83.89	5	o	
t _e	1068.	5	30 mm	83.13	5	m'	to
Density g/ml 20°C			BP	71.07	5	n'	°K
d ₄ ^t 25	0.7212	2	t _e	69.36	5	o'	
d ₄ ^t 30	0.7170	2	t _e (d, e)	69.29	5	Surface tension dynes/cm. 20°C	
	0.7128	4	ΔHv/T _e	19.04	5	γ	21.53 5
a	0.7380	4	d 35 to	87.85	5		30 20.54 5
b	-0.0383	4	e 36 °C	0.1369	5		40 19.58 5
Ref. Index n _D 20°C			d' 25 to	85.91	5	Parachor [P]	
25	1.4148	2	e' 35 °C	0.0806	5		20°C
30	1.4124	2	d _c g/ml	0.226	5		30
	1.4097	4	v _c ml/g	4.42	5		40
"C"	0.7653	4	t _c °C	295.	5		Sugd. 335.2 5
MR (Obs.)	38.95	2	P _c mm	18155.	5	Exp. L. l. %/wt. u.	
MR (Calc.)	38.677	5	PV/RT				Dispersion
(nD-d/2)	1.0542	2	25°C	1.0000	5		120. 2
Dielectric			30 mm	1.0000	5	Flash Point °C	
A 35 to	6.87149	4	BP	0.9495	5	Fire Point	
B 153 °C	1351.0	4	t _e	0.9388	5	M. Spec. Ultra V.	
C	216.	4	t _c	0.254	5	X-Ray Dif. Infrared	
A* 35 to	1.30477	5	ΔHc kcal/m			Solubility in [†]	
B* 146 °C	1267.4	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to °C			η			Ether	
t _x to °C						n-Heptane	
A ¹ 25 to	7.25919	5	B ^v to °C			Ethanol	
B ¹ 35 °C	1552.2	5	A ^v to °C			Water	
C ¹	234.	5	(B ^v) to °C			Water in	
A ¹ * 25 to	1.65489	5	(A ^v) to °C				
B ¹ * 35 °C	1452.5	5	c _p liq. °K				
Ac 153 to	7.2826	5	c _p vap. °K				
Bc t _c °C	1672.	5	c _v vap.				
Cc t _c °C	257.	5					
Cryos. A° const. B°							
t _e °C	135.54	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:							

NAME			trans-4-Octene			STRUCTURAL FORMULA		
						CH ₃ (CH ₂) ₂ CH=CH(CH ₂) ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208			
			Ref.			Ref.		
F. P. °C	-93.810	2	dt/dP °C/mm			f		to
F. P. 100%			25°C	1.0047	5	g		°K
B. P. °C			BP	0.0485	4	h		
760 mm	122.25	2	t _e	0.0372	5	f'		to
100	61.06	4	t _e (d, e)	0.6717	5	g'		°K
30	34.19	4	ΔHm cal/g			h'		
10	13.74	5	ΔHv cal/g			m		to
1	-20.40	5	25°C	83.78	5	n		°K
Pressure mm 25°C	18.71	5	30 mm	83.04	5	o		
t _e	1067.	5	BP	70.98	5	m'		to
Density g/ml 20°C	0.7141	2	t _e	69.27	5	n'		°K
d ^t 25	0.7099	2	t _e (d, e)	69.20	5	o'		
d ⁴ 30	0.7057	4	ΔHv/T _e	19.03	5	Surface tension dynes/cm. 20°C		
a	0.7309	4	d 34 to	87.72	5	γ		20.70
b	-0.0383	4	e 140 °C	0.1370	5	30		19.73
Ref. Index n _D 20°C	1.4118	2	d' 20 to	85.79	5	40		18.80
25	1.4093	2	e' 34 °C	0.0805	5	Parachor [P] 20°C		
30	1.4068	4	d _c g/ml	0.223	5	30		
"C"	0.7676	4	v _c ml/g	4.48	5	40		
MR (Obs.)	39.08	2	t _c °C	294.	5	Sugd.		335.2
MR (Calc.)	38.677	5	P _c mm	17879.	5	Exp. L. l. %/wt. u.		
(n _D -d/2)	1.0548	2	PV/RT 25°C	1.0000	5	Dispersion		122.
Dielectric			30 mm	1.0000	5	Flash Point °C		
A 34 to	6.86904	4	BP	0.9495	5	Fire Point		
B 152 °C	1349.0	4	t _e	0.9389	5	M Spec. Ultra V.		
C	216.	4	t _c	0.254	5	X-Ray Dif.		
A* 34 to	1.30268	5	ΔHc kcal/m			Infrared		
B* 145 °C	1265.5	5	ΔHf			Solubility in +		
K			Δf			Acetone		
c			Viscosity centistokes			Carbon tet.		
t _k to °C			η °C			Benzene		
t _x			B ^v to °C			Ether		
A' 20 to	7.25696	5	A ^v °C			n-Heptane		
B' 34 °C	1550.1	5	(B ^v) to °C			Ethanol		
C'	234.	5	(A ^v) °C			Water		
A'* 20 to	1.65288	5	c _p liq. °K			Water in		
B'* 34 °C	1450.5	5	c _p vap. °K					
Ac 152 to	7.2798	5	c _v vap.					
Bc t _c °C	1668.	5						
Cc t _c °C	257.	5						
Cryos. A° const. B°								
t _e °C	135.22	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:								

NAME		2-Methyl-1-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_4\underset{\text{CH}_3}{\text{C}} = \text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C	-90.0	2	dt/dP °C/mm			f	to
F. P. 100%			25°C		0.8953	g	°K
B. P. °C			BP		0.0482	h	
760 mm	119.3	2	t _e		0.0373	f'	to
100	58.44	4	30 mm		0.6672	g'	°K
30	31.74	4	ΔHm cal/g			h'	
10	11.43	5	ΔHv cal/g			m	to
1	-22.45	5	25°C		82.81	n	°K
Pressure mm	21.24	5	30 mm		82.27	o	
t _e 25°C	1058.	5	BP		70.25	m'	to
Density g/ml 20°C	0.7205	2	t _e (d, e)		68.59	n'	°K
d ₄ 25	0.7164	2	ΔHv/T _e		19.00	o'	
d ₄ 30	0.7123	4	d 31 to		86.63	Surface tension dynes/cm. 20°C	
a	0.7369	4	e 135 °C		0.1373	30	21.45
b	-0.0381	4	d' 20 to		84.80	40	20.48
Ref. Index n _D 20°C	1.4123	2	e' 31 °C		0.0796	5	19.54
25	1.4098	2	d _c g/ml		0.226	Parachor [P] 20°C	
30	1.4073	4	v _c ml/g		4.43	30	
"C"	0.7617	4	t _c °C		291.	40	
MR (Obs.)	38.78	2	P _c mm		17989.	Sugd.	335.2
MR (Calc.) (n _D -d/2)	38.677	5	PV/RT			Exp. L. l. %/wt. u.	
Dielectric	1.0521	2	25°C		1.0000	Dispersion	
A 31 to	6,85239	4	30 mm		1.0000	Flash Point °C	
B 150 °C	1331.7	4	BP		0.9495	Fire Point	
C	216.	4	t _e		0.9391	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 31 to	1,28966	5	ΔHc kcal/m		0.254	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 135 °C	1249.0	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes η °C				
t _k to °C			B _v to °C				
t _x to °C			A _v to °C				
A' 20 to	7,24294	5	(B _v) to °C				
B' 31 °C	1532.2	5	(A _v) °C				
C'	234.	5	c _p liq. °K				
A'* 20 to	1,64083	5	c _p vap. °K				
B'* 31 °C	1433.1	5	c _v vap.				
Ac 150 to	7,2629	5					
Bc t _c °C	1649.	5					
Cc	257.	5					
Cryos. A° const. B°							
t _e °C	131.90	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:							

NAME		3-Methyl-1-heptene			STRUCTURAL FORMULA					
					CH ₃ (CH ₂) ₃ CH=CH ₂ CH ₃					
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208					
		Ref.			Ref.					
F.P. °C			dt/dP °C/mm			f to				
F.P. 100%			25°C	0.6480	5	g °K				
B.P. °C			BP	0.0476	4	h				
760 mm	111.	2	t _e	0.0375	5	f' to				
100	50.98	4	t _e (d, e)			g' °K				
30	24.69	4	ΔHm cal/g			h'				
10	4.82	5	ΔHv cal/g			m to				
1	-27.81	5	25°C	79.74	5	n °K				
Pressure mm 25°C	30.47	5	30 mm	79.78	5	o				
t _e	1035.	5	BP	68.20	5	m' to				
Density g/ml 20°C	0.711	2	t _e	66.70	5	n' °K				
d ₄ ^t 25	0.707	2	ΔHv/T _e	66.64	5	o'				
d ₄ ^t 30	0.703	4	d 20 to	83.09	5	Surface tension dynes/cm. 20°C				
a	0.727	4	e 130 °C	0.1342	5	30	20.34	5		
b	-0.038	4	d'			40	19.41	5		
Ref. Index n _D 20°C	1.406	2	e'				18.50	5		
25	1.404	2	d _c g/ml	0.220	5	Parachor [P]				
30	1.402	4	v _c ml/g	4.54	5	20°C				
"C"	0.7607	4	t _c °C	278.	5	30				
MR (Obs.)	38.8	2	P _c mm	17269.	5	40				
MR (Calc.) (nD-d/2)	38.677	5	PV/RT 25°C	1.0000	5	Sugd.	335.2	5		
	1.051	2	30 mm	1.0000	5	Exp. L. l. %/wt. u.				
Dielectric			BP	0.9500	5	Dispersion			117.	2
A 20 to	6.82779	4	t _e	0.9403	5	Flash Point °C				
B 140 °C	1298.6	4	t _c	0.256	5	Fire Point				
C	218.	4	ΔHc kcal/m			M Spec.				
A* 20 to	1.27254	5	ΔHf			Ultra V.				
B* 125 °C	1216.9	5	ΔFf			X-Ray Dif.				
K			Viscosity centistokes			Infrared				
c			η °C			Solubility in +				
t _k to			B ^v to			Acetone				
t _x °C			A ^v °C			Carbon tet.				
A' to			(B ^v) to			Benzene				
B' °C			(A ^v) °C			Ether				
C' °C			c _p liq. °K			n-Heptane				
A** to			c _p vap. °K			Ethanol				
B** °C			c _v vap.			Water				
Ac 140 to	7.2396	5				Water in				
Bc t _c °C	1610.	5								
Cc t _c °C	259.	5								
Cryos. A° const. B°										
t _e °C	122.59	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. 75

NAME		4-Methyl-1-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F. P. °C							
F. P. 100%							
B. P. °C							
760 mm	112.8	2		0.6943	5		
100	52.59	4		0.0478	4		
30	26.20	4		0.0374	5		
10	6.13	5		0.6593	5		
1	-27.34	5					
Pressure mm 25°C	28.23	5					
t_e	1041.	5					
Density g/ml 20°C	0.717	2					
d ₄ 25	0.713	2					
d ₄ 30	0.709	4					
a	0.7330	4					
b	-0.0379	4					
Ref. Index n _D 20°C	1.410	2					
25	1.408	2					
30	1.406	4					
"C"	0.7614	4					
MR (Obs.)	38.8	2					
MR (Calc.) (n _D -d/2)	38.677	5					
	1.052	2					
Dielectric							
A 20 to	6.88388	4					
B 143 °C	1309.3	4					
C	218.	4					
A* 20 to	1.28143	5					
B* 130 °C	1227.2	5					
K							
c							
t _k to							
t _x °C							
A' to							
B' °C							
C'							
A* to							
B* °C							
Ac 143 to	7.2514	5					
Bc t _c °C	1624.	5					
Cc °C	259.	5					
Cryos. A° const.							
B°							
t _e °C	124.61	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:							

NAME		5-Methyl-1-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_2)_2\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.7096	5	g	
B.P. °C			BP	0.0478	4	h	
760 mm	113.3	2	t_e	0.0374	5	f'	to °K
100	53.09	4	t_e (d, e)			g'	
30	26.70	4	ΔH_m cal/g			h'	
10	6.63	5	ΔH_v cal/g			m	to °K
1	-26.83	5	25°C	80.76	5	n	
Pressure mm 25°C	27.51	5	30 mm	80.53	5	o	
t_e	1042.0	5	BP	68.84	5		
Density g/ml 20°C	0.7164	2	t_e	67.29	5	m'	to °K
d_t 25	0.7122	2	$\Delta H_v/T_e$	67.24	5	n'	
d_4 30	0.7080	4	d 15 to °C	84.13	5	o'	
a	0.7332	4	e 135 °C	0.1350	5	Surface tension dynes/cm. 20°C	
b	-0.0383	4	d' to °C			30	21.03
Ref. Index n_D 20°C	1.4094	2	e' to °C			40	20.10
25	1.4069	2	d_c g/ml	0.222	5		19.19
30	1.4044	4	v_c ml/g	4.50	5	Parachor [P] 20°C	
"C"	0.7610	4	t_c °C	281.	5	30	
MR (Obs.)	38.76	2	P _c mm	17537.	5	40	
MR (Calc.) (nD-d/2)	38.677	5	PV/RT 25°C	1.0000	5	Sugd.	335.2
	1.0512	2	30 mm	1.0000	5	Exp. L.l.%/wt. u.	
Dielectric			BP	0.9500	5	Dispersion	
A 20 to	6.83861	4	t_e	0.9401	5	Flash Point °C	
B 143 °C	1309.1	4	t_c	0.256	5	Fire Point	
C	217.47	4	ΔH_c kcal/m			M Spec. Ultra V.	
A* 20 to	1.28101	5	ΔH_f			X-Ray Dif.	
B* 130 °C	1227.2	5	ΔF_f			Infrared	
K			Viscosity centistokes °C			Solubility in +	
c			η			Acetone	
t_k to °C						Carbon tet.	
t_x to °C						Benzene	
A' to °C						Ether	
B' to °C						n-Heptane	
C' to °C						Ethanol	
A* to °C						Water	
B* to °C						Water in	
Ac 143 to	7.2501	5	B ^v to °C				
Bc t_c °C	1622.	5	A ^v to °C				
Cc t_c °C	258.	5	(B ^v) to °C				
Cryos. A° const. B°			(A ^v) to °C				
t_e °C	125.16	5	c_p liq. °K				
$T_R = 0.75 T_c$			c_p vap. °K				
+ grams/100 grams solvent							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		6-Methyl-1-heptene				STRUCTURAL FORMULA		
						$\begin{array}{c} \text{CH}_3\text{CH}(\text{CH}_2)_3\text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208			
		Ref.			Ref.			
F. P. °C			dt/dP			f		to
F. P. 100%			°C/mm			g		°K
B. P. °C			25°C	0.7511	5	h		
760 mm	113.2	2	BP	0.0465	4	f'		to
100	54.34	4	t _e	0.0363	5	g'		°K
30	28.36	4	30 mm	0.6505	5	h'		
10	8.37	5	ΔHm cal/g			m		to
1	-24.8	5	ΔHv cal/g			n		°K
Pressure mm 25°C	25.25	5	25°C	83.00	5	o		
t _e	1041.	5	30 mm	82.53	5	m'		to
Density g/ml 20°C	0.7120	2	BP	70.73	5	n'		°K
d ₄ ²⁵	0.7079	2	t _e (d, e)	69.19	5	o'		
d ₄ ³⁰	0.7038	4	ΔHv/T _e	19.51	5	Surface tension dynes/cm. 20°C		
a	0.7284	4	d _e 20 to °C	86.48	5	γ	20.45	5
b	-0.0381	4	e _e 125 °C	0.1391	5		30	19.52
Ref. Index n _D 20°C	1.4070	2	d'				40	18.61
25	1.4045	2	e'			Parachor [P]		
30	1.4018	4	d _v g/ml	0.240	5		20°C	
"C"	0.7610	4	v _c ml/g	4.167	5		30	
MR (Obs.)	38.79	2	t _c °C	280.	5		40	
MR (Calc.)	38.677	5	P _c mm	18887.	5		Sugd.	335.2
(nD-d/2)	1.0510	2	PV/RT			Exp. L. l. %wt. u.		
Dielectric			25°C	1.0000	5	Dispersion		
A 20 to	6.94874	5	30 mm	1.0000	5	Flash Point °C		
B 142 °C	1345.2	5	BP	0.9500	5	Fire Point		
C	217.49	5	t _e	0.9404	5	M. Spec. Ultra V.		
A* 20 to	1.39165	5	t _c	0.256	5	X-Ray Dif.		
B* 135 °C	1263.4	5	ΔHc kcal/m			Infrared		
K			ΔHf			Solubility in +		
t _k to °C			ΔFf			Acetone		
t _x to °C			Viscosity centistokes			Carbon tet.		
A' 10 to	7.37919	5	η			Benzene		
B' 20 °C	1554.37	5				Ether		
C'	235.49	5	B _v to °C			n-Heptane		
A* 10 to	1.78823	5	A _v to °C			Ethanol		
B* 20 °C	1457.8	5	(B _v) to °C			Water		
Ac 142 to	7.3591	5	(A _v) °C			Water in		
Bc t _c °C	1656.	5	c _p liq. °K					
Cc	257.	5	c _p vap. °K					
Cryos. A° const. B°			c _v vap.					
t _e °C	124.7	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:								

NAME		2-Methyl-2-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\text{CH}=\underset{\text{CH}_3}{\text{C}}\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	1.0857	5	g	°K
B.P. °C			BP	0.0474	4	h	
760 mm	122.6	2	t_e	0.0363	5	f'	to
100	62.51	4	30 mm	0.6646	5	g'	°K
30	35.98	4	$\Delta\text{Hm cal/g}$			h'	
10	15.72	5	$\Delta\text{Hv cal/g}$			m	to
1	-18.21	5	25°C	85.82	5	n	°K
Pressure mm	16.90	5	30 mm	84.91	5	o	
t_e	1067.3	5	BP	72.71	5	m'	to
Density g/ml 20°C	0.7241	2	t_e	70.99	5	n'	°K
d_4^{25}	0.7200	2	t_e (d, e)	70.92	5	o'	
d_4^{30}	0.7159	4	$\Delta\text{Hv}/T_e$	19.50	5	Surface tension dynes/cm. 20°C	
a	0.7405	4	d 36 to	89.89	5	30	21.88
b	-0.0382	4	e 135	0.1408	5	40	20.90
Ref. Index n_D 20°C	1.4170	2	d' 20	87.89	5	40	19.95
25	1.4145	2	e' 36 °C	0.0829	5	Parachor [P] 20°C	
30	1.4120	4	d g/ml	0.242	5	30	
"C"	0.7661	4	v_c ml/g	4.125	5	40	
MR (Obs.)	38.97	2	t_c °C	296.	5	Sugd.	335.2
MR (Calc.)	38.677	5	P_c mm	1955.	5	Exp. L.l. %/wt. u.	
($n_D-d/2$)	1.0550	2	PV/RT 25°C	1.0000	5	Dispersion 124.	
Dielectric			30 mm	1.0000	5	Flash Point °C	
A 36 to	6.95927	5	BP	0.9495	5	Fire Point	
B 154 °C	1379.8	5	t_e	0.9391	5	M Spec. Ultra V.	
C	215.7	5	t_c	0.255	5	X-Ray Dif. Infrared	
A* 36 to	1.39313	5	$\Delta\text{Hc kcal/m}$			Solubility in +	
B* 145 °C	1296.4	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t_x to			η °C			Ether	
t_x °C			B^v to			n-Heptane	
A' 20 to	7.35134	5	A^v °C			Ethanol	
B' 36 °C	1584.2	5	(B ^v) to			Water	
C' 36 °C	233.7	5	(A ^v) °C			Water in	
A'* 20 to	1.74623	5	c_p liq. °K				
B'* 36 °C	1484.4	5	c_p vap. °K				
Ac 154 to	7.3692	5	c_v vap.				
Bc t_c °C	1699.	5					
Cc t_c °C	256.	5					
Cryos. A° const. B°							
t_e °C	135.29	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:							

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NAME		3-Methyl-cis-2-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\underset{\text{CH}_3}{\text{C}} = \text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	1.0610	g	°K	
B. P. °C			BP	0.0473	h		
760 mm	122.	2	t_e	0.0363	f'	to	
100	62.5	4	30 mm	0.6637	g'	°K	
30	35.50	4			h'		
10	15.27	5					
1	-18.61	5					
Pressure mm 25°C	17.33	5					
t_e	1066.	5					
Density g/ml 20°C	0.729	2					
d_4^{25}	0.725	2					
d_4^{30}	0.721	4					
a	0.745	4					
b	-0.038	4					
Ref. Index $n_D^{20°C}$	1.419	2					
25	1.417	2					
30	1.414	4					
"C"	0.7643	4					
MR (Obs.)	38.9	2					
MR (Calc.) (nD-d/2)	38.677	5					
	1.055	2					
Dielectric							
A 35 to	6.95905	5					
B 154 °C	1377.7	5					
C	215.82	5					
A* 35 to	1.39354	5					
B* 145 °C	1294.5	5					
K							
t_k							
t_x							
A' 25 to	7.35168	5					
B' 35 °C	1582.1	5					
C'	233.82	5					
A* 25 to	1.74680	5					
B* 35 °C	1482.4	5					
Ac 154 to	7.3693	5					
Bc t_c °C	1698.	5					
Cc	256.	5					
Cryos. A° const. B°							
t_e °C	134.61	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:							

NAME		3-Methyl-trans-2-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\underset{\text{CH}_3}{\text{C}} = \text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	1.0610	5	g	°K
B.P. °C			BP	0.0473	4	h	
760 mm	122.	2	t_e	0.0363	5	f'	to
100	62.5	4	30 mm	0.6637	5	g'	°K
30	35.50	4				h'	
10	15.27	5					
1	-18.61	5					
Pressure mm 25°C	17.33	5	$\Delta\text{Hm cal/g}$			m	to
t_e	1066.	5	25°C	85.63	5	n	°K
Density g/ml 20°C	0.729	2	30 mm	84.76	5	o	
25	0.725	2	BP	72.59	5		
d_4^{25}	0.721	4	t_e	70.89	5	m'	to
			t_e (d, e)	70.82	5	n'	°K
			$\Delta\text{Hv}/T_e$	19.50	5	o'	
a	0.745	4	d 35 to	89.76	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 135 °C	0.1407	5	30	22.48
Ref. Index n_D 20°C	1.419	2	d' 25 to	87.69	5	40	21.50
25	1.417	2	e' 35 °C	0.0826	5		20.55
30	1.414	4	d	g/ml	0.246	5	Parachor [P]
"C"	0.7643	4	v	ml/g	4.072	5	20°C
MR (Obs.)	38.9	2	t	°C	296.	5	30
MR (Calc.)	38.677	5	P	mm	19812.	5	40
(nD-d/2)	1.055	2	PV/RT				Sugd.
			25°C	1.0000	5	335.2	5
			30 mm	1.0000	5	Exp. L.l. %/wt. u.	
			BP	0.9495	5	Dispersion	124.
			t_e	0.9391	5	Flash Point °C	
			t_c	0.255	5	Fire Point	
			$\Delta\text{Hc kcal/m}$			M Spec.	
			ΔHf			Ultra V.	
			ΔFf			X-Ray Dif.	
			Viscosity centistokes			Infrared	
			η °C			Solubility in +	
A' 25 to	7.35168	5	B ^v to			Acetone	
B' 35 °C	1582.1	5	A ^v °C			Carbon tet.	
C' 233.82		5	(B ^v) to			Benzene	
A [*] 25 to	1.74680	5	(A ^v) °C			Ether	
B [*] 35 °C	1482.4	5	c_p liq. °K			n-Heptane	
Ac 154 to	7.3693	5	c_p vap. °K			Ethanol	
Bc t_c °C	1698.	5	c_v vap.			Water	
Cc 256.		5				Water in	
Cryos. A° const. B°							
t_e °C	134.61	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:							

NAME		4-Methyl-cis-2-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{CH}_3}{\text{CH}}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.	Ref.	
F. P. °C			dt/dP		f	to	
F. P. 100%			°C/mm		g	to	
B. P. °C			25°C	0.7791	5		
760 mm	114.	2	BP	0.0465	4		
100	55.05	4	t_e	0.0363	5	f'	to
30	29.03	4	30 mm	0.6516	5	g'	to
10	9.17	5				h'	
1	-24.09	5	$\Delta\text{Hm cal/g}$				
Pressure mm 25°C	24.33	5	$\Delta\text{Hv cal/g}$		m	to	
t_e	1043.	5	25°C	83.06	5	n	to
Density g/ml 20°C	0.716	2	30 mm	82.76	5	o	
d_4^{25}	0.712	2	BP	70.93	5		
d_4^{30}	0.708	4	t_e (d, e)	69.37	5	m'	to
			t_e	69.32	5	n'	to
			$\Delta\text{Hv}/T_e$	19.52	5	o'	
a	0.732	4	d 29 to	86.80	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 126 °C	0.1392	5	γ	20.92
Ref. Index			d' 15 to	84.95	5	30	19.99
$n_D^{20^\circ\text{C}}$	1.410	2	e' 29 °C	0.0754	5	40	19.08
25	1.408	2				Parachor [P]	
30	1.405	4	d_c g/ml	0.242	5	20°C	
"C"	0.7624	4	v_c ml/g	4.126	5	30	
MR (Obs.)	38.9	2	t_c °C	282.	5	40	
MR (Calc.)	38.677	5	P_c mm	19144.	5	Sugd.	335.2
(nD-d/2)	1.052	2				Exp. L. l. %wt. u.	
Dielectric			PV/RT			Dispersion	119.
A 29 to	6.95106	5	25°C	1.0000	5	Flash Point °C	
B 144 °C	1348.6	5	30 mm	1.0000	5	Fire Point	
C	217.34	5	BP	0.9500	5	M. Spec. Ultra V.	
A* 29 to	1.39312	5	t_e	0.9403	5	X-Ray Dif.	
B* 136 °C	1266.7	5	t_c	0.256	5	Infrared	
K			$\Delta\text{Hc kcal/m}$			Solubility in +	
c			ΔHf			Acetone	
t_k to °C			ΔFf			Carbon tet.	
t_x to °C			Viscosity centistokes			Benzene	
A' 15 to	7.35098	5	η			Ether	
B' 29 °C	1552.9	5				n-Heptane	
C'	235.34	5	B_v to °C			Ethanol	
A* 15 to	1.74916	5	A_v to °C			Water	
B* 29 °C	1453.3	5	(B'v) to °C			Water in	
Ac 144 to	7.3615	5	(A'v) °C				
Bc t_c °C	1661.	5	c_p liq. °K				
Cc	257.	5	c_v vap. °K				
Cryos. A° const. B°			c_v vap.				
t_e °C	125.59	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:							

NAME		4-Methyl-trans-2-heptene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂ CH CH=CHCH ₃ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.7791	5	g	°K
B.P. °C			BP	0.0465	4	h	
760 mm	114.	2	t _e	0.0363	5	f'	to
100	55.05	4	30 mm	0.6516	5	g'	°K
30	29.03	4	ΔHm cal/g			h'	
10	9.17	5	ΔHv cal/g			m	to
1	-24.09	5	25°C	83.06	5	n	°K
Pressure mm 25°C	24.33	5	30 mm	82.76	5	o	
t _e	1043.	5	BP	70.93	5	m'	to
Density g/ml 20°C			t _e	69.37	5	n'	°K
d _t 25	0.716	2	t _e (d, e)	69.32	5	o'	
d ₄ 30	0.712	2	ΔHv/T _e	19.52	5	Surface tension dynes/cm. 20°C	
	0.708	4	d 29 to	86.80	5	γ	20.92
a	0.732	4	e 126 °C	0.1392	5		30 19.99
b	-0.038	4	d' 15 to	84.95	5		40 19.08
			e' 29 °C	0.0754	5	Parachor [P]	
Ref. Index n _D 20°C			d _c g/ml	0.242	5	20°C	
25	1.410	2	v _c ml/g	4.126	5	30	
30	1.405	4	t _c °C	282.	5	40	
"C"	0.7624	4	P _c mm	19144.	5	30	
MR (Obs.)	38.9	2	PV/RT			Sugd.	335.2
MR (Calc.)	38.677	5	25°C	1.0000	5	Exp. L. l. %/wt. u.	
(nD-d/2)	1.052	2	30 mm	1.0000	5	Dispersion	121.
Dielectric			BP	0.9500	5	Flash Point °C	
A 29 to	6.95106	5	t _e	0.9403	5	Fire Point	
B 144 °C	1348.6	5	t _c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
C	217.34	5	ΔHc kcal/m			Solubility in +	
A* 29 to	1.39312	5	ΔHf			Acetone	
B* 136 °C	1266.7	5	ΔFf			Carbon tet.	
K			Viscosity centistokes			Benzene	
t _k to			η °C			Ether	
t _x °C			B ^v to			n-Heptane	
A' 15 to	7.35098	5	A ^v °C			Ethanol	
B' 29 °C	1552.9	5	(B ^v) to			Water	
C'	235.34	5	(A ^v) °C			Water in	
A** 15 to	1.74916	5	c _p liq. °K				
B** 29 °C	1453.3	5	c _p vap. °K				
Ac 144 to	7.3615	5	c _v vap.				
Bc t _c °C	1661.	5					
Cc t _c °C	257.	5					
Cryos. A° const. B°							
t _e °C	125.59	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:							

NAME		5-Methyl-cis-2-heptene			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{CH}=\text{CHCH}_3$			
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	0.9078	5	g	°K	
B. P. °C			BP	0.0469	4	h		
760 mm	118.	2	t_e	0.0363	5	f'	to	
100	58.51	4	30 mm	0.6577	5	g'	°K	
30	32.24	4				h'		
10	12.19	5				m	to	
1	-21.38	5				n	°K	
						o		
Pressure mm 25°C	20.57	5				m'	to	
t_e	1055.	5				n'	°K	
Density g/ml 20°C	0.723	2				o'		
d_t	0.719	2						
d_4	0.715	4						
a	0.739	4						
b	-0.038	4						
Ref. Index n_D 20°C	1.414	2						
25	1.412	2						
30	1.409	4						
"C"	0.7620	4						
MR (Obs.)	38.8	2						
MR (Calc.)	38.677	5						
(nD-d/2)	1.053	2						
Dielectric								
A 32 to	6.95360	5						
B 149 °C	1362.7	5						
C	216.58	5						
A* 32 to	1.39140	5						
B* 135 °C	1280.0	5						
K								
t_k to								
t_x °C								
A' 20 to	7.34977	5						
B' 32 °C	1567.0	5						
C'	234.58	5						
A* 20 to	1.74643	5						
B* 32 °C	1467.3	5						
Ac 149 to	7.3640	5						
Bc t_c °C	1679.	5						
Cc	257.	5						
Cryos. A° const. B°								
t_e °C	130.12	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:								

NAME		5-Methyl-trans-2-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.9078	5	g	°K
B. P. °C			BP	0.0469	4	h	
760 mm	118.	2	t_e	0.0363	5	f'	to
100	58.51	4	30 mm	0.6577	5	g'	°K
30	32.24	4	ΔH_m cal/g			h'	
10	12.19	5	ΔH_v cal/g			m	to
1	-21.38	5	25°C	84.31	5	n	°K
Pressure mm 25°C	20.57	5	30 mm	83.73	5	o	
t_e	1055.	5	BP	71.76	5		
Density g/ml 20°C	0.723	2	t_e	70.12	5	m'	to
d_t 25	0.719	2	t_e (d, e)	70.06	5	n'	°K
d_4 30	0.715	4	$\Delta H_v/T_e$	19.51	5	o'	
a	0.739	4	d 32 to	88.24	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 130 °C	0.1397	5	30	21.75
Ref. Index n_D 20°C	1.414	2	d' 20 to	86.30	5	40	20.79
25	1.412	2	e' 32 °C	0.0797	5		19.86
30	1.409	4	d_c g/ml	0.244	5	Parachor [P] 20°C	
"C"	0.7620	4	v_c ml/g	4.106	5	30	
MR (Obs.)	38.8	2	t_c °C	289.	5	40	
MR (Calc.)	38.677	5	P mm	19479.	5	Sugd.	335.2
(nD-d/2)	1.053	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	
A 32 to	6.95360	5	BP	0.9500	5	121.	2
B 149 °C	1362.7	5	t_e	0.9400	5	Flash Point °C	
C	216.58	5	t_c	0.256	5	Fire Point	
A* 32 to	1.39140	5	ΔH_c kcal/m			M Spec. Ultra V.	
B* 135 °C	1280.0	5	ΔH_f			X-Ray Dif.	
K			ΔF_f			Infrared	
c			Viscosity centistokes			Solubility in +	
t_k to			η °C			Acetone	
t_x °C						Carbon tet.	
A' 20 to	7.34977	5	B ^v to			Benzene	
B' 32 °C	1567.0	5	A ^v °C			Ether	
C' 234.58	234.58	5	(B ^v) to			n-Heptane	
A* 20 to	1.74643	5	(A ^v) °C			Ethanol	
B* 32 °C	1467.3	5	c_p liq. °K			Water	
Ac 149 to	7.3640	5	c_p vap. °K			Water in	
Bc t_c °C	1679.	5					
Gc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	130.12	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:							

NAME		6-Methyl-cis-2-heptene			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CH}(\text{CH}_3)_2\text{CH}=\text{CHCH}_3$			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208			
F.P. °C		Ref.			Ref.			
F.P. 100%								
B.P. °C					dt/dP °C/mm			
760 mm	117.	2		0.8733	5	f	to	
100	57.63	4		0.0468	4	g	°K	
30	31.43	4		0.0363	5	h		
10	11.43	5		0.6563	5	f'	to	
1	-22.07	5				g'	°K	
Pressure mm 25°C					ΔHm cal/g			
t_e	21.47	5		83.98	5	m	to	
	1052.	5		83.48	5	n	°K	
Density g/ml 20°C					BP			
d ₄ 25	0.718	2		71.53	5	o		
d ₄ 30	0.714	2		69.92	5	m'	to	
	0.710	4		69.86	5	n'	°K	
				19.51	5	o'		
a	0.734	4		d	31 to	Surface tension dynes/cm. 20°C		
b	-0.038	4		e	129 °C	γ	21.15	
Ref. Index					d'	20 to	30	20.22
n_D 20°C	1.412	2		e'	31 °C		40	19.31
25	1.410	2		d _c g/ml		Parachor [P]		
30	1.407	4		v _c ml/g	0.242	20°C		
"C"					t _c °C	4.138	30	
MR (Obs.)	38.9	2		P _c mm	287.	40		
MR (Calc.)	38.677	5			19262.	Sugd.	335.2	
(n _D -d/2)	1.053	2		PV/RT		Exp. L. l. %/wt.		
Dielectric					25°C	1.0000	u.	
A 31 to	6.95222	5		30 mm	1.0000	Dispersion	119.	
B 147 °C	1358.9	5		BP	0.9500	Flash Point °C		
C	216.77	5		t _e	0.9401	Fire Point		
A*	31 to	5		t _c	0.256	M. Spec. Ultra V. X-Ray Dif. Infrared		
B*	139 °C	5		ΔHc kcal/m		Solubility in ⁺		
K	1276.4	5		ΔHf		Acetone		
c				ΔFf		Carbon tet.		
t _k to				Viscosity centistokes		Benzene		
t _x °C				η °C		Ether		
A' 20 to	7.34929	5		B ^v to		n-Heptane		
B' 31 °C	1563.2	5		A ^v °C		Ethanol		
C'	234.77	5		(B ^v) to		Water		
A'*	20 to	5		(A ^v) °C		Water in		
B'*	31 °C	5		c _p liq. °K				
Ac 147 to	7.3625	5		c _p vap. °K				
Bc t _c °C	1674.	5		c _v vap.				
Cc	257.	5						
Cryos. A° const. B°								
t _e °C	128.99	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:								

No. 86

NAME		6-Methyl-trans-2-heptene			STRUCTURAL FORMULA		
					CH ₃ CH(CH ₂) ₂ CH=CHCH ₃ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
F. P. °C				dt/dP °C/mm		f	to
F. P. 100%				25°C	0.8733	g	°K
B. P. °C				BP	0.0468	h	
760 mm	117.	2		t _e	0.0363	f'	to
100	57.63	4		30 mm	0.6563	g'	°K
30	31.43	4				h'	
10	11.43	5		ΔHm cal/g		m	to
1	-22.07	5		25°C	83.98	n	°K
Pressure mm 25°C	21.47	5		30 mm	83.48	o	
t _e	1052.	5		BP	71.53		
Density g/ml 20°C	0.718	2		t _e	69.92	m'	to
d ₄ ²⁵	0.714	2		t _e (d, e)	69.86	n'	°K
d ₄ ³⁰	0.710	4		ΔHv/T _e	19.51	o'	
a	0.734	4		d 31 to	87.86	Surface tension dynes/cm. 20°C	
b	-0.038	4		e 129 °C	0.1396	30	21.15
Ref. Index n _D 20°C	1.412	2		d' 20 to	85.95	40	20.22
25	1.410	2		e' 31 °C	0.0788		19.31
30	1.407	4		d c g/ml	0.242	Parachor [P] 20°C	
"C"	0.7638	4		v c ml/g	4.138	30	
MR (Obs.)	38.9	2		t _c °C	287.	40	
MR (Calc.)	38.677	5		P c mm	19262.	Sugd.	335.2
(nD-d/2)	1.053	2		PV/RT 25°C	1.0000	Exp. L.l. %/wt. u.	
Dielectric				30 mm	1.0000	Dispersion	
A 31 to	6.95222	5		BP	0.9500	121.	
B 147 °C	1358.9	5		t _e	0.9401	Flash Point °C	
C	216.77	5		t _c	0.256	Fire Point	
A* 31 to	1.39108	5		ΔHc kcal/m		M Spec. Ultra V.	
B* 139 °C	1276.4	5		ΔHf		X-Ray Dif.	
K				ΔFf		Infrared	
c				Viscosity centistokes		Solubility in +	
t _x to				η °C		Acetone	
t _x °C						Carbon tet.	
A' 20 to	7.34929	5		B ^v to		Benzene	
B' 31 °C	1563.2	5		A ^v °C		Ether	
C'	234.77	5		(B ^v) to		n-Heptane	
A'* 20 to	1.74633	5		(A ^v) °C		Ethanol	
B'* 31 °C	1463.5	5		c _p liq. °K		Water	
Ac 147 to	7.3625	5		c _p vap. °K		Water in	
Bc t _c °C	1674.	5		c _v vap.			
Cc t _c °C	257.	5					
Cryos. A° const. B°							
t _e °C	128.99	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:							

NAME		2-Methyl-cis-3-heptene				STRUCTURAL FORMULA						
						$\text{CH}_3(\text{CH}_2)_2\text{CH}=\text{CHCH}(\text{CH}_3)\text{CH}_3$						
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}		Molecular Weight	112.208						
F.P. °C			Ref.									
F.P. 100%												
B.P. °C												
760 mm	112.		2		dt/dP °C/mm				f		to	
100	53.31		4		25°C	0.7214	5		g		°K	
30	27.41		4		BP	0.0463	4		h			
10	7.64		5		t _e	0.0363	5		f'		to	
1	-25.47		5		30 mm	0.6486	5		g'		°K	
					ΔHm cal/g				h'			
Pressure mm 25°C	26.48		5		ΔHv cal/g				m		to	
t _e	1038.		5		25°C	82.42	5		n		°K	
Density g/ml 20°C	0.706		2		30 mm	82.25	5		o			
25	0.702		2		BP	70.49	5		m'		to	
d ₄ 30	0.698		4		t _e	68.97	5		n'		°K	
					t _e (d, e)	68.91	5		o'			
					ΔHv/T _e	19.52	5					
a	0.722		4		d	27	5		Surface tension dynes/cm. 20°C			
b	-0.038		4		e	123	5		y	30	19.77	5
Ref. Index					d'	15	5			40	18.88	5
n _D 20°C	1.407		2		e'	27	5				18.01	5
25	1.405		2		d _c g/ml	0.239	5		Parachor [P]			
30	1.402		4		v _c ml/g	4.190	5		20°C			
"C"	0.7679		4		t _c °C	278.	5		30			
MR (Obs.)	39.1		2		P _c mm	18716.	5		40			
MR (Calc.)	38.677		5		PV/RT				Sugd. 335.2			
(n _D -d/2)	1.054		2		25°C	1.0000	5		Exp. L. l. %/wt. u.			
Dielectric					30 mm	1.0000	5		Dispersion			
A 27 to	6.94826		5		BP	0.9500	5		119.			
B 140 °C	1341.1		5		t _e	0.9405	5		Flash Point °C			
C	217.72		5		t _c	0.256	5		Fire Point			
A* 27 to	1.39246		5		ΔHc kcal/m				M. Spec. Ultra V.			
B* 130 °C	1259.5		5		ΔHf				X-Ray Dif. Infrared			
K					ΔFf				Solubility in +			
c					Viscosity centistokes				Acetone			
t _k to					η °C				Carbon tet.			
t _x °C									Benzene			
A' 15 to	7.35001		5		B ^v to				Ether			
B' 27 °C	1545.3		5		A ^v °C				n-Heptane			
C'	235.72		5		(B ^v) to				Ethanol			
A ^{1*} 15 to	1.74894		5		(A ^v) °C				Water			
B ^{1*} 27 °C	1445.8		5		c _p liq. °K				Water in			
A _c 140 to	7.3585		5		c _p vap. °K							
B _c t _c °C	1651.		5		c _v vap.							
C _c t _c °C	257.		5									
Cryos. A ² consts. B ²												
t _e °C	123.34		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:												

NAME		2-Methyl-trans-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{CH}=\underset{\text{CH}_3}{\text{CH}}\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.7214	5	g	°K
B. P. °C			BP	0.0463	4	h	
760 mm	112.	2	t_e	0.0363	5	f'	to
100	53.31	4	t_e (d, e)	0.6486	5	g'	°K
30	27.41	4	ΔH_m cal/g			h'	
10	7.64	5	25°C	82.42	5	m	to
1	-25.47	5	30 mm	82.25	5	n	°K
Pressure mm 25°C	26.48	5	BP	70.49	5	o	
t_e	1038.	5	t_e	68.97	5	m'	to
Density g/ml 20°C	0.706	2	t_e (d, e)	68.91	5	n'	°K
d^t 25	0.702	2	$\Delta H_v/T_e$	19.52	5	o'	
d^t 30	0.698	4	d 27 to	86.05	5	Surface tension dynes/cm. 20°C	
a	0.722	4	e 123 °C	0.1390	5	30	19.77
b	-0.038	4	d' 15 to	84.19	5	40	18.88
Ref. Index n_D 20°C	1.407	2	e' 27 °C	0.0708	5	40	18.01
25	1.405	2	d c g/ml	0.239	5	Parachor [P] 20°C	
30	1.402	4	v c ml/g	4.190	5	30	
"C"	0.7679	4	t_c °C	278.	5	40	
MR (Obs.)	39.1	2	P c mm	18716.	5	Sugd.	335.2
MR (Calc.)	38.677	5	PV/RT 25°C	1.0000	5	Exp. L.l. %/wt. u.	
(nD-d/2)	1.054	2	30 mm	1.0000	5	Dispersion	121.
Dielectric			BP	0.9500	5	Flash Point °C	
A 27 to	6.94826	5	t_e	0.9405	5	Fire Point	
B 140 °C	1341.1	5	t_c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
C	217.72	5	ΔH_c kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 27 to	1.39246	5	ΔH_f				
B* 130 °C	1259.5	5	ΔF_f				
K			Viscosity centistokes °C				
t_k to °C							
t_x to °C							
A' 15 to	7.35001	5	B v to °C				
B' 27 °C	1545.3	5	A v to °C				
C'	235.72	5	(B v) to °C				
A* 15 to	1.74894	5	(A v) to °C				
B* 27 °C	1445.8	5	c_p liq. °K				
Ac 140 to	7.3585	5	c_p vap. °K				
Bc t_c °C	1651.	5	c_v vap.				
Cc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	123.34	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. 89

NAME		3-Methyl-cis-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{CH}=\underset{\text{CH}_3}{\text{C}}\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C							
F.P. 100%							
B.P. °C							
760 mm	121.	2		1.0203	5	f	to
100	61.12	4		0.0472	4	g	°K
30	34.68	4		0.0363	5	h	
10	14.50	5		0.6622	5	f'	to
1	-19.31	5				g'	°K
						h'	
Pressure mm	18.09	5		85.30	5	m	to
25°C	1062.7	5		84.51	5	n	°K
t _e				72.37	5	o	
Density g/ml	0.728	2		70.69	5	m'	to
25°C	0.724	2		70.62	5	n'	°K
t	0.720	4		19.50	5	o'	
d ₄							
a	0.744	4		89.38	5	Surface tension dynes/cm. 20°C	
b	-0.038	4		0.1405	5	30	22.36
				87.35	5	40	21.38
Ref. Index n _D	1.418	2		0.0819	5		20.44
25	1.416	2				Parachor [P] 20°C	
30	1.413	4				30	
"C"	0.7637	4				40	
MR (Obs.)	38.9	2				Sugd.	335.2
MR (Calc.)	38.677	5					
(n _D -d/2)	1.054	2				Exp. L.l.%wt. u.	
Dielectric						Dispersion 124.	
A 35 to	6.95770	5				Flash Point °C	
B 153 °C	1374.0	5				Fire Point	
C	216.	5				M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 35 to	1.39323	5				Solubility in +	
B* 143 °C	1290.9	5				Acetone	
K						Carbon tet.	
c						Benzene	
t _k to						Ether	
t _x °C						n-Heptane	
A' 25 to	7.35121	5				Ethanol	
B' 35 °C	1578.3	5				Water	
C'	234.	5				Water in	
A* 25 to	1.74671	5					
B* 35 °C	1478.6	5					
Ac 153 to	7.3680	5					
Bc t _c °C	1693.	5					
Cc	257.	5					
Cryos. A° const.							
B°							
t _e °C	133.48	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:							

NAME		3-Methyl-trans-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{CH}=\underset{\text{CH}_3}{\text{C}}\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C		Ref.		dt/dP °C/mm		Ref.	
F.P. 100%				25°C	1.0203	5	f to
B.P. °C				BP	0.0472	4	g °K
760 mm	121.	2		t _e	0.0363	5	h
100	61.12	4		30 mm	0.6622	5	f' to
30	34.68	4		ΔHm cal/g			g' °K
10	14.50	5					h'
1	-19.31	5		ΔHv cal/g			m to
Pressure mm 25°C	18.09	5		25°C	85.30	5	n °K
t _e	1062.7	5		30 mm	84.51	5	o
Density g/ml 20°C	0.728	2		BP	72.37	5	m' to
d ₄ ^t 25	0.724	2		t _e	70.69	5	n' °K
d ₄ ^t 30	0.720	4		t _e (d, e)	70.62	5	o'
a	0.744	4		ΔHv/T _e	19.50	5	
b	-0.038	4		d 35 to	89.38	5	Surface tension dynes/cm. 20°C
Ref. Index n _D 25	1.418	2		e 133 °C	0.1405	5	30
30	1.416	2		d' 25 to	87.35	5	40
"C"	0.7637	4		e' 35 °C	0.0819	5	22.36
MR (Obs.)	38.9	2		d _c g/ml	0.246	5	21.38
MR (Calc.) (nD-d/2)	38.677	5		v _c ml/g	4.071	5	20.44
Dielectric	1.054	2		t _c °C	294.	5	Parachor [P] 20°C
A 35 to	6.95770	5		P _c mm	19746.	5	30
B 153 °C	1374.0	5		PV/RT 25°C	1.0000	5	40
C	216.	5		30 mm	1.0000	5	Sugd.
A* 35 to	1.39323	5		BP	0.9495	5	335.2
B* 143 °C	1290.9	5		t _e	0.9392	5	Exp. L.l.%/wt. u.
K				t _c	0.255	5	Dispersion
c to				ΔHc kcal/m			124.
t _k °C				ΔHf			Flash Point °C
t _x °C				ΔFf			Fire Point
A' 25 to	7.35121	5		Viscosity centistokes η °C			M Spec. Ultra V. X-Ray Dif. Infrared
B' 35 °C	1578.3	5					Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
C' 234.		5		B ^v to °C			
A'* 25 to	1.74671	5		A ^v °C			
B'* 35 °C	1478.6	5		(B ^v) to °C			
Ac 153 to	7.3680	5		(A ^v) °C			
Bc t _c °C	1693.	5		c _p liq. °K			
Cc t _c °C	257.	5		c _p vap. °K			
Cryos. A° const. B°				c _v vap.			
t _e °C	133.48	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:							

NAME		4-Methyl-cis-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{CH}_3}{\text{C}} = \text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	1.0610	5	g	°K
B.P. °C			BP	0.0473	4	h	
760 mm	122.	2	t_e	0.0363	5	f'	to
100	62.00	4	t_e 30 mm	0.6637	5	g'	°K
30	35.50	4	ΔHm cal/g			h'	
10	15.27	5	ΔHv cal/g			m	to
1	-18.61	5	25°C	85.63	5	n	°K
Pressure mm 25°C	17.33	5	30 mm	84.76	5	o	
t_e	1066.	5	BP	72.59	5	m'	to
Density g/ml 20°C	0.725	2	t_e	70.88	5	n'	°K
d ⁴ 25	0.721	2	t_e (d, e)	70.82	5	o'	
d ⁴ 30	0.717	4	$\Delta\text{Hv}/T_e$	19.50	5	Surface tension dynes/cm. 20°C	
a	0.741	4	d 36 to	89.76	5	γ	21.99
b	-0.038	4	e 135 °C	0.1407	5		5
Ref. Index			d' 25 to	87.69	5		21.03
n_D 20°C	1.417	2	e' 36 °C	0.0826	5		5
25	1.415	2	d _c g/ml	0.244	5	Parachor [P]	
30	1.412	4	v _c ml/g	4.096	5		20°C
"C"	0.7651	4	t _c °C	295.	5		30
MR (Obs.)	38.9	2	P _c mm	19660.	5		40
MR (Calc.)	38.677	5	PV/RT				Sugd. 335.2
(nD-d/2)	1.055	2	25°C	1.0000	5	Exp. L.l.%/wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	124.
A 36 to	6.95905	5	BP	0.9495	5	Flash Point °C	
B 153 °C	1377.7	5	t_e	0.9391	5	Fire Point	
C	215.82	5	t _c	0.255	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 36 to	1.39354	5	ΔHc kcal/m			Solubility in +	
B* 145 °C	1294.5	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to °C			η °C			Ether	
t _x to °C						n-Heptane	
A' 25 to	7.35168	5	B ^v to °C			Ethanol	
B' 36 °C	1582.1	5	A ^v to °C			Water	
C'	233.82	5	(B ^v) to °C			Water in	
A* 25 to	1.74680	5	(A ^v) °C				
B* 36 °C	1482.4	5	c _p liq. °K				
Ac 153 to	7.3692	5	c _p vap. °K				
Bc t _c °C	1697.	5	c _v vap.				
Cc t _c °C	256.	5					
Cryos. A° const. B°							
t _e °C	134.61	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:							

NAME		4-Methyl-trans-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\underset{\text{CH}_3}{\text{C}} = \text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.	Ref.	
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	1.0610	5	g	
B.P. °C			BP	0.0473	4	h	
760 mm	122.	2	t _e	0.0363	5	f'	to °K
100	62.00	4	t _e (d, e)			g'	
30	35.50	4	ΔHm cal/g			h'	
10	15.27	5	ΔHv cal/g			m	to °K
1	-18.61	5	25°C	85.63	5	n	
Pressure mm 25°C	17.33	5	30 mm	84.76	5	o	
t _e	1066.	5	BP	72.59	5		
Density g/ml 20°C	0.725	2	t _e	70.88	5	m'	to °K
d ^t 25	0.721	2	t _e (d, e)	70.82	5	n'	
d ₄ 30	0.717	4	ΔHv/T _e	19.50	5	o'	
a	0.741	4	d 36 to	89.76	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 135 °C	0.1407	5	γ	21.99
Ref. Index n _D 20°C	1.417	2	d' 25 to	87.69	5	30	21.03
25	1.415	2	e' 36 °C	0.0826	5	40	20.09
30	1.412	4	d _c g/ml	0.244	5	Parachor [P]	
"C"	0.7651	4	v _c ml/g	4.096	5	20°C	
MR (Obs.)	38.9	2	t _c °C	295.	5	30	
MR (Calc.) (nD-d/2)	38.677	5	P _c mm	19660.	5	40	
	1.055	2	PV/RT 25°C	1.0000	5	Sugd.	335.2
Dielectric			30 mm	1.0000	5	Exp. L. l. %/wt. u.	
A 36 to	6.95905	5	BP	0.9495	5	Dispersion	124.
B 153 °C	1377.7	5	t _e	0.9391	5	Flash Point °C	
C	215.82	5	t _c	0.255	5	Fire Point	
A* 36 to	1.39354	5	ΔHc kcal/m			M Spec. Ultra V. X-Ray Dif. Infrared	
B* 145 °C	1294.5	5	ΔHf			Solubility in +	
K			ΔFf			Acetone	
c			Viscosity centistokes °C			Carbon tet.	
t _k to			η			Benzene	
t _x °C						Ether	
A' 25 to	7.35168	5	B ^v to			n-Heptane	
B' 36 °C	1582.1	5	A ^v °C			Ethanol	
C'	233.82	5	(B ^v) to			Water	
A!* 25 to	1.74680	5	(A ^v) °C			Water in	
B!* 36 °C	1482.4	5	c _p liq. °K				
Ac 153 to	7.3692	5	c _p vap. °K				
Bc t _c °C	1697.	5					
Cc t _c °C	256.	5					
Cryos. A° const. B°							
t _e °C	134.61	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:							

NAME		5-Methyl-cis-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}=\text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.					Ref.
F. P. °C			dt/dP		f	to	
F. P. 100%			°C/mm		g	°K	
B. P. °C			25°C	0.7214	5		
760 mm	112.	2	BP	0.0463	4		
100	53.31	4	t_e	0.0363	5	f'	to
30	27.41	4	30 mm	0.6486	5	g'	°K
10	7.64	5	ΔH_m cal/g			h'	
1	-25.47	5				m	to
Pressure mm 25°C	26.48	5	ΔH_v cal/g	82.42	5	n	°K
t_e	1038.	5	25°C	82.25	5	o	
Density g/ml 20°C	0.713	2	30 mm	70.49	5	m'	to
d_4^{25}	0.709	2	BP	68.97	5	n'	°K
d_4^{30}	0.705	4	t_e (d, e)	68.92	5	o'	
a	0.729	4	$\Delta H_v/T_e$	19.52	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	d 27 to	86.05	5	30	20.57
Ref. Index			e 123 °C	0.1389	5	40	19.65
n_D^{20}	1.410	2	d' 15 to	84.19	5		18.76
25	1.408	2	e' 27 °C	0.0709	5	Parachor [P]	
30	1.405	4	d_c g/ml	0.242	5	20°C	
"C"	0.7657	4	v_c ml/g	4.140	5	30	
MR (Obs.)	39.0	2	t_c °C	279.	5	40	
MR (Calc.)	38.677	5	P_c mm	18976.	5	Sugd.	335.2
(nD-d/2)	1.054	2	PV/RT			Exp. L. l. %/wt.	
Dielectric			25°C	1.0000	5	u.	
A 27 to	6.94826	5	30 mm	1.0000	5	Dispersion	119.
B 141 °C	1341.1	5	BP	0.9500	5	Flash Point °C	
C	217.72	5	t_e	0.9405	5	Fire Point	
A* 27 to	1.39246	5	t_c	0.256	5	M. Spec.	
B* 133 °C	1259.5	5	ΔH_c kcal/m			Ultra V.	
K			ΔH_f			X-Ray Dif.	
t_c to °C			ΔF_f			Infrared	
t_x to °C			Viscosity centistokes			Solubility in +	
A' 15 to	7.35001	5	η			Acetone	
B' 27 °C	1545.3	5	°C			Carbon tet.	
C'	235.72	5	B^v to °C			Benzene	
A* 15 to	1.74894	5	A^v to °C			Ether	
B* 27 °C	1445.8	5	(B^v) to °C			n-Heptane	
Ac 141 to	7.3588	5	(A^v) °C			Ethanol	
Bc t_c °C	1652.	5	c_p liq. °K			Water	
Cc	257.	5	c_p vap. °K			Water in	
Cryos. A° const. B°			c_v vap.				
t_e °C	123.34	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:							

NAME		5-Methyl-trans-3-heptene			STRUCTURAL FORMULA		
					CH ₃ CH ₂ CH=CHCH ₂ CH ₃ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
					Ref.		
F.P. °C		dt/dP °C/mm				f to	
F.P. 100%		25°C				g °K	
B.P. °C		BP		0.7214	5	h	
760 mm	112.	2	t _e	0.0463	4	f' to	
100	53.31	4	t _e (d, e)	0.0363	5	g' °K	
30	27.41	4	ΔHm cal/g	0.6486	5	h'	
10	7.64	5	ΔHv cal/g			m to	
1	-25.47	5	25°C	82.42	5	n °K	
Pressure mm 25°C	26.48	5	30 mm	82.25	5	o	
t _e	1038.	5	BP	70.49	5	m' to	
Density g/ml 20°C	0.713	2	t _e	68.97	5	n' °K	
d ₄ ²⁵	0.709	2	t _e (d, e)	68.92	5	o'	
d ₄ ³⁰	0.705	4	ΔHv/T _e	19.52	5		
a	0.729	4	d 27 to	86.05	5	Surface tension	
b	-0.038	4	e 123 °C	0.1389	5	dynes/cm. 20°C	
Ref. Index n _D 20°C	1.410	2	d' 15 to	84.19	5	30	
25	1.408	2	e' 27 °C	0.0709	5	40	
30	1.405	4	d _c g/ml	0.242	5	Parachor [P]	
"C"	0.7657	4	v _c ml/g	4.140	5	20°C	
MR (Obs.)	39.0	2	t _c °C	279.	5	30	
MR (Calc.)	38.677	5	P _c mm	18976.	5	40	
(nD-d/2)	1.054	2	PV/RT			Sugd. 335.2	
Dielectric			25°C	1.0000	5	Exp. L. l. %/wt.	
A 27 to	6.94826	5	30 mm	1.0000	5	u.	
B 141 °C	1341.1	5	BP	0.9500	5	Dispersion	
C	217.72	5	t _e	0.9405	5	Flash Point °C	
A* 27 to	1.39246	5	t _c	0.256	5	Fire Point	
B* 133 °C	1259.5	5	ΔHc kcal/m			M Spec.	
K			ΔHf			Ultra V.	
c			ΔFf			X-Ray Dif.	
t _k to			Viscosity centistokes			Infrared	
t _x °C			η			Solubility in +	
A' 15 to	7.35001	5	B ^v to			Acetone	
B' 27 °C	1545.3	5	A ^v °C			Carbon tet.	
C'	235.72	5	(B ^v) to			Benzene	
A** 15 to	1.74894	5	(A ^v) °C			Ether	
B** 27 °C	1445.8	5	c _p liq. °K			n-Heptane	
Ac 141 to	7.3588	5	c _p vap. °K			Ethanol	
Bc t _c °C	1652.	5	c _v vap.			Water	
Cc t _c °C	257.	5				Water in	
Cryos. A° const. B°							
t _e °C	123.34	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:							

NAME		6-Methyl-cis-3-heptene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP		f	to	
F. P. 100%			°C/mm		g	°K	
B. P. °C			25°C	0.8098	5		
760 mm	115.	2	BP	0.04662	4		
100	55.93	4	t_e	0.03630	5	f'	to
30	29.85	4	30 mm	0.6530	5	g'	°K
10	9.94	5				h'	
1	-23.40	5	ΔH_m cal/g				
Pressure mm 25°C	23.32	5	ΔH_v cal/g			m	to
t_e	1046.	5	25°C	83.39	5	n	°K
Density g/ml 20°C	0.713	2	30 mm	83.02	5	o	
d_4^{25}	0.709	2	BP	71.15	5		
d_4^{30}	0.705	4	t_e	69.57	5	m'	to
			t_e (d, e)	69.51	5	n'	°K
			$\Delta H_v/T_e$	19.52	5	o'	
a	0.729	4	d 30 to	87.18	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 27 °C	0.1394	5	γ	20.57
Ref. Index n_D 20°C	1.410	2	d' 20 to	85.31	5		19.65
25	1.408	2	e' 30 °C	0.0768	5		18.76
30	1.403	4				Parachor [P]	
"C"	0.7657	4	d_c g/ml	0.241	5		20°C
MR (Obs.)	39.0	2	v_c ml/g	4.152	5		30
MR (Calc.)	38.677	5	t_c °C	283.	5		40
(nD-d/2)	1.054	2	P_c mm	19060.	5		Sugd. 335.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A 30 to	6.95245	5	25°C	1.0000	5		
B 144 °C	1352.4	5	30 mm	1.0000	5	Dispersion	119.
C	217.15	5	BP	0.9500	5		
A* 30 to	1.39344	5	t_e	0.9402	5	Flash Point °C	
B* 134 °C	1270.2	5	t_c	0.256	5	Fire Point	
K			ΔH_c kcal/m			M. Spec. Ultra V. X-Ray Dif. Infrared	
c			ΔH_f			Solubility in +	
t_k to °C			ΔF_f			Acetone	
t_x to °C			Viscosity centistokes			Carbon tet.	
A' 20 to	7.35146	5	η			Benzene	
B' 30 °C	1556.7	5				Ether	
C'	235.15	5	B^v to °C			n-Heptane	
A'* 20 to	1.74923	5	A^v to °C			Ethanol	
B'* 30 °C	1457.1	5	(B ^v) to °C			Water	
Ac 144 to	7.3627	5	(A ^v) °C			Water in	
Bc t_c °C	1665.	5	c_p liq. °K				
Cc t_c °C	257.	5	c_p vap. °K				
Cryos. A° const. B°			c_v vap.				
t_e °C	126.72	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:							

NAME		6-Methyl-trans-3-heptene				STRUCTURAL FORMULA					
						CH ₃ CH CH ₂ CH=CHCH ₂ CH ₃ CH ₃					
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208						
		Ref.			Ref.						
F.P. °C			dt/dP °C/mm			f		to			
F.P. 100%			25°C	0.8098	5	g		°K			
B.P. °C			BP	0.04662	4	h					
760 mm	115.	2	t _e	0.0363	5	f'		to			
100	55.93	4	t _e (d, e)			g'		°K			
30	29.85	4	ΔHm cal/g			h'					
10	9.94	5	ΔHv cal/g			m		to			
1	-23.40	5	25°C	83.39	5	n		°K			
Pressure mm 25°C	23.32	5	30 mm	83.02	5	o					
t _e	1046.	5	BP	71.15	5	m'		to			
Density g/ml 20°C	0.713	2	t _e	69.57	5	n'		°K			
d ₄ ^t 25	0.709	2	t _e (d, e)	69.51	5	o'					
d ₄ ^t 30	0.705	4	ΔHv/T _e	19.52	5	Surface tension dynes/cm. 20°C					
a	0.729	4	d 30 to	87.18	5	γ		20, 57	5		
b	-0.038	4	e 127 to	0.1394	5	30		19.65	5		
Ref. Index n _D 20°C	1.410	2	d' 20 to	85.31	5	40		18.76	5		
25	1.408	2	e' 30 °C	0.0768	5	Parachor [P]					
30	1.403	4	d g/ml	0.241	5	20°C					
"C"	0.7657	4	v _c ml/g	4.152	5	30					
MR (Obs.)	39.0	2	t _c °C	283.	5	40					
MR (Calc.)	38.677	2	P _c mm	19060.	5	Sugd.	335.2	5			
(n _D -d/2)	1.054	5	PV/RT 25°C	1.0000	5	Exp. L.I. %/wt. u.					
Dielectric			30 mm	1.0000	5	Dispersion				121.	2
A 30 to	6.95245	5	BP	0.9500	5	Flash Point °C					
B 144 °C	1352.4	5	t _e	0.9402	5	Fire Point					
C	217.15	5	t _c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared					
A* 30 to	1.39344	5	ΔHc kcal/m			Solubility in +					
B* 134 °C	1270.2	5	ΔHf			Acetone					
K			ΔFf			Carbon tet.					
c			Viscosity centistokes			Benzene					
t _x to			η °C			Ether					
t _x °C			B ^v to			n-Heptane					
A' 20 to	7.35146	5	A ^v °C			Ethanol					
B' 30 °C	1556.7	5	(B ^v) to			Water					
C' 30 °C	235.15	5	(A ^v) °C			Water in					
A''* 20 to	1.74923	5	c _p liq. °K								
B''* 30 °C	1457.1	5	c _p vap. °K								
Ac 144 to	7.3627	5	c _v vap.								
Bc t _c °C	1665.	5									
Cc °C	257.	5									
Cryos. A° const. B°											
t _e °C	126.72	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:											

NAME		2-Ethyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_3\text{C} = \text{CH}_2$ C_8H_{16}		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.				Ref.	
F. P. °C			dt/d ^p			f	to
F. P. 100%			°C			g	°K
B. P. °C			25°C	0.9813	5	h	
760 mm	120.	2	BP	0.0471	4		
100	60.25	4	t _e	0.0363	5	f'	to
30	33.87	4	30 mm	0.6607	5	g'	°K
10	13.73	5	ΔHm cal/g			h'	
1	-20.00	5	ΔHv cal/g			m	to
Pressure mm 25°C	18.88	5	25°C	84.97	5	n	°K
t _e	1060.	5	30 mm	84.25	5	o	
Density g/ml 20°C	0.7270	2	BP	72.15	5	m'	to
d ₄ ²⁵	0.7228	2	t _e	70.48	5	n'	°K
d ₄ ³⁰	0.7186	4	t _e (d, e)	70.42	5	o'	
a	0.7438	4	ΔHv/T _e	19.50	5	Surface tension dynes/cm. 20°C	
b	-0.0383	4	d 34 to	89.00	5	γ	22.24
Ref. Index n _D 20°C	1.4157	2	e 132 °C	0.1404	5		5
25	1.4132	2	d' 25 to	87.00	5		21.22
30	1.4106	4	e' 34 °C	0.0812	5		5
"C"	0.7608	4	d _v g/ml	0.244	5	Parachor [P] 20°C	
MR (Obs.)	38.71	2	v _c ml/g	4.101	5		30
MR (Calc.)	38.677	5	t _c °C	292.	5		40
(n _D ²⁰ -d/2)	1.0522	2	P _c mm	19527.	5		Sugd. 335.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A 34 to	6.95634	5	25°C	1.0000	5	Dispersion	121.
B 151 °C	1370.2	5	30 mm	1.0000	5	Flash Point °C	
C	216.2	5	BP	0.9495	5	Fire Point	
A* 34 to	1.39292	5	t _e	0.9393	5	M. Spec. Ultra V.	
B* 142 °C	1287.3	5	t _c	0.255	5	X-Ray Dif. Infrared	
K'			ΔHc kcal/m			Solubility in +	
c			ΔHf			Acetone	
t _k to °C			ΔFf			Carbon tet.	
t _x °C			Viscosity centistokes η °C			Benzene	
A' 25 to	7.35072	5	B ^v to °C			Ether	
B' 34 °C	1575.	5	A ^v to °C			n-Heptane	
C'	234.2	5	(B ^v) to °C			Ethanol	
A* 25 to	1.74662	5	(A ^v) °C			Water	
B* 34 °C	1474.8	5	c _p liq. °K			Water in	
Ac 151 to	7.3666	5	c _v vap. °K				
Bc t _c °C	1688.	5					
Cc	257.	5					
Cryos. A° const. B°							
t _e °C	132.35	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:							

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NAME		3-Ethyl-1-hexene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂ CH CH=CH ₂ C ₂ H ₅		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.6758	5	g	°K
B. P. °C			BP	0.0462	4	h	
760 mm	110.3	2	t _e	0.0363	5	f'	to
100	51.82	4	30 mm	0.6461	5	g'	°K
30	26.02	4	ΔHm cal/g			h'	
10	6.32	5	ΔHv cal/g			m	to
1	-26.66	5	25°C	81.86	5	n	°K
Pressure mm 25°C	28.46	5	30 mm	81.80	5	o	
t _e	1033.	5	BP	70.12	5	m'	to
Density g/ml 20°C	0.715	2	t _e	68.63	5	n'	°K
d ^t 25	0.711	2	t _e (d, e)	68.58	5	o'	
d ^t 30	0.707	4	ΔHv/T _e	19.51	5	Surface tension dynes/cm. 20°C	
a	0.731	4	d 26 to	85.41	5	30	20.80
b	-0.038	4	e 121 °C	0.1386	5	40	19.87
Ref. Index n _D 20°C	1.407	2	d' 5 to	83.32	5	40	18.97
25	1.405	2	e' 26 °C	0.0582	5	Parachor [P] 20°C	
30	1.402	4	d _c g/ml	0.243	5	30	
"C"	0.7582	4	v _c ml/g	4.121	5	40	
MR (Obs.)	38.7	2	t _c °C	277.	5	Sugd.	335.2
MR (Calc.)	38.677	5	P mm	18997.	5	Exp. L.l. %/wt. u.	
(nD-d/2)	1.050	2	PV/RT 25°C	1.0000	5	Dispersion	
Dielectric			30 mm	1.0000	5	Flash Point °C	
A 26 to	6.94556	5	BP	0.9500	5	Fire Point	
B 140°C	1334.6	5	t _e	0.9406	5	M Spec. Ultra V.	
C	218.	5	t _c	0.256	5	X-Ray Dif. Infrared	
A* 26 to	1.39159	5	ΔHc kcal/m			Solubility in +	
B* 131°C	1253.3	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes °C			Benzene	
t _k to						Ether	
t _x °C						n-Heptane	
A' 5 to	7.34887	5	B ^v to			Ethanol	
B' 26°C	1538.8	5	A ^v °C			Water	
C'	236.	5	(B ^v) to			Water in	
A'* 5 to	1.74852	5	(A ^v) °C				
B'* 26°C	1439.3	5	c _p liq. °K				
Ac 140 to	7.35634	5	c _p vap. °K				
Bc t _c °C	1644.	5	c _v vap.				
Cc t _c °C	257.	5					
Cryos. A° const. B°							
t _e °C	121.42	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:							

NAME		4-Ethyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C				dt/dP °C/mm		f	to
F.P. 100%				25°C	0.7497	g	°K
B.P. °C				BP	0.0464	h	
760 mm	113.	2		t_e	0.0363	f'	to
100	54.18	4		30 mm	0.6501	g'	°K
30	28.22	4				h'	
10	8.40	5		ΔH_m cal/g		m	to
1	-24.78	5				n	°K
Pressure mm 25°C	25.38	5		ΔH_v cal/g		o	
t_e	1040.	5		25°C	82.74		
				30 mm	82.50		
Density g/ml 20°C	0.726	2		BP	70.74		
t 25	0.722	2		t_e	69.20	m'	to
d_4 30	0.718	4		t_e (d, e)	69.14	n'	°K
				$\Delta H_v/T_e$	14.69	o'	
a	0.742	4		d 28 to	86.51	Surface tension dynes/cm. 20°C	
b	-0.038	4		e 110 °C	0.1396	22.11	5
Ref. Index n_D 20°C	1.412	2		d' 15 to	84.58	30	5
25	1.410	2		e' 28 °C	0.0737	40	5
30	1.407	4		d_c g/ml	0.201	Parachor [P]	
"C"	0.7554	4		v_c ml/g	4.985	20°C	
MR (Obs.)	38.5	2		t_c °C	264.	30	
MR (Calc.)	38.677	5		P_c mm	15331.	40	
(nD-d/2)	1.049	2		PV/RT		Sugd.	335.2
Dielectric				25°C	1.0000	5	
A 28 to	6.94966	5		30 mm	1.0000	5	Exp. L. l. %/wt.
B 130 °C	1344.9	5		BP	0.9500	5	u.
C	217.53	5		t_e	0.9400	5	Dispersion
A* 28 to	1.39289	5		t_c	0.256	5	117.
B* 120 °C	1263.1	5		ΔH_c kcal/m			Flash Point °C
K				ΔH_f			Fire Point
t_k to				ΔF_f			M. Spec.
t_x °C				Viscosity centistokes			Ultra V.
A' 15 to	7.35049	5		η			X-Ray Dif.
B' 28 °C	1549.1	5					Infrared
C'	235.53	5					Solubility in +
A'* 15 to	1.74901	5		B ^v to			Acetone
B'* 28 °C	1450.0	5		A ^v °C			Carbon tet.
Ac 130 to	7.3559	5		(B ^v) to			Benzene
Bc t_c °C	1642.	5		(A ^v) °C			Ether
Cc	254.	5		c_p liq. °K			n-Heptane
Cryos. A°				c_p vap. °K			Ethanol
const. B°				c_v vap.			Water
t_e °C	124.46	5					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. 100

NAME		2, 3-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.6817	5	g	°K
B.P. °C			BP	0.0462	4	h	
760 mm	110.5	2	t_e	0.0363	5	f'	to
100	52.02	4	30 mm	0.6463	5	g'	°K
30	26.21	4				h'	
10	6.51	5				m	to
1	-26.48	5				n	°K
Pressure mm 25°C			$\Delta\text{Hm cal/g}$			o	
t_e	28.18	5	$\Delta\text{Hv cal/g}$			m'	to
	1033.	5	25°C	81.96	5	n'	°K
			30 mm	81.89	5	o'	
Density g/ml 20°C			BP	70.20	5		
25	0.7214	2	t_e	68.70	5		
d_4^{25}	0.7172	2	t_e (d, e)	68.65	5		
30	0.7130	4	$\Delta\text{Hv}/T_e$	19.52	5		
a	0.7382	4	d 26 to	85.52	5	Surface tension dynes/cm. 20°C	
b	-0.0383	4	e 122 °C	0.1387	5	30	21.55
Ref. Index n_D 20°C			d' 15 to	83.50	5	40	20.56
25	1.4113	2	e' 26 °C	0.0617	5		19.58
30	1.4089	2	d c g/ml	0.244	5	Parachor [P] 20°C	
	1.4063	4	v_c ml/g	4.099	5	30	
"C"	0.7590	4	t_c °C	278.	5	40	
MR (Obs.)	38.64	2	P mm	19130.	5	Sugd.	335.2
MR (Calc.)	38.677	5	PV/RT			Exp. L.l. %/wt. u.	
($n_D-d/2$)	1.0506	2	25°C	1.0000	5	Dispersion	
Dielectric			30 mm	1.0000	5	122.	
A 26 to	6.94766	5	BP	0.9500	5	Flash Point °C	
B 140°C	1336.0	5	t_e	0.9406	5	Fire Point	
C	218.	5	t_c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 26 to	1.39348	5	$\Delta\text{Hc kcal/m}$			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 130°C	1254.6	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes °C				
t_x to							
t_x °C							
A' 15 to	7.35087	5	B ^v to				
B' 26°C	1540.2	5	A ^v °C				
C'	236.	5	(B ^v) to				
A'* 15 to	1.75034	5	(A ^v) °C				
B'* 26°C	1440.7	5	c_p liq. °K				
Ac 140 to	7.3585	5	c_p vap. °K				
Bc t_c °C	1646.	5					
Cc	257.	5					
Cryos. A* const. B*							
t_e °C	121.64	5					
$T_R = 0.75 T_c$							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		2, 4-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\underset{\text{CH}_3}{\text{C}}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula C ₈ H ₁₆	Molecular Weight 112.208				
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.6991	g	°K	
B. P. °C			BP	0.0463	h		
760 mm	111.2	2	t _e	0.0363	f'	to	
100	52.60	4	30 mm	0.6475	g'	°K	
30	26.74	4	ΔHm cal/g		h'		
10	7.00	5	ΔHv cal/g		m	to	
1	-26.05	5	25°C	82.13	n	°K	
Pressure mm 25°C	27.42	5	30 mm	82.02	o		
t _e	1035.	5	BP	70.30			
Density g/ml 20°C	0.720	2	t _e	68.80	m'	to	
d ₄ ^t 25	0.716	2	t _e (d, e)	68.75	n'	°K	
d ₄ ^t 30	0.712	4	ΔHv/T _e	19.51	o'		
a	0.736	4	d _e 27 to	85.73	Surface tension dynes/cm. 20°C		
b	-0.038	4	e' 122 °C	0.1387	γ	30	21.39
Ref. Index n _D 20°C	1.411	2	d _e ' 15 to	83.82		40	20.44
25	1.409	2	e'	0.0672			19.52
30	1.406	4	d _c g/ml	0.244	Parachor [P] 20°C		
"C"	0.7600	4	v _c ml/g	4.093		30	
MR (Obs.)	38.7	2	t _c °C	279.		40	
MR (Calc.) (nD-d/2)	38.677	5	P _c mm	19195.		Sugd.	335.2
	1.051	2	PV/RT 25°C	1.0000	Exp. L. l. %/wt. u.		
Dielectric			30 mm	1.0000	Dispersion		122.
A 27 to	6.94593	5	BP	0.9500	Flash Point °C		
B 141 °C	1337.7	5	t _e	0.9406	Fire Point		
C	217.87	5	t _c	0.256	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 27 to	1.39098	5	ΔHc kcal/m		Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 130 °C	1256.3	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t _k to °C			η °C				
A' 15 to	7.34836	5	B ^v to				
B' 27 °C	1541.8	5	A ^v °C				
C'	235.87	5	(B ^v) to				
A* 15 to	1.74767	5	(A ^v) °C				
B* 27 °C	1442.4	5	c _p liq. °K				
Ac 141 to	7.3568	5	c _p vap. °K				
Bc t _c °C	1649.	5	c _v vap.				
Cc	257.	5					
Cryos. A° const. B°							
t _e °C	122.44	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:							

NAME		2, 5-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}(\text{CH}_2)_2\text{C}=\text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.7102	5	g	
B.P. °C			BP	0.0463	4	h	
760 mm	111.6	2	t_e	0.0363	5	f'	to °K
100	52.95	4	30 mm	0.6480	5	g'	
30	27.07	4	ΔH_m cal/g			h'	
10	7.32	5	ΔH_v cal/g			m	to °K
1	-25.76	5	25°C	82.28	5	n	
Pressure mm 25°C	26.95	5	30 mm	82.13	5	o	
t_e	1036.	5	BP	70.40	5	m'	to °K
Density g/ml 20°C			t_e	68.88	5	n'	
d_4^{25}	0.7172	2	t_e (d, e)	68.83	5	o'	
d_4^{30}	0.7129	2	$\Delta H_v/T_e$	19.51	5	Surface tension dynes/cm. 20°C	
a	0.7344	4	d 27 to	85.89	5	30	21.06
b	-0.0385	4	e 123 °C	0.1388	5	40	20.05
Ref. Index n_D^{20}			d' 10 to	84.01	5	40	19.08
25	1.4105	2	e' 27 °C	0.0693	5	Parachor [P] 20°C	
30	1.4080	2	d c g/ml	0.241	5	30	
"C"	0.7620	4	v c ml/g	4.148	5	40	
MR (Obs.)	38.80	2	t c °C	278.	5	Sugd.	335.2
MR (Calc.) (nD-d/2)	38.677	5	P c mm	18908.	5	Exp. L. l. %/wt. u.	
Dielectric	1.0519	2	PV/RT 25°C	1.0000	5	Dispersion	
A 27 to	6.94709	5	30 mm	1.0000	5	Flash Point °C	
B 140 °C	1339.4	5	BP	0.9500	5	Fire Point	
C	217.80	5	t_e	0.9405	5	M Spec. Ultra V.	
A* 27 to	1.39172	5	t_c	0.256	5	X-Ray Dif.	
B* 130 °C	1257.9	5	ΔH_c kcal/m			Infrared	
K			ΔH_f			Solubility in +	
c			ΔF_f			Acetone	
t_k to °C			Viscosity centistokes			Carbon tet.	
t_x °C			η °C			Benzene	
A' 10 to	7.34919	5	B' v to °C			Ether	
B' 27 °C	1543.6	5	A' v °C			n-Heptane	
C'	235.80	5	(B' v) to °C			Ethanol	
A** 10 to	1.74826	5	(A' v) °C			Water	
B** 27 °C	1444.1	5	c_p liq. °K			Water in	
Ac 140 to	7.3576	5	c_p vap. °K				
Bc t_c °C	1650.	5	c_v vap.				
Cc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	122.89	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:							

NAME		3,3-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_2\text{C} \\ \\ \text{CH}_3 \end{array} \text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F. P. °C		Ref.					
F. P. 100%							
B. P. °C							
760 mm	104.	2		dt/dP °C/mm			
100	46.36	4		25°C	0.5340	5	
30	20.94	4		BP	0.0455	4	
10	1.65	5		t_e	0.0363	5	
1	-30.18	5		30 mm	0.6365	5	
				ΔH_m cal/g			
Pressure mm 25°C	36.97	5		ΔH_v cal/g			
t_e	1016.	5		25°C	79.70	5	
				30 mm	80.24	5	
Density g/ml 20°C	0.7140	2		BP	68.88	5	
d_4^{25}	0.7099	2		t_e	67.50	5	
d_4^{30}	0.7058	4		t_e (d, e)	67.46	5	
				$\Delta H_v/T_e$	19.54	5	
a	0.7303	4		d 21 to	83.11	5	
b	-0.0381	4		e 14 °C	0.1368	5	
Ref. Index				d' to			
n_D^{20}	1.4070	2		e' °C			
25	1.4046	2					
30	1.4021	4		d_c g/ml	0.243	5	
"C"	0.7593	4		v_c ml/g	4.115	5	
MR (Obs.)	38.68	2		t_c °C	268.	5	
MR (Calc.)	38.677	5		P_c mm	18786.	5	
($n_D-d/2$)	1.0500	2					
Dielectric				PV/RT			
A 21 to	6.93989	5		25°C	0.9991	5	
B 132 °C	1312.1	5		30 mm	1.0000	5	
C	219.24	5		BP	0.9510	5	
A* 21 to	1.39099	5		t_e	0.9422	5	
B* 124 °C	1231.5	5		t_c	0.257	5	
K				ΔH_c kcal/m			
c				ΔH_f			
t_k to				ΔF_f			
t_x °C				Viscosity			
A' to				centistokes			
B' °C				η			
C' °C							
A** to				B ^v to			
B** °C				A ^v °C			
Ac 132 to	7.3512	5		(B ^v) to			
Bc t_c °C	1617.	5		(A ^v) °C			
Cc t_c °C	258.	5		c_p liq. °K			
Cryos. A° const. B°				c_p vap. °K			
t_e °C	114.36	5		c_v vap.			
$T_R = 0.75 T_c$							
							+ 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:							

NAME		3,4-Dimethyl-1-hexene			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{CH} \\ \\ \text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208			
		Ref.			Ref.	Ref.		
F.P. °C			dt/dP °C/mm			f to °K		
F.P. 100%			25°C	0.7214	5	g		
B.P. °C			BP	0.0463	4	h		
760 mm	112.	2	t_e	0.0363	5	f' to °K		
100	53.31	4	t_e (d, e)			g'		
30	27.41	4	ΔHm cal/g			h'		
10	7.64	5	ΔHv cal/g			m to °K		
1	-25.47	5	25°C	82.42	5	n		
			30 mm	82.25	5	o		
			BP	70.50	5			
			t_e	68.98	5	m' to °K		
			t_e (d, e)	68.93	5	n'		
			$\Delta\text{Hv}/T_e$	19.52	5	o'		
Pressure mm 25°C	26.48	5	d 27 to	86.05	5	Surface tension dynes/cm. 20°C		
t_e	1038.	5	e 123 °C	0.1388	5	y	21.87	5
Density g/ml 20°C	0.724	2	d' 15 to	84.19	5	30	20.91	5
d_4^{25}	0.720	2	e' 27 °C	0.0710	5	40	19.97	5
d_4^{30}	0.716	4	d c g/ml	0.246	5	Parachor [P]		
			v_c ml/g	4.068	5	20°C		
			t_c °C	281.	5	30		
			P_c mm	19384.	5	40		
a	0.740	4	PV/RT			Sugd.	335.2	5
b	-0.038	4	25°C	1.0000	5	Exp. L.l. %/wt. u.		
Ref. Index n_D			30 mm	1.0000	5	Dispersion		
25	1.413	2	BP	0.9500	5	117.		
30	1.411	2	t_e	0.9405	5	Flash Point °C		
	1.408	4	t_c	0.256	5	Fire Point		
"C"	0.7592	4	ΔHc kcal/m			M Spec.		
MR (Obs.)	38.7	2	ΔHf			Ultra V.		
MR (Calc.)	38.677	5	ΔFf			X-Ray Dif.		
(nD-d/2)	1.051	2	Viscosity centistokes			Infrared		
Dielectric			η °C			Solubility in +		
A 27 to	6.94826	5				Acetone		
B 142°C	1341.1	5				Carbon tet.		
C	217.72	5				Benzene		
A* 27 to	1.39246	5				Ether		
B* 133°C	1259.5	5				n-Heptane		
K						Ethanol		
c						Water		
t_x to °C						Water in		
A' 15 to	7.3500	5						
B' 27 °C	1545.3	5						
C'	236.	5						
A** 15 to	1.74894	5						
B** 27 °C	1445.8	5						
Ac 142 to	7.3592	5						
Bc t_c -	1653.	5						
Cc t_c -	257.	5						
Cryos. A° const. B°								
t_e °C	123.34	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:								

NAME		3,5-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}_2\text{CH} \quad \text{CH}=\text{CH}_2 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C				dt/dP °C/mm		f	to
F.P. 100%				25°C	0.5340	g	°K
B.P. °C				BP	0.0455	h	
760 mm	104.	2		t_e	0.0363	f'	to
100	46.36	4		30 mm	0.6365	g'	°K
30	20.94	4				h'	
10	1.65	5		ΔH_m cal/g		m	to
1	-30.18	5				n	°K
Pressure mm 25°C	36.97	5		ΔH_v cal/g	79.70	o	
t_e	1016.0	5		25°C	80.24		
Density g/ml 20°C	0.708	2		30 mm	68.88		
t 25	0.704	2		BP	67.50	m'	to
d_4 30	0.700	4		t_e (d, e)	67.46	n'	°K
				t_e		o'	
				$\Delta H_v/T_e$	19.54		
a	0.724	4		d 21 to	83.11		Surface tension dynes/cm. 20°C
b	-0.038	4		e 14 °C	0.1369		19.99
Ref. Index				d'			30 19.09
n_D 20°C	1.404	2		e'			40 18.22
25	1.402	2					
30	1.399	4		d_c g/ml	0.241		Parachor [P]
"C"	0.7604	4		v_c ml/g	4.142		20°C
MR (Obs.)	38.8	2		t_c °C	267.		30
MR (Calc.)	38.677	5		P_c mm	18629.		40
(nD-d/2)	1.050	2					Sugd. 335.2
	1.050	2		PV/RT			Exp. L. l. %/wt. u.
Dielectric				25°C	0.9991		Dispersion
A 21 to	6.93989	5		30 mm	1.0000		117.
B 132 °C	1312.1	5		BP	0.9510		Flash Point °C
C	219.24	5		t_e	0.9422		Fire Point
A* 21 to	1.39099	5		t_c	0.257		M. Spec. Ultra V. X-Ray Dif. Infrared
B* 124 °C	1231.5	5		ΔH_c kcal/m			Solubility in +
K				ΔH_f			Acetone
t_k to °C				ΔF_f			Carbon tet.
t_x to °C				Viscosity centistokes η			Benzene
A' to °C							Ether
B' to °C							n-Heptane
C' to °C							Ethanol
A'* to °C				B ^v to °C			Water
B'* to °C				A ^v to °C			Water in
Ac 132 to °C	7.3510	5		{B ^v } to °C			
Bc t_c °C	1617.	5		(A ^v) °C			
Cc t_c °C	258.	5		c_p liq. °K			
Cryos. A° const. B°				c_p vap. °K			
t_e °C	114.36	5		c_v vap.			
$T_R = 0.75 T_c$							+ 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. 106

NAME		4,4-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}_3 \end{array} \text{CH}_2\text{CH}=\text{CH}_2$		
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	0.6016	5	g	°K
B. P. °C			BP	0.0458	4	h	
760 mm	107.2	2	t_e	0.0363	5	f'	to
100	49.14	4	30 mm	0.6413	5	g'	°K
30	23.53	4				h'	
10	4.09	5					
1	-27.99	5					
			ΔH_m cal/g				
Pressure mm 25°C	32.37	5	ΔH_v cal/g	71.19	5	m	to
t_e	1025.	5	25°C	81.04	5	n	°K
			30 mm	69.56	5	o	
			BP	68.12	5		
Density g/ml 20°C	0.7198	2	t_e	68.08	5	m'	to
d_4^{25}	0.7157	2	t_e (d, e)	19.54	5	n'	°K
d_4^{30}	0.7116	4	$\Delta H_v/T_e$		5	o'	
			d 24 to	84.27	5	Surface tension dynes/cm. 20°C	
a	0.7361	4	e 118 °C	0.1373	5	y	30 21.36 5
b	-0.0381	4	d' to				40 20.40 5
			e' °C				19.46 5
Ref. Index n_D^{20}	1.4102	2	d c g/ml	0.245	5	Parachor [P]	
25	1.4078	2	v_c ml/g	4.089	5	20°C	
30	1.4053	4	t_c °C	273.	5	30	
"C"	0.7588	4	P_c mm	19079.	5	40	
MR (Obs.)	38.64	2				Sugd. 335.2 5	
MR (Calc.)	38.677	5	PV/RT	0.8807	5	Exp. L. l. %/wt. u.	
(nD-d/2)	1.0503	2	25°C	1.0000	5	Dispersion 117. 2	
			30 mm	0.9510	5	Flash Point °C	
			BP	0.9419	5	Fire Point	
			t_e	0.257	5	M Spec. Ultra V. X-Ray Dif. Infrared	
			t_c			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
			ΔH_c kcal/m				
			ΔH_f				
			ΔF_f				
			Viscosity centistokes °C				
			η				
			B ^v to				
			A ^v °C				
			(B ^v) to				
			(A ^v) °C				
			c_p liq. °K				
			c_p vap. °K				
			c_v vap.				
			t_e °C				
			$T_R = 0.75 T_c$				
REFERENCES:		1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE:		API					
PURIFICATION:		API					
LITERATURE REFERENCES:							

NAME		4, 5-Dimethyl-1-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}-\text{CH}-\text{CH}_2\text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.	Ref.	
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.6431	5	h	
760 mm	109.	2	BP	0.0460	4	f'	to
100	50.69	4	t _e	0.0363	5	g'	°K
30	24.96	4	30 mm	0.6441	5	h'	
10	5.44	5	ΔHm cal/g			m	to
1	-26.78	5				n	°K
Pressure mm 25°C	30.06	5	ΔHv cal/g			o	
t _e	1030.	5	25°C	79.03	5	m'	to
Density g/ml 20°C	0.728	2	30 mm	81.47	5	n'	°K
d ₄ ^t 25	0.724	2	BP	69.92	5	o'	
d ₄ ^t 30	0.720	4	t _e	68.46	5	Surface tension dynes/cm. 20°C	22.35
a	0.744	4	t _e (d, e)	68.41	5	30	21.37
b	-0.038	4	ΔHv/T _e	19.54	5	40	20.42
Ref. Index n _D 20°C	1.414	2	d 25 to	84.91	5	γ	
25	1.412	2	e 120 °C	0.1374	5	30	21.37
30	1.409	4	d'			40	20.42
"C"	0.7568	4	e'			Parachor [P] 20°C	
MR (Obs.)	38.5	2	d _c g/ml	0.248	5	30	
MR (Calc.)	38.677	5	v _c ml/g	4.038	5	40	
(nD-d/2)	1.050	2	t _c °C	277.	5	Sugd.	335.2
Dielectric			P _c mm	19460.	5	Exp. L. l. %/wt. u.	
A 25 to	6.94402	5	PV/RT			Dispersion	117.
B 140 °C	1329.8	5	25°C	0.9703	5	Flash Point °C	
C	218.29	5	30 mm	1.0000	5	Fire Point	
A* 25 to	1.38967	5	BP	0.9510	5	M. Spec. Ultra V.	
B* 130 °C	1248.4	5	t _e	0.9418	5	X-Ray Dif.	
K			t _c	0.257	5	Infrared	
t _k to			ΔHc kcal/m			Solubility in +	
t _x °C			ΔHf			Acetone	
A' to			ΔFf			Carbon tet.	
B' °C			Viscosity centistokes η °C			Benzene	
C' °C			B _v to			Ether	
A* to °C			A _v °C			n-Heptane	
B* to °C			(B _v) to			Ethanol	
A _c 140 to	7.3554	5	(A _v) °C			Water	
B _c t _c °C	1641.	5	c _p liq. °K			Water in	
C _c °C	258.	5	c _p vap. °K				
Cryos. A° const. B°			c _v vap.				
t _e °C	120.00	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. 108

NAME		5,5-Dimethyl-1-hexene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C}(\text{CH}_2)_2\text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$	
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	0.5054	5	g °K
B. P. °C			BP	0.0453	4	h
760 mm	102.5	2	t_e	0.0362	5	f' to
100	45.07	4	30 mm	0.6341	5	g' °K
30	19.74	4	ΔH_m cal/g			h'
10	0.52	5	ΔH_v cal/g			m to
1	-31.19	5	25°C	79.19	5	n °K
Pressure mm 25°C	39.31	5	30 mm	79.89	5	o
t_e	1013.	5	BP	68.65	5	m' to
Density g/ml 20°C	0.709	2	t_e	67.30	5	n' °K
d_t 25	0.705	2	t_e (d, e)	67.26	5	o'
d_4 30	0.701	4	$\Delta H_v/T_e$	19.57	5	
a	0.725	4	d 20 to	82.57	5	Surface tension dynes/cm. 20°C
b	-0.038	4	e 113 °C	0.1358	5	30
Ref. Index n_D 20°C	1.4049	2	d' to			40
25	1.4024	2	e' °C			Sugd. 335.2
30	1.4001	4	d c g/ml	0.244	5	Parachor [P] 20°C
"C"	0.7609	4	v c ml/g	4.101	5	30
MR (Obs.)	38.8	2	t c °C	265.	5	40
MR (Calc.)	38.677	5	p mm	18670.	5	Exp. L. l. %/wt. u.
(nD-d/2)	1.0501	2	PV/RT 25°C	0.9991	5	Dispersion
Dielectric			30 mm	1.0000	5	Flash Point °C
A 20 to	6.93924	5	BP	0.9520	5	Fire Point
B 130 °C	1306.9	5	t_e	0.9434	5	M Spec. Ultra V. X-Ray Dif. Infrared
C	219.52	5	t_c	0.256	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
A* 20 to	1.39022	5	ΔH_c kcal/m			
B* 120 °C	1226.2	5	ΔH_f			
K			ΔF_f			
c			Viscosity centistokes			
t_x to			η °C			
t_x °C			B ^v to			
A' °C			A ^v °C			
B' °C			(B ^v) to			
C' °C			(A ^v) °C			
A'* to			c _p liq. °K			
B'* °C			c _p vap. °K			
Ac 130 to	7.3505	5	c _v vap.			
Bc t_c °C	1610.6	5				
Cc t_c °C	258.	5				
Cryos. A° const. B°						
t_e °C	112.71	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:						

NAME		3-Ethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}=\text{C} \begin{array}{c} \\ \text{C}_2\text{H}_5 \end{array} (\text{CH}_2)_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	1.020	5	g	°K
B.P. °C			BP	0.0472	4	h	
760 mm	121.	2	t_e	0.0363	5	f'	to
100	61.12	4	30 mm	0.6622	5	g'	°K
30	34.68	4				h'	
10	14.50	5				m	to
1	-19.31	5				n	°K
			ΔHm cal/g			o	
Pressure mm 25°C	18.09	5	ΔHv cal/g	85.30	5	m'	to
t_e	1063.	5	25°C	84.51	5	n'	°K
Density g/ml 20°C	0.737	2	30 mm	72.42	5	o'	
25	0.733	2	BP	70.73	5		
d_4^{25}	0.729	4	t_e (d, e)	70.67	5		
			$\Delta\text{Hv}/T_e$	19.52	5		
a	0.753	4	d 35 to	89.36	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 134 °C	0.1400	5	y	23.49
			d' 25 to	87.35	5		30
Ref. Index			e' 35 °C	0.0819	5		40
n_D 20°C	1.424	2				Parachor [P] 20°C	
25	1.422	2	d_c g/ml	0.248	5		30
30	1.419	4	v_c ml/g	4.030	5		40
"C"	0.7646	4	t_c °C	296.	5		Sugd. 335.2
MR (Obs.)	38.9	2	P_c mm	20096.	5		
MR (Calc.) (nD-d/2)	38.677	5	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
	1.056	2	30 mm	1.0000	5	Dispersion	
			BP	0.9500	5	124.	
			t_e	0.9397	5	Flash Point °C	
			t_c	0.256	5	Fire Point	
			ΔHc kcal/m			M. Spec. Ultra V. X-Ray Dif. Infrared	
			ΔHf			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
			ΔFf				
			Viscosity centistokes η °C				
A* 35 to	1.39234	5					
B* 144 °C	1290.7	5					
K							
c							
t_k to °C							
A' 25 to	7.35121	5					
B' 35 °C	1578.3	5					
C'	234.	5					
A'* 25 to	1.74671	5					
B'* 35 °C	1478.6	5					
Acl 154 to	7.3684	5					
Bc t_c °C	1694.	5					
Cc	257.	5					
Cryos. A* consts. B*							
t_e °C	133.50	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:							

NAME		3-Ethyl-trans-2-hexene		STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula C ₈ H ₁₆	Molecular Weight 112.208	C ₂ H ₅ CH ₃ (CH ₂) ₂ C = CH-CH ₃	
		Ref.			Ref.	Ref.
F.P. °C			dt/dP °C/mm			f to
F.P. 100%			25°C	1.0203	5	g °K
B.P. °C			BP	0.0472	4	h
760 mm	121.	2	t _e	0.0363	5	f' to
100	61.12	4	t _e (d, e)			g' °K
30	34.68	4	ΔHm cal/g			h'
10	14.50	5	ΔHv cal/g			m to
1	-19.31	5	25°C	85.30	5	n °K
Pressure mm 25°C	18.09	5	30 mm	84.51	5	o
t _e	1063.	5	BP	72.42	5	m' to
Density g/ml 20°C	0.737	2	t _e	70.73	5	n' °K
d _t 25	0.733	2	t _e (d, e)	70.67	5	o'
d ₄ 30	0.729	4	ΔHv/T _e	19.52	5	Surface tension dynes/cm. 20°C
a	0.753	4	d 35 to	89.36	5	30
b	-0.038	4	e 134 °C	0.1400	5	40
Ref. Index n _D 20°C	1.424	2	d' 25 to	87.35	5	40
25	1.422	2	e' 35 °C	0.0819	5	23.49
30	1.419	4	d _c g/ml	0.248	5	22.47
"C"	0.7646	4	v _c ml/g	4.030	5	21.49
MR (Obs.)	38.9	2	t _c °C	296.	5	Parachor [P] 20°C
MR (Calc.)	38.677	5	P mm	20096.	5	30
(n _D -d/2)	1.056	2	PV/RT 25°C	1.0000	5	40
Dielectric			30 mm	1.0000	5	Sugd.
A 35 to	6.95770	5	BP	0.9500	5	335.
B 154°C	1374.0	5	t _e	0.9397	5	Exp. L.l./wt. u.
C	216.	5	t _c	0.256	5	Dispersion
A* 35 to	1.39234	5	ΔHc kcal/m			124.
B* 144°C	1290.7	5	ΔHf			Flash Point °C
K			ΔFf			Fire Point
c			Viscosity centistokes			M Spec. Ultra V. X-Ray Dif. Infrared
t _k to			η °C			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
t _x °C			B ^v to			
A' 25 to	7.35121	5	A ^v °C			
B' 35°C	1578.3	5	(B ^v) to			
C'	234.	5	(A ^v) °C			
A'* 25 to	1.74671	5	c _p liq. °K			
B'* 35°C	1478.6	5	c _p vap. °K			
Ac 154 to	7.3684	5	c _v vap.			
Bc t _c °C	1694.	5				
Cc t _c °C	257.	5				
Cryos. A° const. B°						
t _e °C	133.50	5				
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: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		4-Ethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ \text{CH}_3\text{CH}_2\text{CH} \\ \\ \text{CH}=\text{CHCH}_3 \end{array}$		
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	0.7500	g		°K
B. P. °C			BP	0.0464	h		
760 mm	113.	2	t_e	0.0363	f'		to
100	54.18	4	30 mm	0.6501	g'		°K
30	28.22	4	ΔH_m cal/g		h'		
10	8.40	5			m		to
1	-24.78	5			n		°K
Pressure mm 25°C	25.38	5	ΔH_v cal/g		o		
t_e	1040.	5	25°C				
Density g/ml 20°C	0.725	2	30 mm				
d_4^{25}	0.721	2	BP				
d_4^{30}	0.717	4	t_e				
			t_e (d, e)				
			$\Delta H_v/T_e$				
a	0.741	4	d 20 to	86.42	5	Surface tension	
b	-0.038	4	e 124 °C	0.1390	5	dynes/cm. 20°C	
Ref. Index			d' to			30	21.99
n_D^{20}	1.412	2	e' °C			40	21.02
25	1.410	2	d_c g/ml		5	30	
30	1.407	4	v_c ml/g		5	40	
"C"	0.7564	4	t_c °C		5	Sugd. 335.2	
MR (Obs.)	38.5	2	P_c mm		5	19451.	
MR (Calc.)	38.677	5					
(nD-d/2)	1.050	2					
Dielectric							
A 20 to	6.94966	5	PV/RT				
B 144 °C	1344.9	5	25°C		5	Exp. L. l. %/wt.	
C	217.53	5	30 mm		5	u.	
A* 20 to	1.39279	5	BP		5	Dispersion	
B* 134 °C	1263.1	5	t_e		5	Flash Point °C	
K			t_c		5	Fire Point	
t_k to			ΔH_c kcal/m			M. Spec.	
t_x °C			ΔH_f			Ultra V.	
A' 15 to	7.3505	5	ΔF_f			X-Ray Dif.	
B' 20 °C	1549.1	5	Viscosity			Infrared	
C'	235.53	5	centistokes			Solubility in +	
A' 15 to	1.74901	5	η °C			Acetone	
B' 20 °C	1450.	5				Carbon tet.	
A' 15 to	7.3606	5	B^v to			Benzene	
Bc t_c °C	1658.	5	A^v °C			Ether	
Cc t_c °C	257.	5	(B^v) to			n-Heptane	
Cryos. A° const. B°			(A^v) °C			Ethanol	
t_e °C	124.47	5	c_p liq. °K			Water	
			c_p vap. °K			Water in	
			c_v vap.				
$T_R = 0.75 T_c$					+ 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:							

NAME		4-Ethyl-trans-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_3$ C_8H_{16}		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.				Ref.	Ref.
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.750	5	g	
B.P. °C			BP	0.0464	4	h	
760 mm	113.	2	t_e	0.0363	5	f'	to °K
100	54.18	4	t_e (d, e)			g'	
30	28.22	4	ΔH_m cal/g			h'	
10	8.40	5	ΔH_v cal/g			m	to °K
1	-24.78	5	25°C	82.95	5	n	
			30 mm	82.50	5	o	
			BP	70.72	5		
			t_e	69.18	5	m'	to °K
			t_e (d, e)	69.13	5	n'	
			$\Delta H_v/T_e$	19.52	5	o'	
Pressure mm 25°C	25.38	5	d 28 to	86.42	5	Surface tension dynes/cm. 20°C	
t_e	1040.	5	e 124 °C	0.1390	5	y	21.99
Density g/ml 20°C	0.725	2	d'			30	21.02
d_4^{25}	0.721	2	e'			40	20.08
d_4^{30}	0.717	4					
a	0.741	4	d c g/ml	0.246	5	Parachor [P]	
b	-0.038	4	v c ml/g	4.061	5	20°C	
Ref. Index n_D			t_c °C	282.	5	30	
20°C	1.412	2	P c mm	19451.	5	40	
25	1.410	2				Sugd.	335.2
30	1.407	4	PV/RT				
"C"	0.7564	4	25°C	1.0000	5	Exp. L.l. %/wt. u.	
MR (Obs.)	38.5	2	30 mm	1.0000	5	Dispersion	
MR (Calc.)	38.677	5	BP	0.9500	5	121.	
(nD-d/2)	1.050	2	t_e	0.9404	5	Flash Point °C	
Dielectric			t_c	0.256	5	Fire Point	
A 20 to	6.94966	5	ΔH_c kcal/m			M Spec.	
B 144 °C	1344.9	5	ΔH_f			Ultra V.	
C	217.53	5	ΔF_f			X-Ray Dif.	
A* 20 to	1.39279	5	Viscosity centistokes			Infrared	
B* 134 °C	1263.1	5	η °C			Solubility in +	
K						Acetone	
c						Carbon tet.	
t_k to						Benzene	
t_x °C						Ether	
A' 15 to	7.3505	5	B ^v to			n-Heptane	
B' 20 °C	1549.1	5	A ^v °C			Ethanol	
C'	235.53	5	(B ^v) to			Water	
A** 15 to	1.74901	5	(A ^v) °C			Water in	
B** 20 °C	1450.	5					
Ac 144 to	7.3606	5	c_p liq. °K				
Bc t_c °C	1658.	5	c_p vap. °K				
Cc t_c °C	257.	5	c_v vap.				
Cryos. A° const. B°							
t_e °C	124.47	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:							

NAME		2, 3-Dimethyl-2-hexene			STRUCTURAL FORMULA					
					$\text{CH}_3(\text{CH}_2)_2\text{C}=\text{C}\begin{matrix} \text{CH}_3 \\ \text{CH}_2\text{CH}_3 \end{matrix}$					
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208					
						Ref.	Ref.			
F. P. °C	-115.1	2		dt/dP			f	to		
F. P. 100%				°C/mm			g	to		
B. P. °C				25°C	1.0500	5	h	to		
760 mm	121.77	2		BP	0.0473	4	f'	to		
100	61.77	4		t _e	0.0363	5	g'	to		
30	35.28	4		30 mm	0.6635	5	h'	to		
10	15.05	5		ΔHm cal/g			m	to		
1	-18.81	5		ΔHv cal/g			n	to		
Pressure mm 25°C	17.54	5		25°C	85.51	5	o	to		
t _e	1066.	5		30 mm	84.67	5	m'	to		
Density g/ml 20°C	0.7408	2		BP	72.55	5	n'	to		
d ₄ ^t 25	0.7366	2		t _e (d, e)	70.85	5	o'	to		
d ₄ ^t 30	0.7324	4		ΔHv/T _e	19.51	5	Surface tension dynes/cm. 20°C			
a	0.7576	4		d 35 to	89.61	5	γ	30	23.97	5
b	-0.0384	4		e 134 °C	0.1401	5		40	22.90	5
Ref. Index n _D 20°C	1.4268	2		d' 25 to	87.57	5	Parachor [P] 20°C			
25	1.4244	2		e' 35 °C	0.0824	5		30	22.90	5
30	1.4217	4		d _c g/ml	0.248	5		40	21.85	5
"C"	0.7654	4		v _c ml/g	4.040	5	Sugd. 335.2			
MR (Obs.)	38.87	2		t _c °C	297.	5	Exp. L. l. %/wt. u.			
MR (Calc.)	38.677	5		P _c mm	20079.	5	Dispersion 127.			
(n _D -d/2)	1.0564	2		PV/RT 25°C	1.0000	5	Flash Point °C			
Dielectric				30 mm	1.0000	5	Fire Point			
A 35 to	6.95670	5		BP	0.9500	5	M. Spec. Ultra V.			
B 154 °C	1376.2	5		t _e	0.9397	5	X-Ray Dif. Infrared			
C	215.86	5		t _c	0.256	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in			
A* 35 to	1.39053	5		ΔHc kcal/m						
B* 144 °C	1292.8	5		ΔHf						
K				ΔFf						
t _k to °C				Viscosity centistokes η °C						
x to °C				B _v to °C						
A' 25 to	7.34943	5		A _v to °C						
B' 35 °C	1580.5	5		(B _v) to °C						
C'	233.86	5		(A _v) °C						
A'* 25 to	1.74467	5		c _p liq. °K						
B'* 35 °C	1480.7	5		c _p vap. °K						
Ac 154 to	7.36734	5		c _v vap.						
Bc t _c °C	1697.	5								
Cc	257.	5								
Cryos. A° const. B°										
t _e °C	134.38	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. 114

NAME		2, 4-Dimethyl-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH}=\text{CH}\text{CH}_3 \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.6835	5	g	°K
B. P. °C			BP	0.0462	4	h	
760 mm	110.6	2	t_e	0.0363	5	f'	to
100	52.08	4	t_e (d, e)			g'	°K
30	26.26	4	ΔH_m cal/g			h'	
10	6.55	5				m	to
1	-26.45	5				n	°K
Pressure mm 25°C	28.11	5	ΔH_v cal/g			o	
t_e	1034.	5	25°C	81.95	5	m'	to
Density g/ml 20°C	0.7213	2	30 mm	81.87	5	n'	°K
d_4^{25}	0.7171	2	BP	70.18	5	o'	
d_4^{30}	0.7129	4	t_e	68.69	5	Surface tension dynes/cm. 20°C	
			$\Delta H_v/T_e$	68.64	5	γ	30 20.54
a	0.7381	4		19.51	5		40 19.57
b	-0.0383	4	d 20 to	85.51	5	Parachor [P]	
Ref. Index n_D^{20}	1.4118	2	e 122 °C	0.1386	5	20°C	335.2
25	1.4094	2	d' to			30	
30	1.4067	4	e'			40	
"C"	0.7600	4				Sugd.	
MR (Obs.)	38.69	2	d _c g/ml	0.244	5	Exp. L. l. %/wt. u.	
MR (Calc.)	38.677	5	v _c ml/g	4.106	5	Dispersion	124.
(nD-d/2)	1.0512	2	t _c °C	278.	5	Flash Point °C	
Dielectric			P _c mm	19100.	5	Fire Point	
A 20 to	6.94568	5	PV/RT			M Spec. Ultra V. X-Ray Dif. Infrared	
B 140 °C	1335.7	5	25°C	1.0000	5	Solubility in +	
C	218.	5	30 mm	1.0000	5	Acetone	
A* 20 to	1.39139	5	BP	0.9500	5	Carbon tet.	
B* 130 °C	1254.3	5	t_e	0.9406	5	Benzene	
K			t_c	0.256	5	Ether	
c			ΔH_c kcal/m			n-Heptane	
t_x to			ΔH_f			Ethanol	
t_x °C			ΔF_f			Water	
A' to			Viscosity centistokes			Water in	
B' °C			η °C				
C'							
A'* to			B ^v to				
B'* °C			A ^v °C				
Ac 140 to	7.3565	5	(B ^v) to				
Bc °C	1646.	5	(A ^v) °C				
Cc t_c °C	257.	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t_e °C	121.76	5	c _v vap.				
$T_R = 0.75 T_c$		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:							

NAME		2, 5-Dimethyl-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH} \underset{\text{CH}_3}{\text{CH}_2}\text{CH}=\text{C} \underset{\text{CH}_3}{\text{CH}} \text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
F. P. °C		Ref.				Ref.	
F. P. 100%							
B. P. °C							
760 mm	112.2	2		0.7265	5	f	to
100	53.47	4		0.0464	4	g	°K
30	27.55	4		0.0363	5	h	
10	7.77	5		0.6490	5	f'	to
1	-25.36	5				g'	°K
						h'	
Pressure mm 25°C	26.28	5				m	to
t _e	1038.	5				n	°K
						o	
Density g/ml 20°C	0.720	2				m'	to
d ₄ ^t 25	0.716	2				n'	°K
d ₄ ^t 30	0.712	4				o'	
a	0.736	4	d 20 to	86.10	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 124 °C	0.1388	5	γ	21.39 5
			d'			30	20.44 5
			e'			40	19.52 5
Ref. Index n _D 20°C	1.4140	2	d _c g/ml	0.244	5	Parachor [P] 20°C	
25	1.4115	2	v _c ml/g	4.094	5		
30	1.4091	4	t _c °C	280.	5		
"C"	0.7652	4	P _c mm	19225.	5	Sugd.	335.2 5
MR (Obs.)	38.9	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
MR (Calc.)	38.677	5	30 mm	1.0000	5	Dispersion 124. 2	
(n _D -d/2)	1.054	2	BP	0.9500	5	Flash Point °C	
Dielectric			t _e	0.9405	5	Fire Point	
A 20 to	6.94734	5	t _c	0.256	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B 142 °C	1341.5	5				Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
C	217.68	5					
A* 20 to	1.39132	5					
B* 134 °C	1259.8	5					
K							
t _k to °C							
A' to °C							
B' to °C							
C'							
A** to °C							
B** to °C							
Ac 142 to	7.3581	5					
Bc t _c °C	1653.	5					
Cc t _c °C	257.	5					
Cryos. A° const. B°							
t _e °C	123.57	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:							

NAME		3, 4-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}=\text{C}=\text{CHCH}_3$ CH_3CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.8401	5	g	
B.P. °C	116.	2	BP	0.0467	4	h	
760 mm	56.76	4	t_e	0.0363	5	f'	to °K
100	30.61	4	30 mm	0.6548	5	g'	
30	10.66	5	ΔH_m cal/g			h'	
10	-22.77	5	ΔH_v cal/g			m	to °K
1			25°C	83.66	5	n	
Pressure mm 25°C	22.40	5	30 mm	83.22	5	o	
t_e	1049.	5	BP	71.33	5		
Density g/ml 20°C	0.737	2	t_e	69.74	5	m'	to °K
d_4^{25}	0.733	2	t_e (d, e)	69.68	5	n'	
d_4^{30}	0.729	4	$\Delta H_v/T_e$	19.51	5	o'	
a	0.753	4	d 31 to	87.48	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 128 °C	0.1393	5	y	23.48
Ref. Index n_D^{20}	1.418	2	d' 20 to	85.60	5		30 22.47
25	1.416	2	e' 31 °C	0.0779	5		40 21.48
30	1.413	4	d c g/ml	0.249	5	Parachor [P] 20°C	
"C"	0.7543	4	v_c ml/g	4.010	5		30
MR (Obs.)	38.4	2	t_c °C	289.	5		40
MR (Calc.)	38.677	5	P_c mm	19946.	5		Sugd. 335.2
(nD-d/2)	1.050	2	PV/RT			Exp. L.l. %/wt. u.	
Dielectric			25°C	1.0000	5	Dispersion 124.	
A 31 to	6.95084	5	30 mm	1.0000	5	Flash Point °C	
B 148 °C	1355.2	5	BP	0.9500	5	Fire Point	
C	216.96	5	t_e	0.9401	5	M Spec. Ultra V.	
A* 31 to	1.39076	5	t_c	0.256	5	X-Ray Dif. Infrared	
B* 138 °C	1272.8	5	Viscosity centistokes			Solubility in +	
K			η °C			Acetone	
c						Carbon tet.	
t_k to						Benzene	
t_x °C						Ether	
A' 20 to	7.34881	5	B^v to			n-Heptane	
B' 31 °C	1559.4	5	A'v °C			Ethanol	
C'	234.96	5	(B'v) to			Water	
A** 20 to	1.74623	5	(A'v) °C			Water in	
B** 31 °C	1459.8	5	c_p liq. °K				
Ac 148 to	7.3620	5	c_p vap. °K				
Bc t_c °C	1672.	5	c_v vap.				
Cc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	127.86	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:							

NAME		3, 4-Dimethyl-trans-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{CH}=\text{C}(\text{CH}_3)\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.8401	g	°K	
B. P. °C			BP	0.0467	h		
760 mm	116.	2	t_e	0.0363	g'	to	
100	56.76	4	30 mm	0.6548	h'	°K	
30	30.61	4	ΔH_m cal/g		m	to	
10	10.66	5			n	°K	
1	-22.77	5			o		
Pressure mm 25°C	22.40	5	ΔH_v cal/g				
t_e	1049.	5	25°C		83.66		
Density g/ml 20°C	0.737	2	30 mm		83.22		
d ⁴ ₂₅	0.733	2	BP		71.33		
d ⁴ ₃₀	0.729	4	t_e		69.74		
			t_e (d, e)		69.68		
			$\Delta H_v/T_e$		19.51		
a	0.753	4	d 31 to	87.48	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 128 °C	0.1393	5	23.48	
Ref. Index			d' 20 to	85.60	5	30 22.47	
n_D 20°C	1.418	2	e' 31 °C	0.0779	5	40 21.48	
25	1.416	2	d_c g/ml		5	Parachor [P]	
30	1.413	4	v_c ml/g		5	20°C	
"C"	0.7543	4	t_c °C		5	30	
MR (Obs.)	38.4	2	P_c mm		5	40	
MR (Calc.)	38.677	2	19946.		5	Sugd. 335.2	
($n_D - d/2$)	1.050	2	PV/RT		5	Exp. L. 1%/wt.	
Dielectric			25°C		5	u.	
A 31 to	6.95084	5	30 mm		5	Dispersion 124.	
B 148 °C	1355.2	5	BP		5	Flash Point °C	
C	216.96	5	t_e		5	Fire Point	
A* 31 to	1.39076	5	t_c		5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 138 °C	1272.8	5	ΔH_c kcal/m				
K			ΔH_f				
c			ΔF_f				
t_k to °C			Viscosity centistokes		Solubility in +		
t_x to °C			η °C		Acetone		
A' 20 to	7.34881	5			Carbon tet.		
B' 31 °C	1559.4	5			Benzene		
C'	234.96	5			Ether		
A' * 20 to	1.74623	5			n-Heptane		
B' * 31 °C	1459.8	5			Ethanol		
Ac 148 to	7.3620	5			Water		
Bc t_c °C	1672.	5			Water in		
Cc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	127.86	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. 118

NAME		3,5-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CHCH}_2\text{C}=\text{CHCH}_3$ $\text{CH}_3 \quad \text{CH}_3$		
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	0.7214	5	g °K	
B. P. °C			BP	0.0463	4	h	
760 mm	112.	2	t_e	0.0363	5	f' to	
100	53.31	4	30 mm	0.6486	5	g' °K	
30	27.41	4	ΔH_m cal/g			h'	
10	7.64	5				m to	
1	-25.47	5				n °K	
Pressure mm 25°C	26.48	5	ΔH_v cal/g	82.42	5	o	
t_e	1038.	5	25°C	82.25	5	m' to	
Density g/ml 20°C	0.725	2	30 mm	70.50	5	n' °K	
d_t	0.721	2	BP	68.98	5	o'	
d_4	0.717	4	t_e (d, e)	68.93	5		
			$\Delta H_v/T_e$	19.52	5		
a	0.741	4	d 27 to	86.05	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 123 °C	0.1388	5	30	
Ref. Index n_D 25	1.416	2	d' 15 to	84.19	5	40	
25	1.414	2	e' 27 °C	0.0710	5	21.99	
30	1.411	4				21.02	
"C"	0.7634	4	d c g/ml	0.246	5	20.08	
MR (Obs.)	38.9	2	v c ml/g	4.060	5	Parachor [P] 20°C	
MR (Calc.)	38.677	5	t_c °C	281.	5	30	
(nD-d/2)	1.054	2	P c mm	19421.	5	40	
Dielectric			PV/RT 25°C	1.0000	5	Sugd.	
A 27 to	6.94826	5	30 mm	1.0000	5	335.2	
B 142 °C	1341.1	5	BP	0.9500	5	Exp. L. l. %/wt. u.	
C	217.72	5	t_e	0.9405	5	Dispersion	
A* 27 to	1.39246	5	t_c	0.256	5	124.	
B* 133 °C	1259.5	5	ΔH_c kcal/m			Flash Point °C	
K			ΔH_f			Fire Point	
c			ΔF_f			M Spec. Ultra V.	
t_k to			Viscosity centistokes °C			X-Ray Dif.	
t_x °C			η			Infrared	
A' 15 to	7.35001	5	B ^v to			Solubility in + Acetone	
B' 27 °C	1545.3	5	A ^v °C			Carbon tet.	
C'	235.72	5	(B ^v) to			Benzene	
A'* 15 to	1.74894	5	(A ^v) °C			Ether	
B'* 27 °C	1445.8	5	c_p liq. °K			n-Heptane	
Ac 142 to	7.3593	5	c_p vap. °K			Ethanol	
Bc t_c °C	1653.	5	c_v vap.			Water	
Cc t_c °C	257.	5				Water in	
Cryos. A° const. B°							
t_e °C	123.34	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:							

NAME		3,5-Dimethyl-trans-2-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{C}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f to	
F. P. 100%			25°C	0.7214	5	g °K	
B. P. °C			BP	0.0463	4	h	
760 mm	112.	2	t _e	0.0363	5	f' to	
100	53.31	4	30 mm	0.6486	5	g' °K	
30	27.41	4				h'	
10	7.64	5				m to	
1	-25.47	5				n °K	
			ΔHm cal/g			o	
Pressure mm 25°C	26.48	5	ΔHv cal/g			m' to	
t _e	1038.	5	25°C	82.42	5	n' °K	
			30 mm	82.25	5	o'	
Density g/ml 20°C	0.725	2	BP	70.50	5	Surface tension dynes/cm. 20°C	
d ₄ ^t 25	0.721	2	t _e	68.98	5	30	21.99
d ₄ ^t 30	0.717	4	t _e (d, e)	68.93	5	40	21.02
			ΔHv/T _e	19.52	5		20.08
a	0.741	4	d _e 27 to	86.05	5	Parachor [P] 20°C	
b	-0.038	4	e 123 °C	0.1388	5	30	30
Ref. Index n _D 20°C	1.416	2	d' 15 to	84.19	5	40	40
25	1.414	2	e' 27 °C	0.0710	5	Sugd. 335.2	
30	1.411	4	d _c g/ml	0.246	5		
"C"	0.7634	4	v _c ml/g	4.060	5		
MR (Obs.)	38.9	2	t _c °C	281.	5		
MR (Calc.) (n _D -d/2)	38.677	5	P _c mm	19421.	5	Exp. L.l. %/wt. u.	
Dielectric	1.054	2				Dispersion 124.	
A 27 to	6.94826	5	PV/RT 25°C	1.0000	5	Flash Point °C	
B 142 °C	1341.1	5	30 mm	1.0000	5	Fire Point	
C	217.72	5	BP	0.9500	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 27 to	1.39246	5	t _e	0.9405	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 133 °C	1259.5	5	t _c	0.256	5		
K			ΔHc kcal/m				
t _k to			ΔHf				
t _x °C			ΔFf				
A' 15 to	7.35001	5	Viscosity centistokes				
B' 27 °C	1545.3	5	η				
C'	235.72	5					
A'* 15 to	1.74894	5	B ^v to				
B'* 27 °C	1445.8	5	A ^v °C				
Ac 142 to	7.3593	5	(B ^v) to				
Bc t _c °C	1653.	5	(A ^v) °C				
Cc t _c °C	257.	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	123.34	5	c _v vap.				
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:							

NAME		4,4-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}_3 \end{array} \text{CH}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.5755	5	g	°K
B.P. °C			BP	0.0457	4	h	
760 mm	106.	2	t_e	0.0363	5	f'	to
100	48.11	4	30 mm	0.6395	5	g'	°K
30	22.57	4	ΔH_m cal/g			h'	
10	3.19	5				m	to
1	-28.80	5	ΔH_v cal/g			n	°K
Pressure mm 25°C	34.01	5	25°C	80.42	5	o	
t_e	1020.	5	30 mm	80.76	5	m'	to
Density g/ml 20°C	0.722	2	BP	69.25	5	n'	°K
d_4^{25}	0.718	2	t_e	67.83	5	o'	
d_4^{30}	0.714	4	t_e (d, e)	67.79	5	Surface tension dynes/cm. 20°C	
a	0.738	4	$\Delta H_v/T_e$	19.53	5	30	21.62
b	-0.038	4	d 22 to	83.87	5	40	20.68
Ref. Index $n_D^{20°C}$	1.413	2	e 130 °C	0.1380	5	40	19.76
25	1.411	2	e' °C			Parachor [P]	
30	1.409	4	d c g/ml	0.248	5	20°C	
"C"	0.7613	4	v c ml/g	4.038	5	30	
MR (Obs.)	38.8	2	t c °C	272.	5	40	
MR (Calc.)	38.677	5	P c mm	19212.	5	Sugd.	335.2
(nD-d/2)	1.052	2	PV/RT			Exp. L.l. %/wt. u.	
Dielectric			25°C	1.0000	5	Dispersion	
A 22 to	6.94277	5	30 mm	1.0000	5	Flash Point °C	
B 136 °C	1319.6	5	BP	0.9500	5	Fire Point	
C	218.86	5	t_e	0.9410	5	M Spec.	
A* 22 to	1.39347	5	t_c	0.256	5	Ultra V.	
B* 136 °C	1239.1	5	ΔH_c kcal/m			X-Ray Dif.	
K			ΔH_f			Infrared	
c			Viscosity centistokes			Solubility in +	
t_k to			η °C			Acetone	
t_x °C						Carbon tet.	
A' to						Benzene	
B' °C			B' to			Ether	
C' °C			A' °C			n-Heptane	
A** to			(B') to			Ethanol	
B** °C			(A') °C			Water	
Ac 136 to	7.3542	5	c _p liq. °K			Water in	
Bc t_c °C	1627.	5	c _p vap. °K				
Cc t_c °C	258.	5	c _v vap.				
Cryos. A°							
const. B°							
t_e °C	116.57	5					
$T_R = 0.75 T_c$							
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		4, 4-Dimethyl- trans-2-hexene			STRUCTURAL FORMULA					
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{CH}_3 \end{array} \text{CH}=\text{CHCH}_3$					
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208					
	Ref.					Ref.				
F.P. °C			dt/dP			f	to			
F.P. 100%			°C/mm			g	to			
B.P. °C			25°C	0.5755	5	h	to			
760 mm	106.	2	BP	0.0457	4					
100	48.11	4	t_e	0.0363	5	f'	to			
30	22.57	4	30 mm	0.6395	5	g'	to			
10	3.19	5				h'				
1	-28.80	5	ΔHm cal/g			m	to			
Pressure mm 25°C	34.01	5	ΔHv cal/g			n	to			
t_e	1020.	5	25°C	80.42	5	o	to			
Density g/ml 20°C	0.722	2	30 mm	80.76	5					
d ^t 25	0.718	2	BP	69.25	5	m'	to			
d ^t 30	0.714	4	t_e	67.83	5	n'	to			
			t_e (d, e)	67.79	5	o'	to			
			$\Delta\text{Hv}/T_e$	19.53	5					
a	0.738	4	d 22 to	83.87	5	Surface tension dynes/cm. 20°C				
b	-0.038	4	e 130 °C	0.1380	5	γ	30	21.62	5	
Ref. Index			d'				40	20.68	5	
n_D 20°C	1.413	2	e'			Parachor [P]				
25	1.411	2	d_e g/ml	0.248	5	20°C				
30	1.409	4	v_c ml/g	4.038	5	30				
"C"	0.7613	4	t_c °C	272.	5	40				
MR (Obs.)	38.8	2	P_c mm	19212.	5	Sugd. 335.2			5	
MR (Calc.)	38.677	5	PV/RT			Exp. L.l./wt. u.				
(nD-d/2)	1.052	2	25°C	1.0000	5	Dispersion			121.	2
Dielectric			30 mm	1.0000	5	Flash Point °C				
A 22 to	6.94277	5	BP	0.9500	5	Fire Point				
B 136 °C	1319.6	5	t_e	0.9410	5	M. Spec.				
C	218.86	5	t_c	0.256	5	Ultra V.				
A* 22 to	1.39347	5	ΔHc kcal/m			X-Ray Dif.				
B* 136 °C	1239.1	5	ΔHf			Infrared				
K			ΔFf			Solubility in ⁺				
c			Viscosity centistokes			Acetone				
t_k to			η			Carbon tet.				
t_x °C						Benzene				
A' to						Ether				
B' °C						n-Heptane				
C'						Ethanol				
A'* to			B ^v to			Water				
B'* °C			A ^v °C			Water in				
Ac 136 to	7.3542	5	(B ^v) to							
Bc t_c °C	1627.	5	(A ^v) °C							
Cc	258.	5	c _p liq. °K							
Cryos. A° const. B°			c _p vap. °K							
t_e °C	116.57	5	c _v vap.							
$T_R = 0.75 T_c$						+ 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:										

NAME		4, 5-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH}=\text{CHCH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.6682	5	g	°K
B. P. °C			BP	0.0461	4	h	
760 mm	110.	2	t_e	0.0363	5	f'	to
100	51.56	4	30 mm	0.6456	5	g'	°K
30	25.78	4				h'	
10	6.10	5					
1	-26.86	5					
Pressure mm 25°C	28.82	5	ΔHm cal/g			m	to
t_e	1032.	5	25°C	81.77	5	n	°K
Density g/ml 20°C	0.725	2	30 mm	81.73	5	o	
d_4^{25}	0.721	2	BP	70.07	5		
25	0.717	2	t_e	68.58	5	m'	to
30	0.717	4	t_e (d, e)	68.53	5	n'	°K
			$\Delta\text{Hv}/T_e$	19.52	5	o'	
a	0.741	4	d 20 to	85.30	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 121 °C	0.1385	5	y	21.99
			d' to				30
			e' °C				40
Ref. Index n_D 20°C	1.413	2	d c g/ml	0.247	5	Parachor [P]	
25	1.411	2	v c ml/g	4.051	5	20°C	
30	1.408	4	t c °C	278.	5	30	
"C"	0.7582	4	P c mm	19361.	5	40	
MR (Obs.)	38.6	2				Sugd. 335.2	
MR (Calc.)	38.677	5	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
(nD-d/2)	1.051	2	30 mm	1.0000	5	Dispersion	
			BP	0.9500	5	119.	
			t_e	0.9407	5	Flash Point °C	
			t_c	0.256	5	Fire Point	
						M Spec. Ultra V. X-Ray Dif. Infrared	
A* 20 to	1.39179	5				Solubility in +	
B* 131 °C	1252.4	5				Acetone	
K						Carbon tet.	
c						Benzene	
t_x to						Ether	
t_x °C						n-Heptane	
A' to						Ethanol	
B' °C						Water	
C' °C						Water in	
A* to							
B* °C							
Ac 140 to	7.3566	5	B' to				
Bc t_c °C	1645.	5	A' °C				
Cc t_c °C	258.	5	(B') to				
			(A') °C				
			c_p liq. °K				
			c_p vap. °K				
Cryos. A° const. B°			c_v vap.				
t_e °C	121.08	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:							

NAME		4, 5-Dimethyl-trans-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH}=\text{CHCH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	to °K
B. P. °C			25°C	0.6682	5	h	
760 mm	110.	2	BP	0.0461	4		
100	51.56	4	t _e	0.0363	5	f'	to
30	25.78	4	30 mm	0.6456	5	g'	to °K
10	6.10	5	ΔHm cal/g			h'	
1	-26.86	5				m	to
Pressure mm 25°C	28.82	5	ΔHv cal/g			n	to °K
t _e	1032.	5	25°C	81.77	5	o	
Density g/ml 20°C	0.725	2	30 mm	81.73	5		
25	0.721	2	BP	70.07	5	m'	to
d ₄ 30	0.717	4	t _e	68.58	5	n'	to °K
			t _e (d, e)	68.53	5	o'	
			ΔHv/T _e	19.52	5		
a	0.741	4	d 20 to	85.30	5	Surface tension dynes/cm. 20°C	
b	-0.038	4	e 121 °C	0.1385	5	γ	21.99
			d' to °C			30	21.02
			e' to °C			40	20.08
Ref. Index n _D 20°C	1.413	2	d _c g/ml	0.247	5	Parachor [P]	
25	1.411	2	v _c ml/g	4.051	5	20°C	
30	1.408	4	t _c °C	278.	5	30	
"C"	0.7582	4	P _c mm	19361.	5	40	
MR (Obs.)	38.6	2				Sugd.	335.2
MR (Calc.)	38.677	5	PV/RT				
(nD-d/2)	1.051	2	25°C	1.0000	5	Exp. L. l. %/wt. u.	
			30 mm	1.0000	5	Dispersion	
			BP	0.9500	5	121.	2
			t _e	0.9407	5	Flash Point °C	
			t _c	0.256	5	Fire Point	
			ΔHc kcal/m			M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 20 to	6.94544	5	ΔHf			Solubility in +	
B* 131 °C	1252.4	5	ΔFf			Acetone	
K			Viscosity centistokes			Carbon tet.	
t _k to			η			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	7.3566	5	c _p vap. °K				
Bc t _c °C	1645.	5	c _v vap.				
Cc °C	258.	5					
Cryos. A° const. B°							
t _e °C	121.08	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:							

NAME		5, 5-Dimethyl-cis-2-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.5950	5	g	°K
B. P. °C			BP	0.0458	4	h	
760 mm	106.9	2	t_e	0.0363	5	f'	to
100	48.88	4	30 mm	0.6409	5	g'	°K
30	23.29	4	$\Delta\text{Hm cal/g}$			h'	
10	3.86	5	$\Delta\text{Hv cal/g}$			m	to
1	-28.19	5	25°C	80.74	5	n	°K
Pressure mm 25°C	32.77	5	30 mm	80.97	5	o	
t_e	1023.	5	BP	69.42	5	m'	to
Density g/ml 20°C	0.7169	2	t_e	67.99	5	n'	°K
25	0.7125	2	t_e (d, e)	67.94	5	o'	
d ₄ ^t 30	0.7081	4	$\Delta\text{Hv}/T_e$	19.52	5	Surface tension dynes/cm. 20°C	
a	0.7344	4	d 23. to	84.19	5	30	21.02
b	-0.0387	4	e 118. °C	0.1382	5	40	20.00
Ref. Index			d' to			40	19.00
n _D 20°C	1.4113	2	e' °C			Sugd.	335.2
25	1.4088	2	d c g/ml	0.242	5	Parachor [P] 20°C	
30	1.4060	4	v c ml/g	4.128	5	30	
"C"	0.7638	4	t c °C	271.	5	40	
MR (Obs.)	38.89	2	P c mm	18758.	5	Exp. L.l. %/wt. u.	
MR (Calc.)	38.677	2	PV/RT 25°C	1.0000	5	Dispersion	
(n _D -d/2)	1.0528	2	30 mm	1.0000	5	119.	
Dielectric			BP	0.9500	5	Flash Point °C	
A 23 to	6.94315	5	t_e	0.9409	5	Fire Point	
B 135 °C	1322.7	5	t_c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 23 to	1.39286	5	$\Delta\text{Hc kcal/m}$			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 126 °C	1242.0	5	ΔHf				
K			ΔFf				
c			Viscosity centistokes				
t_x to			η °C				
t_x °C			B ^v to				
A' to			A ^v °C				
B' to			(B ^v) to				
C' °C			(A ^v) °C				
A'* to			c _p liq. °K				
B'* to			c _p vap. °K				
Ac 135 to	7.35404	5	c _v vap.				
Bc t _c °C	1629.	5					
Cc °C	258.	5					
Cryos. A* const. B*							
t_e °C	117.58	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:							

NAME		5, 5-Dimethyl-trans-2-hexene				STRUCTURAL FORMULA	
						$ \begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}_2\text{CH}=\text{CHCH}_3 \\ \\ \text{CH}_3 \end{array} $	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	0.5363	5	h	
760 mm	104.1	2	BP	0.0455	4		
100	46.46	4	t_e	0.0363	5	f'	to
30	21.04	4	30 mm	0.6366	5	g'	°K
10	1.74	5				h'	
1	-30.09	5	ΔHm cal/g			m	to
Pressure mm 25°C	36.79	5	ΔHv cal/g			n	°K
t_e	1015.	5	25°C	79.74	5	o	
Density g/ml 20°C	0.7066	2	30 mm	80.29	5		
d_4^{25}	0.7023	2	BP	68.84	5	m'	to
d_4^{30}	0.6980	4	t_e	67.45	5	n'	°K
			t_e (d, e)	67.41	5	o'	
			$\Delta\text{Hv}/T_e$	19.52	5		
a	0.7237	4	d 20 to	83.19	5	Surface tension dynes/cm. 20°C	
b	-0.0385	4	e 20 °C	0.1379	5	γ	19.83
Ref. Index $n_D^{20°C}$	1.4055	2	d' 20 to			30	18.87
25	1.4030	2	e' 20 °C			40	17.94
30	1.4002	4				Parachor [P] 20°C	
"C"	0.7646	4	d_c g/ml	0.24	5		
MR (Obs.)	38.96	2	v_c ml/g	4.17	5		
MR (Calc.)	38.677	5	t_c °C	266.	5		
($n_D-d/2$)	1.0522	2	P_c mm	18389.	5		Sugd. 335.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A 20 to	6.94095	5	25°C	1.0000	5	Dispersion 121.	
B 131 °C	1312.7	5	30 mm	1.0000	5	Flash Point °C	
C	219.22	5	BP	0.9500	5	Fire Point	
A* 20 to	1.39372	5	t_e	0.9412	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 122 °C	1232.6	5	t_c	0.256	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
K			ΔHc kcal/m				
t_k to			ΔHf				
t_x °C			ΔFf				
A' to			Viscosity centistokes				
B' °C			η				
C' °C							
A'* to			B^v to				
B'* °C			A^v °C				
Ac 131 to	7.3518	5	(B^v) to				
Bc t_c °C	1616.	5	(A^v) °C				
Cc t_c °C	258.	5	c_p liq. °K				
Cryos. A° const. B°			c_p vap. °K				
t_e °C	114.43	5	c_v vap.				
$T_R = 0.75 T_c$		+ 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:							

NAME		3-Ethyl-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{C} = \text{CHCH}_2\text{CH}_3$ C_8H_{16}		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	0.8401	5	g	
B. P. °C			BP	0.0467	4	h	
760 mm	116.	2	t_e	0.0363	5	f'	to °K
100	56.76	4	30 mm	0.6548	5	g'	
30	30.61	4	ΔH_m cal/g			h'	
10	10.66	5	ΔH_v cal/g			m	to °K
1	-22.77	5	25°C	83.66	5	n	
Pressure mm 25°C	22.40	5	30 mm	83.22	5	o	
t_e	1049.	5	BP	71.32	5	m'	to °K
Density g/ml 20°C	0.729	2	t_e	69.73	5	n'	
d^t 25	0.725	2	t_e (d, e)	69.67	5	o'	
d^t 30	0.721	4	$\Delta H_v/T_e$	19.51	5	Surface tension dynes/cm. 20°C	
a	0.745	4	d 31 to	87.48	5	30	22.48
b	-0.038	4	e 128 °C	0.1393	5	40	21.50
Ref. Index n_D 20°C	1.418	2	d' 15 to	85.60	5	40	20.54
25	1.416	2	e' 31 °C	0.0779	5	Parachor [P] 20°C	
30	1.413	4	d_c g/ml	0.246	5	30	
"C"	0.7626	4	v_c ml/g	4.057	5	40	
MR (Obs.)	38.8	2	t_c °C	287.	5	40	
MR (Calc.)	38.677	5	P _c mm	19646.	5	Sugd.	335.2
(nD-d/2)	1.054	2	PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	124.
A 31 to	6.95084	5	BP	0.9500	5	Flash Point °C	
B 147 °C	1355.2	5	t_e	0.9401	5	Fire Point	
C	217.	5	t_c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 31 to	1.39076	5	ΔH_c kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 138 °C	1272.8	5	ΔH_f				
K			ΔF_f				
c			Viscosity centistokes °C				
t_k --- to °C			η				
t_x --- to °C			B ^v --- to °C				
A' 15 to	7.34881	5	A ^v --- to °C				
B' 31 °C	1559.4	5	(B ^v) --- to °C				
C' 31 °C	235.	5	(A ^v) --- to °C				
A'* 15 to	1.74623	5	c_p liq. °K				
B'* 31 °C	1459.8	5	c_p vap. °K				
Ac 147 to	7.3617	5	c_v vap. °K				
Bc t_c °C	1671.	5					
Cc t_c °C	257.	5					
Cryos. A° const. B°							
t_e °C	127.86	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:							

NAME		2, 2-Dimethyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \\ \\ \text{CH}=\text{CHCH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C	-137.350	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.5627	5	h	
760 mm	105.43	2	BP	0.0457	4		
100	47.59	4	t _e	0.0363	5	f'	to
30	22.07	4	30 mm	0.6388	5	g'	°K
10	2.71	5	ΔHm cal/g			h'	
1	-29.23	5	ΔHv cal/g			m	to
Pressure mm 25°C	34.89	5	25°C	80.17	5	n	°K
t _e	1019.	5	30 mm	80.57	5	o	
Density g/ml 20°C	0.7128	2	BP	69.08	5	m'	to
d ₄ ^t 25	0.7086	2	t _e	67.67	5	n'	°K
d ₄ ^t 30	0.7044	4	t _e (d, e)	67.63	5	o'	
a	0.7295	4	ΔHv/T _e	19.51	5	Surface tension dynes/cm. 20°C	
b	-0.0383	4	d _e 22 to	83.62	5	γ	20.54
Ref. Index n _D 20°C	1.4099	2	e 125 °C	0.1379	5		19.58
25	1.4074	2	d'				18.64
30	1.4049	4	e'			Parachor [P] 20°C	
"C"	0.7657	4	d _c g/ml	0.242	5		30
MR (Obs.)	38.99	2	v _c ml/g	4.130	5		40
MR (Calc.)	38.677	5	t _c °C	269.	5		Sugd.
(nD-d/2)	1.0535	2	P _c mm	18677.	5		335.2
Dielectric			PV/RT			Exp. L. l. %/wt. u.	
A 22 to	6.93979	5	25°C	1.0000	5	Dispersion	
B 134 °C	1316.7	5	30 mm	1.0000	5	Flash Point °C	
C	218.97	5	BP	0.9500	5	Fire Point	
A* 22 to	1.39110	5	t _e	0.9411	5	M. Spec.	
B* 126 °C	1236.3	5	t _c	0.256	5	Ultra V.	
K			ΔHc kcal/m			X-Ray Dif.	
t _k to			ΔHf			Infrared	
t _x °C			ΔFf			Solubility in +	
A' to			Viscosity centistokes			Acetone	
B' °C			η			Carbon tet.	
C' °C						Benzene	
A** to			B _v to			Ether	
B** °C			A _v °C			n-Heptane	
Ac 134 to	7.3508	5	(B _v) to			Ethanol	
Bc t _c °C	1622.	5	(A _v) °C			Water	
Cc	258.	5	c _p liq. °K			Water in	
Cryos. A° const. B°			c _p vap. °K				
t _e °C	115.93	5	c _v vap.				
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:							

NAME		2, 2-Dimethyl-trans-3-hexene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}=\text{CHCH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	
F.P. °C		Ref.		dt/dP °C/mm		Ref.
F.P. 100%				25°C	0.4755	5
B.P. °C				BP	0.0452	4
760 mm	100.85	2		t_e	0.0363	5
100	43.64	4		30 mm	0.6317	5
30	18.40	4		ΔH_m cal/g		
10	-0.74	5		ΔH_v cal/g		
1	-32.33	5		25°C	78.56	5
Pressure mm 25°C	42.09	5		30 mm	79.47	5
t_e	1006.	5		BP	68.14	5
Density g/ml 20°C	0.7039	2		t_e	66.81	5
d_t 25	0.6995	2		t_e (d, e)	66.78	5
d_4 30	0.6949	4		$\Delta H_v/T_e$	19.53	5
a	0.7218	4		d 15 to	81.99	5
b	-0.0388	4		e 120 °C	0.1374	5
Ref. Index n_D 20°C	1.4063	2		d'		
25	1.4037	2		e'		
30	1.4011	4		d_c g/ml	0.239	5
"C"	0.7689	4		v_c ml/g	4.189	5
MR (Obs.)	39.18	2		t_c °C	260.	5
MR (Calc.) (nD-d/2)	38.677	5		P_c mm	18108.	5
	1.0544	2		PV/RT 25°C	1.0000	5
Dielectric				30 mm	1.0000	5
A 15 to	6.93699	5		BP	0.9500	5
B 127 °C	1300.8	5		t_e	0.9415	5
C	219.84	5		t_c	0.256	5
A* 15 to	1.39334	5		ΔH_c kcal/m		
B* 120 °C	1221.2	5		ΔH_f		
K				ΔF_f		
t_c to				Viscosity centistokes		
t_k °C				η °C		
t_x						
A' to				B^v to		
B' °C				A'v °C		
C'				(B ^v) to		
A** to				(A ^v) °C		
B** °C				c_p liq. °K		
Ac 127 to	7.3479	5		c_p vap. °K		
Bc t_c °C	1601.	5		c_v vap.		
Gc	258.	5				
Cryos. A° const. B°						
t_e °C	110.77	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:						

NAME		2, 3-Dimethyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH C} = \text{CHCH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to °K	
F. P. 100%			25°C	0.7791	g		
B. P. °C			BP	0.0465	h		
760 mm	114.	2	t_e	0.0363	f'	to °K	
100	55.05	4	30 mm	0.6516	g'		
30	29.03	4	ΔH_m cal/g		h'		
10	9.17	5	ΔH_v cal/g		m	to °K	
1	-24.09	5	25°C	83.06	n		
Pressure mm 25°C	24.33	5	30 mm	82.76	o		
t_e	1043.	5	BP	70.94			
Density g/ml 20°C	0.728	2	t_e	69.38	m'	to °K	
d ^t 25	0.724	2	t_e (d, e)	69.33	n'		
d ^t 30	0.720	4	$\Delta H_v/T_e$	19.52	o'		
a	0.744	4	d 29 to	86.80	Surface tension dynes/cm. 20°C		
b	-0.038	4	e 135 °C	0.1391	22.25 5		
Ref. Index n _D 20°C	1.416	2	d' 20 to	84.95	30 21.28 5		
25	1.414	2	e' 29 °C	0.0755	40 20.41 5		
30	1.402	4	d _c g/ml	0.247	Parachor [P] 20°C		
"C"	0.7602	4	v _c ml/g	4.05	30		
MR (Obs.)	38.7	2	t _c °C	284.	40		
MR (Calc.)	38.677	5	P _c mm	19592.	Sugd. 335.2 5		
(n _D -d/2)	1.052	2	PV/RT 25°C	1.0000	Exp. L. l. %/wt. u.		
Dielectric			30 mm	1.0000	Dispersion 124. 2		
A 29 to	6.95106	5	BP	0.9500	Flash Point °C		
B 145 °C	1348.6	5	t_e	0.9403	Fire Point		
C	217.34	5	t_c	0.256	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 29 to	1.39312	5	ΔH_c kcal/m		Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 140 °C	1266.7	5	ΔH_f				
K			ΔF_f				
c			Viscosity centistokes				
t _k to °C			η				
t _x to °C							
A' 15 to	7.35098	5	B _v to °C				
B' 29 °C	1552.9	5	A _v to °C				
C'	235.34	5	(B _v) to °C				
A'* 15 to	1.74916	5	(A _v) to °C				
B'* 29 °C	1453.3	5	c _p liq. °K				
Ac 145 to	7.3620	5	c _p vap. °K				
Bc t _c °C	1663.	5	c _v vap.				
Cc	257.	5					
Cryos. A° const. B°							
t _e °C	125.59	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. 130

NAME		2, 3-Dimethyl-trans-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}=\text{C}(\text{CH}_3)\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
F.P. °C		Ref.			Ref.		
F.P. 100%							
B.P. °C					dt/dP °C/mm		
760 mm		114.			25°C		
100		55.05			BP		
30		29.03			t _e		
10		9.17			30 mm		
1		-24.09			0.7791 5		
					0.0465 4		
					0.0363 5		
					0.6516 5		
Pressure mm 25°C		24.33			ΔHm cal/g		
t _e		1043.			ΔHv cal/g		
					25°C		
					30 mm		
					BP		
Density g/ml 20°C		0.728			t _e		
d ₄ ^t 25		0.724			t _e (d, e)		
30		0.720			ΔHv/T _e		
					19.52 5		
a		0.744			d 29 to °C		
b		-0.038			e 135 °C		
					d' 20 to °C		
					e' 29 °C		
Ref. Index n _D 20°C		1.416			d _c g/ml		
25		1.414			v _c ml/g		
30		1.402			t _c °C		
					P _c mm		
"C"		0.7602			19592.		
MR (Obs.)		38.7			PV/RT 25°C		
MR (Calc.)		38.677			30 mm		
(n _D -d/2)		1.052			BP		
Dielectric					t _e		
A 29 to °C		6.95106			t _c		
B 145 °C		1348.6			ΔHc kcal/m		
C		217.34			ΔHf		
					ΔFf		
A* 29 to °C		1.39312			Viscosity centistokes °C		
B* 140 °C		1266.7			η		
K					B ^v to °C		
c					A ^v °C		
t _x to °C					(B ^v) to °C		
t _x °C					(A ^v) °C		
A' 15 to °C		7.35098			c _p liq. °K		
B' 29 °C		1552.9			c _p vap. °K		
C' °C		235.34			c _v vap.		
A'* 15 to °C		1.74916					
B'* 29 °C		1453.3					
Ac 145 to °C		7.3620					
Bc t _c °C		1663.					
Cc °C		257.					
Cryos. A° const. B°							
t _e °C		125.59					
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. 131

NAME		2, 4-Dimethyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}=\text{C} \quad \text{CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C							
F.P. 100%							
B.P. °C							
760 mm	109.0	2		0.6431	5	f	to
100	50.69	4		0.0460	4	g	°K
30	24.96	4		0.0363	5	h	
10	5.44	5		0.6441	5	f'	to
1	-26.78	5				g'	°K
						h'	
Pressure mm						m	to
25°C	30.06	5		81.47	5	n	°K
t_e	1029.	5		81.47	5	o	
Density g/ml				69.84	5	m'	to
20°C	0.7178	2		68.38	5	n'	°K
t ₂₅	0.7135	2		68.32	5	o'	
d ₄ ^t	0.7095	4		19.51	5		
a	0.7343	4		84.93	5	Surface tension dynes/cm. 20°C	
b	-0.0382	4		0.1384	5	g	21.12
							30 20.16
							40 19.21
Ref. Index						Parachor [P]	
n _D 20°C	1.4140	2		0.244	5	20°C	
25	1.4114	2		4.109	5	30	
30	1.4088	4		275.	5	40	
"C"	0.7675	4		18980.	5	Sugd. 335.2	
MR (Obs.)	39.06	2				Exp. L.l. %/wt.	
MR (Calc.)	38.677	5				u.	
(n _D -d/2)	1.0551	2				Dispersion	
						124.	
Dielectric						Flash Point °C	
A 20 to	6.94402	5				Fire Point	
B 138 °C	1329.8	5				M. Spec.	
C	218.29	5				Ultra V.	
A* 20 to	1.39145	5				X-Ray Dif.	
B* 135 °C	1248.8	5				Infrared	
K						Solubility in ⁺	
c						Acetone	
t _k — to —						Carbon tet.	
t _x — °C						Benzene	
A' to						Ether	
B' — °C						n-Heptane	
C'						Ethanol	
A* to						Water	
B* °C						Water in	
Ac 138 to	7.3549	5					
Bc t _c °C	1639.	5					
Cc	258.	5					
Cryos. A°							
const. B°							
t _e °C	119.96	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. 132

NAME		2, 4-Dimethyl-trans-3-hexene			STRUCTURAL FORMULA			
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}=\text{C} \quad \text{CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$			
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	0.6109	5	g		°K
B. P. °C			BP	0.0459	4	h		
760 mm	107.6	2	t_e	0.0363	5	f'		to
100	49.50	4	30 mm	0.6419	5	g'		°K
30	23.86	4				h'		
10	4.40	5				m		to
1	-27.70	5				n		°K
Pressure mm 25°C	31.82	5	ΔHm cal/g			o		
t_e	1025.	5	25°C	81.00	5	m'		to
Density g/ml 20°C	0.7145	2	30 mm	81.16	5	n'		°K
d_t 25	0.7101	2	BP	69.57	5	o'		
d_4 30	0.7056	4	t_e (d, e)	68.13	5	Surface tension dynes/cm. 20°C		
			$\Delta\text{Hv}/T_e$	68.08	5	30	19.71	5
				19.52	5	40	18.71	5
a	0.7323	4	d 23 to	84.46	5	Parachor [P] 20°C		
b	-0.0388	4	e 130 °C	0.1383	5	30		
Ref. Index n_D 20°C	1.4126	2	e'			40		
25	1.4101	2	d c g/ml	0.240	5	Sugd.	335.2	5
30	1.4076	4	v_c ml/g	4.161	5	Exp. L.l. %/wt. u.		
"C"	0.7686	4	t_c °C	272.	5	Dispersion		
MR (Obs.)	39.13	2	P c mm	18641.	5	Flash Point °C		
MR (Calc.)	38.677	5	PV/RT 25°C	1.0000	5	Fire Point		
(nD-d/2)	1.0554	2	30 mm	1.0000	5	M Spec. Ultra V.		
Dielectric			BP	0.9500	5	X-Ray Dif.		
A 23 to	6.94445	5	t_e	0.9409	5	Infrared		
B 135 °C	1325.4	5	t_c	0.256	5	Solubility in +		
C	218.56	5	ΔHc kcal/m			Acetone		
A* 23 to	1.39341	5	ΔHf			Carbon tet.		
B* 130 °C	1244.6	5	ΔFf			Benzene		
K			Viscosity centistokes η °C			Ether		
c						n-Heptane		
t_k to °C						Ethanol		
t_x to °C						Water		
A' to °C						Water in		
B' to °C								
C' to °C								
A'* to °C								
B'* to °C								
Ac 135 to	7.3551	5	B ^v to °C					
Bc t_c °C	1632.	5	A ^v to °C					
Cc t_c °C	257.	5	(B ^v) to °C					
Cryos. A° const. B°			(A ^v) to °C					
t_e °C	118.37	5	c_p liq. °K					
			c_p vap. °K					
			c_v vap.					
$T_R = 0.75 T_c$			+ 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:								

NAME		2, 5-Dimethyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}=\text{CHCH}(\text{CH}_3)\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.	Ref.	
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.4958	5	g	°K
B.P. °C			BP	0.0453	4	h	
760 mm	102.	2	t _e	0.0363	5	f'	to
100	44.62	4	t _e 30 mm	0.6335	5	g'	°K
30	19.31	4	ΔHm cal/g			h'	
10	0.1120	5	ΔHv cal/g			m	to
1	-31.56	5	25°C	78.96	5	n	°K
Pressure mm 25°C	40.18	5	30 mm	79.73	5	o	
t _e	1009.	5	BP	68.37	5	m'	to
Density g/ml 20°C	0.710	2	t _e	67.03	5	n'	°K
25	0.706	2	t _e (d, e)	66.99	5	o'	
d ₄ 30	0.702	4	ΔHv/T _e	19.52	5	Surface tension dynes/cm. 20°C	
a	0.726	4	d 15 to	82.38	5	γ	20.22
b	-0.038	4	e 120 °C	0.1374	5		30
Ref. Index			d' to				19.31
n _D 20°C	1.406	2	e' °C				40
25	1.404	2	d	0.244	5	Parachor [P]	
30	1.402	4	v _c ml/g	4.103	5	20°C	
"C"	0.7618	4	t _c °C	264.	5	30	
MR (Obs.)	38.8	2	P _c mm	18625.	5	40	
MR (Calc.)	38.677	5	PV/RT			Sugd.	335.2
(nD-d/2)	1.051	2	25°C	0.9989	5	Exp. L.l. %wt.	
Dielectric			30 mm	1.0000	5	u.	
A 15 to	6.93698	5	BP	0.9500	5	Dispersion	119.
B 130 °C	1304.5	5	t _e	0.9414	5	Flash Point °C	
C	219.62	5	t _e	0.256	5	Fire Point	
A* 15 to	1.39205	5	ΔHc kcal/m			M. Spec.	
B* 120 °C	1224.8	5	ΔHf			Ultra V.	
K			ΔFf			X-Ray Dif.	
c			Viscosity centistokes			Infrared	
t _k to			η °C			Solubility in +	
t _x °C			B ^v to			Acetone	
A' to			A ^v °C			Carbon tet.	
B' °C			(B ^v) to			Benzene	
C' °C			(A ^v) °C			Ether	
A'* to			c _p liq. °K			n-Heptane	
B'* °C			c _p vap. °K			Ethanol	
Acl 130 to	7.3483	5	c _v vap.			Water	
Bc t _c °C	1608.	5				Water in	
Cc t _c °C	258.	5					
Cryos. A° const. B°							
t _e °C	112.07	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:							

NAME		2,5-Dimethyl-trans-3-hexene		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}=\text{CHCH} \quad \text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208
			Ref.	Ref.	
F.P. °C			dt/dP °C/mm		f to °K
F.P. 100%			25°C	0.4958	5
B.P. °C			BP	0.0453	4
760 mm	102.	2	t_e	0.0363	5
100	44.62	4	30 mm	0.6335	5
30	19.31	4	ΔH_m cal/g		f' to °K
10	0.1120	5			g' to °K
1	-31.56	5			h' to °K
Pressure mm 25°C	40.18	5	ΔH_v cal/g		m to °K
t_e	1009.	5	25°C	78.96	5
			30 mm	79.73	5
Density g/ml 20°C	0.710	2	BP	68.37	5
d_t 25	0.706	2	t_e	67.03	5
d_4 30	0.702	4	t_e (d,e)	66.99	5
			$\Delta H_v/T_e$	19.52	5
a	0.726	4	d 15 to °C	82.38	5
b	-0.038	4	e 120 to °C	0.1374	5
Ref. Index n_D 20°C	1.406	2	e' to °C		
25	1.404	2	d_c g/ml	0.244	5
30	1.402	4	v_c ml/g	4.103	5
"C"	0.7618	4	t_c °C	264.	5
MR (Obs.)	38.8	2	P _c mm	18625.	5
MR (Calc.)	38.677	5	PV/RT 25°C	0.9989	5
(nD-d/2)	1.051	2	30 mm	1.0000	5
Dielectric			BP	0.9500	5
A 15 to °C	6.93698	5	t_e	0.9414	5
B 130 °C	1304.5	5	t_c	0.256	5
C	219.62	5	ΔH_c kcal/m		
A* 15 to °C	1.39205	5	ΔH_f		
B* 120 °C	1224.8	5	ΔF_f		
K			Viscosity centistokes		
c			η °C		
t_k to °C					
t_x to °C					
A' to °C					
B' to °C					
C' to °C					
A'* to °C			B ^v to °C		
B'* to °C			A ^v to °C		
Ac 130 to °C	7.3483	5	(B ^v) to °C		
Bc t_c °C	1608.	5	(A ^v) to °C		
Cc t_c °C	258.	5	c_p liq. °K		
Cryos. A° const. B°			c_p vap. °K		
t_e °C	112.07	5	c_v vap. °K		
$T_R = 0.75 T_c$					
+ 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:					

NAME		3, 4-Dimethyl-cis-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{C}=\text{C}\begin{matrix} \text{CH}_2\text{CH}_3 \\ \text{CH}_3\text{CH}_3 \end{matrix}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	1.0610	5	h	
760 mm	122.	2	BP	0.0473	4	f'	to
100	62.00	4	t _e	0.0363	5	g'	°K
30	35.50	4	30 mm	0.6637	5	h'	
10	15.27	5	ΔHm cal/g			m	to
1	-18.61	5				n	°K
Pressure mm 25°C	17.33	5	ΔHv cal/g	85.63	5	o	
t _e	1066.	5	25°C	84.76	5	m'	to
Density g/ml 20°C	0.747	2	30 mm	72.64	5	n'	°K
d ₄ ²⁵	0.743	2	BP	70.94	5	o'	
d ₄ ³⁰	0.739	4	t _e (d, e)	70.87	5	Surface tension dynes/cm. 20°C	
a	0.763	4	t _e	19.52	5	30	24.79
b	-0.038	4	ΔHv/T _e			40	23.73
Ref. Index n _D 20°C	1.430	2	d 36 to	89.74	5	40	22.71
25	1.428	2	e 135 °C	0.1401	5	Parachor [P] 20°C	
30	1.425	4	d' 20 to	87.70	5	30	
"C"	0.7644	4	e' 36 °C	0.0826	5	40	
MR (Obs.)	38.8	2	d _c g/ml	0.252	5	Sugd.	335.2
MR (Calc.)	38.677	5	v _c ml/g	3.970	5	Exp. L. l. %/wt. u.	
(n _D -d/2)	1.057	2	t _c °C	299.	5	Dispersion	127.
Dielectric			P _c mm	20507.	5	Flash Point °C	
A 36 to	6.95905	5	PV/RT			Fire Point	
B 156 °C	1377.7	5	25°C	1.0000	5	M. Spec. Ultra V.	
C	215.82	5	30 mm	1.0000	5	X-Ray Dif. Infrared	
A* 36 to	1.39265	5	BP	0.9500	5	Solubility in +	
B* 145 °C	1294.3	5	t _e	0.9396	5	Acetone	
K			t _c	0.256	5	Carbon tet.	
c			ΔHc kcal/m			Benzene	
t _k to			ΔHf			Ether	
t _x °C			ΔFf			n-Heptane	
A' 20 to	7.35168	5	Viscosity centistokes			Ethanol	
B' 36 °C	1582.1	5	η			Water	
C'	233.82	5	°C			Water in	
A* 20 to	1.74680	5	B ^v to				
B* 36 °C	1482.4	5	A ^v °C				
Ac 156 to	7.3700	5	(B ^v) to				
Bc t _c °C	1700.	5	(A ^v) °C				
Cc	257.	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. °K				
t _e °C	134.63	5	c _v vap.				
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:							

NAME		3, 4-Dimethyl-trans-3-hexene			STRUCTURAL FORMULA		
					$\text{CH}_3\text{CH}_2\text{C}=\text{C}\begin{matrix} \text{CH}_2\text{CH}_3 \\ \text{CH}_3\text{CH}_3 \end{matrix}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	1.0610	5	g	
B. P. °C			BP	0.0473	4	h	
760 mm	122.	2	t_e	0.0363	5	f'	to °K
100	62.00	4				g'	
30	35.50	4	ΔH_m cal/g			h'	
10	15.27	5				m	to °K
1	-18.61	5	ΔH_v cal/g			n	
Pressure mm 25°C	17.33	5	25°C	85.63	5	o	
t_e	1066.	5	30 mm	84.76	5		
Density g/ml 20°C			BP	72.64	5	m'	to °K
d_4^{25}	0.747	2	t_e	70.94	5	n'	
d_4^{25}	0.743	2	t_e (d, e)	70.87	5	o'	
d_4^{30}	0.739	4	$\Delta H_v/T_e$	19.52	5	Surface tension dynes/cm. 20°C	
a	0.763	4	d 36 to	89.74	5	24.79	5
b	-0.038	4	e 135 °C	0.1401	5	30	5
Ref. Index n_D^{20}			d' 20 to	87.70	5	40	5
25	1.430	2	e' 36 °C	0.0826	5	Parachor [P] 20°C	
30	1.428	2	d_c g/ml	0.252	5	335.2	5
30	1.425	4	v_c ml/g	3.970	5	Exp. L. l. %/wt. u.	
"C"	0.7644	4	t_c °C	299.	5	127.	2
MR (Obs.)	38.8	2	P_c mm	20507.	5	Dispersion	
MR (Calc.)	38.677	5	PV/RT			Flash Point °C	
(nD-d/2)	1.057	2	25°C	1.0000	5	Fire Point	
Dielectric			30 mm	1.0000	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A 36 to	6.95905	5	BP	0.9500	5	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B 156 °C	1377.7	5	t_e	0.9396	5		
C	215.82	5	t_c	0.256	5		
A* 36 to	1.39265	5	ΔH_c kcal/m				
B* 145 °C	1294.3	5	ΔH_f				
K			ΔF_f				
t_c			Viscosity centistokes				
t_x			η °C				
A' 20 to	7.35168	5	B^v to				
B' 36 °C	1582.1	5	A^v °C				
C'	233.82	5	(B ^v) to				
A* 20 to	1.74680	5	(A ^v) °C				
B* 36 °C	1482.4	5	c_p liq. °K				
Ac 156 to	7.3700	5	c_p vap. °K				
Bc t_c -	1700.	5	c_v vap.				
Cc	257.	5					
Cryos. A° const. B°							
t_e °C	134.63	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:							

NAME		2-n-Propyl-1-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\overset{\text{C}}{\text{C}}=\text{CH}_2$ C_3H_7		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F. P. °C				dt/dP		f	to
F. P. 100%				°C/mm		g	°K
B. P. °C				25°C	0.8975	h	
760 mm	117.7	2		BP	0.0469		
100	58.25	4		t_e	0.0363	f'	to
30	32.00	4		30 mm	0.6573	g'	°K
10	-11.97	5				h'	
1	-21.58	5		$\Delta\text{Hm cal/g}$		m	to
Pressure				$\Delta\text{Hv cal/g}$		n	°K
mm 25°C	20.83	5		25°C	84.22	o	
t_e	1054.0	5		30 mm	83.66		
Density				BP	71.69	m'	to
g/ml 20°C	0.7240	2		t_e	70.07	n'	°K
d_4^{25}	0.7198	2		t_e (d, e)	70.01	o'	
d_4^{30}	0.7156	4		$\Delta\text{Hv}/T_e$	19.51		
a	0.7408	4		d 32 to	88.13		
b	-0.03834	4		e 130 °C	0.1397		
Ref. Index				d'	86.20		
n_D				e'	0.0794		
20°C	1.4136	2					
25	1.4111	2		d, g/ml	0.243		
30	1.4085	4		v_c ml/g	4.123		
"C"	0.7603	4		t_c °C	288.		
MR (Obs.)	38.69	2		P_c mm	19365.		
MR (Calc.)	38.677	5		PV/RT			
(mD-d/2)	1.0516	2		25°C	1.0000		
Dielectric				30 mm	1.0000		
A 32 to	6.9535	5		BP	0.9500		
B 148 °C	1361.6	5		t_e	0.9400		
C	216.64	5		t_c	0.256		
A* 32 to	1.3916	5		$\Delta\text{Hc kcal/m}$			
B* 138 °C	1279.0	5		ΔHf			
K				ΔFf			
c				Viscosity			
t_k to				centistokes			
t_x °C				η			
A' 20 to	7.350	5					
B' 32 °C	1566.0	5		B^v to			
C'	234.64	5		A^v °C			
A'* 20 to	1.7467	5		(B ^v) to			
B'* 32 °C	1466.27	5		(A ^v) °C			
Ac 148 to	7.3638	5		c_p liq. °K			
Bc t_c °C	1677.4	5		c_p vap. °K			
Cc	256.71	5		c_v vap.			
Cryos. A°							
consts. B°							
t_e °C	129.78	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:							

NAME		2-Isopropyl-1-pentene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_2\text{C}=\text{CH}_2$ $\text{CH}(\text{CH}_3)_2$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to °K
F. P. 100%			25°C	0.7497	5	g	
B. P. °C			BP	0.0464	4	h	
760 mm	113.	2	t_e	0.0363	5	f'	to °K
100	54.18	4	30 mm	0.6501	5	g'	
30	28.22	4	$\Delta\text{Hm cal/g}$			h'	
10	8.40	5	$\Delta\text{Hv cal/g}$			m	to °K
1	-24.78	5	25°C	82.95	5	n	
Pressure mm 25°C	25.38	5	30 mm	82.50	5	o	
t_e	1040.	5	BP	70.72	5	m'	to °K
Density g/ml 20°C	0.725	2	t_e	69.18	5	n'	
d_t 25	0.721	2	t_e (d, e)	69.13	5	o'	
d_4 30	0.717	4	$\Delta\text{Hv}/T_e$	19.52	5	Surface tension dynes/cm. 20°C	
a	0.741	4	d 25 to	86.42	5	30	21.99
b	-0.038	4	e 124 °C	0.1390	5	40	21.02
Ref. Index n_D 20°C	1.414	2	d'				20.08
25	1.412	2	e'			Parachor [P]	
30	1.409	4	d	0.246	5	20°C	
"C"	0.7599	4	v	4.061	5	30	
MR (Obs.)	38.7	2	c	282.	5	40	
MR (Calc.)	38.677	5	t_c	19451.	5	Sugd.	335.2
(nD-d/2)	1.052	2	P _c mm			Exp. L. l. %/wt. u.	
Dielectric			PV/RT 25°C	1.0000	5	Dispersion	122.
A 25 to	6.94966	5	30 mm	1.0000	5	Flash Point °C	
B 144 °C	1344.9	5	BP	0.9500	5	Fire Point	
C	217.53	5	t_e	0.9404	5	M Spec. Ultra V.	
A* 25 to	1.39279	5	t_c	0.256	5	X-Ray Dif.	
B* 134 °C	1263.1	5	$\Delta\text{Hc kcal/m}$			Infrared	
K			ΔHf			Solubility in +	
c			ΔFf			Acetone	
t_k to °C			Viscosity centistokes			Carbon tet.	
t_x to °C			η °C			Benzene	
A' to °C						Ether	
B' to °C			B ^v to °C			n-Heptane	
C' to °C			A ^v to °C			Ethanol	
A* to °C			(B ^v) to °C			Water	
B* to °C			(A ^v) to °C			Water in	
Ac 144 to	7.3606	5	c_p liq. °K				
Bc t_c °C	1658.	5	c_p vap. °K				
Cc t_c °C	257.	5	c_v vap. °K				
Cryos. A° const. B°							
t_e °C	124.47	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:							

NAME		2-Ethyl-3-methyl-1-pentene			STRUCTURAL FORMULA			
					$\text{CH}_3\text{CH}_2\overset{\text{CH}}{\underset{\text{CH}_3}{\text{C}}}\text{C} = \text{CH}_2$			
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208			
F. P. °C				dt/dP		f	to	
F. P. 100%				°C/mm		g	°K	
B. P. °C				25°C	0.7348	5		
760 mm	112.5	2		BP	0.0464	4		
100	53.73	4		t _e	0.0363	5		
30	27.79	4		30 mm	0.6495	5		
10	7.99	5		ΔHm cal/g				
1	-25.16	5						
Pressure mm 25°C	25.96	5		ΔHv cal/g				
t _e	1039.	5		25°C	82.73	5		
				30 mm	82.35	5		
Density g/ml 20°C	0.729	2		BP	70.59	5		
d ₄ ^t 25	0.725	2		t _e	69.06	5		
d ₄ ^t 30	0.721	4		t _e (d, e)	69.00	5		
				ΔHv/T _e	19.51	5		
a	0.745	4		d 25 to	86.20	5		
b	-0.038	4		e 124 °C	0.1388	5		
Ref. Index n _D 20°C	1.4142	2		d' to				
25	1.4118	2		e' °C				
30	1.4094	4		d _c g/ml	0.248	5		
"C"	0.7561	4		v _c ml/g	4.038	5		
MR (Obs.)	38.5	2		t _c °C	282.	5		
MR (Calc.)	38.677	5		P _c mm	19563.	5		
(nD-d/2)	1.050	2		PV/RT				
Dielectric				25°C	1.0000	5		
A 25 to	6.94746	5		30 mm	1.0000	5		
B 143 °C	1342.5	5		BP	0.9500	5		
C	217.62	5		t _e	0.9404	5		
A* 25 to	1.39112	5		t _c	0.256	5		
B* 134 °C	1260.8	5		ΔHc kcal/m				
K				ΔHf				
t _k to				ΔFf				
t _x °C				Viscosity centistokes				
A' to				η				
B' °C								
C' °C				B _v to				
A** to				A _v °C				
B** °C				(B _v) to				
Ac 143 to	7.3586	5		(A _v) °C				
Bc t _c °C	1656.	5		c _p liq. °K				
Cc	258.	5		c _p vap. °K				
Cryos. A° const. B°				c _v vap.				
t _e °C	123.91	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. 140

NAME		2-Ethyl-4-methyl-1-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH}_2\text{C} = \text{CH}_2 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.6758	5	g	°K
B. P. °C			BP	0.0462	4	h	
760 mm	110.3	2	t_e	0.0363	4	f'	to
100	51.82	4	30 mm	0.6461	5	g'	°K
30	26.02	4				h'	
10	6.32	5					
1	-26.66	5					
Pressure mm 25°C	28.46	5	ΔHm cal/g			m	to
t_e	1033.	5	25°C	81.95	5	n	°K
Density g/ml 20°C	0.7195	2	30 mm	81.80	5	o	
d_4^{25}	0.7152	2	BP	70.12	5		
d_4^{30}	0.7109	4	t_e	68.63	5	m'	to
			t_e (d, e)	68.58	5	n'	°K
			$\Delta\text{Hv}/T_e$	19.51	5	o'	
a	0.7367	4	d 20 to	85.41	5	Surface tension dynes/cm. 20°C	
b	-0.0385	4	e 121 °C	0.1386	5	y	21.33
Ref. Index n_D^{20}	1.4105	2	d' to				30
25	1.4080	2	e' °C				40
30	1.4053	4				20.31	
"C"	0.7596	4	d c g/ml	0.242	5	19.33	
MR (Obs.)	38.68	2	v c ml/g	4.128	5	Parachor [P] 20°C	
MR (Calc.)	38.677	5	c °C	277.	5	30	
(nD-d/2)	1.0508	2	t_c	18963.	5	40	
Dielectric			P c mm			Sugd. 335.2	
A 20 to	6.94556	5	PV/RT			Exp. L.l. %/wt. u.	
B 139 °C	1334.6	5	25°C	1.0000	5	Dispersion	
C	218.	5	30 mm	1.0000	5	122.	
A* 20 to	1.39159	5	BP	0.9500	5	Flash Point °C	
B* 130 °C	1253.3	5	t_e	0.9406	5	Fire Point	
K			t_c	0.256	5	M Spec. Ultra V. X-Ray Dif. Infrared	
c			ΔHc kcal/m			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
t_k to			ΔHf				
t_x °C			ΔFf				
A' to			Viscosity centistokes °C				
B' °C							
C' °C							
A** to							
B** °C							
Ac 139 to	7.3563	5					
Bc t_c °C	1644.	5					
Cc °C	257.	5					
Cryos. A° const. B°							
t_e °C	121.42	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:							

NAME		3-Ethyl-2-methyl-1-pentene				STRUCTURAL FORMULA	
						$\text{CH}_3\text{CH}_2\text{CH} \begin{array}{l} \diagup \text{C} = \text{CH}_2 \\ \diagdown \text{C}_2\text{H}_5\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C ₈ H ₁₆	Molecular Weight	112.208		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to
F.P. 100%			25°C	0.6682	5	g	°K
B.P. °C			BP	0.0461	4	h	
760 mm	110.	2	t _e	0.0363	5	f'	to
100	51.56	4	30 mm	0.6456	5	g'	°K
30	25.78	4	ΔHm cal/g			h'	
10	6.10	5	ΔHv cal/g			m	to
1	-26.86	5	25°C	81.84	5	n	°K
Pressure mm 25°C	28.82	5	30 mm	81.73	5	o	
t _e	1032.	5	BP	70.07	5	m'	to
Density g/ml 20°C	0.730	2	t _e	68.59	5	n'	°K
t	0.726	2	t _e (d, e)	68.54	5	o'	
d ₄	0.722	4	ΔHv/T _e	19.52	5	Surface tension dynes/cm. 20°C	
a	0.746	4	d 20 to	85.30	5	γ	22.60
b	-0.038	4	e 121 °C	0.1385	5		30
Ref. Index			d' to				40
n _D 20°C	1.415	2	e'			Parachor [P]	
25	1.413	2	d _c g/ml	0.249	5		20°C
30	1.410	4	v _c ml/g	4.020	5		30
"C"	0.7564	4	t _c °C	279.	5		40
MR (Obs.)	38.5	2	P _c mm	19545.	5		Sugd. 335.2
MR (Calc.)	38.677	5	PV/RT			Exp. L. l. %wt.	
(n _D -d/2)	1.050	2	25°C	1.0000	5	u.	
Dielectric			30 mm	1.0000	5	Dispersion	122.
A 20 to	6.94544	5	BP	0.9500	5	Flash Point °C	
B 141 °C	1333.6	5	t _e	0.9407	5	Fire Point	
C	218.	5	t _c	0.256	5	M. Spec.	
A* 20 to	1.39179	5	ΔHc kcal/m			Ultra V.	
B* 131 °C	1252.4	5	ΔHf			X-Ray Dif.	
K			ΔFf			Infrared	
c			Viscosity centistokes			Solubility in ⁺	
t _k to			η			Acetone	
t _x °C						Carbon tet.	
A' to			B ^v to			Benzene	
B' °C			A ^v °C			Ether	
C'			(B ^v) to			n-Heptane	
A'* to			(A ^v) °C			Ethanol	
B'* °C			c _p liq. °K			Water	
Acl 141 to	7.3568	5	c _p vap. °K			Water in	
Bc t _c °C	1645.	5	c _v vap.				
Cc	258.	5					
Cryos. A° const. B°							
t _e °C	121.08	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:							

NAME		3-Ethyl-3-methyl-1-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{C}_2\text{H}_5 \end{array} \text{CH}=\text{CH}_2$		
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	0.7214	5	g	°K
B. P. °C			BP	0.0463	4	h	
760 mm	112.	2	t_e	0.0363	5	f'	to
100	53.31	4	t_e (d, e)			g'	°K
30	27.41	4	$\Delta\text{Hm cal/g}$			h'	
10	7.64	5	25°C	82.45	5	m	to
1	-25.47	5	30 mm	0.6486	5	n	°K
Pressure mm 25°C	26.48	5	BP	70.50	5	o	
t_e	1038.	5	t_e	68.99	5	m'	to
Density g/ml 20°C	0.7305	2	t_e	68.93	5	n'	°K
d_t 25	0.7264	2	$\Delta\text{Hv}/T_e$	19.52	5	o'	
d_4 30	0.7223	4	d 20 to	86.05	5	Surface tension dynes/cm. 20°C	
a	0.7469	4	e 123 °C	0.1388	5	30	22.66
b	-0.0381	4	e'			40	21.65
Ref. Index n_D 20°C	1.418	2	d c g/ml	0.248	5		20.67
25	1.416	2	v c ml/g	4.039	5	Parachor [P] 20°C	
30	1.413	4	t_c °C	282.	5	30	
"C"	0.7611	4	P mm	19557.	5	40	
MR (Obs.)	38.7	2	PV/RT 25°C	1.0000	5	Sugd.	335.2
MR (Calc.)	38.677	5	30 mm	1.0000	5	Exp. L. l. %/wt. u.	
(nD-d/2)	1.053	2	BP	0.9500	5	Dispersion	117.
Dielectric			t_e	0.9405	5	Flash Point °C	
A 20 to	6.94826	5	t_c	0.256	5	Fire Point	
B 143 °C	1341.1	5	$\Delta\text{Hc kcal/m}$			M Spec. Ultra V.	
C	217.72	5	ΔHf			X-Ray Dif.	
A* 20 to	1.39246	5	ΔFf			Infrared	
B* 133 °C	1259.5	5	Viscosity centistokes η °C			Solubility in + Acetone	
K						Carbon tet.	
c						Benzene	
t_k to						Ether	
t_x °C						n-Heptane	
A' to						Ethanol	
B' °C						Water	
C'						Water in	
A'* to			B ^v to				
B'* °C			A ^v °C				
Ac 143 to	7.3594	5	(B ^v) to				
Bc t_c °C	1654.	5	(A ^v) °C				
Cc	258.	5	c_p liq. °K				
Cryos. A° const. B°			c_p vap. °K				
t_e °C	123.34	5	c_v vap.				
$T_R = 0.75 T_c$							+ 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. 143

NAME		3-Ethyl-4-methyl-1-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{CH}=\text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C						f	to
F.P. 100%						g	°K
B.P. °C						h	
760 mm	107.5	2		0.6083	5		
100	49.40	4		0.0459	4		
30	23.77	4		0.0363	5	f'	to
10	4.31	5		0.6418	5	g'	°K
1	-27.79	5				h'	
Pressure mm 25°C	31.97	5				m	to
t_e	1025.	5				n	°K
Density g/ml 20°C	0.7200	2				o	
d 25	0.7158	2				m'	to
d 30	0.7116	4				n'	°K
a	0.7367	4				o'	
b	-0.0383	4				Surface tension dynes/cm. 20°C	
Ref. Index n_D 20°C	1.4097	2				30	21.38
25	1.4072	2				40	20.40
30	1.4047	4					19.43
"C"	0.7577	4				Parachor [P] 20°C	
MR (Obs.)	38.59	2				30	
MR (Calc.)	38.677	5				40	
($n_D-d/2$)	1.0497	2				Sugd. 335.2	
Dielectric						Exp. L. l. %/wt. u.	
A 20 to	6.94340	5				Dispersion	
B 137°C	1324.7	5				Flash Point °C	
C	218.57	5				Fire Point	
A* 20 to	1.39246	5				M. Spec. Ultra V. X-Ray Dif. Infrared	
B* 137°C	1243.9	5				Solubility in +	
K						Acetone	
c						Carbon tet.	
t_k to						Benzene	
t_x °C						Ether	
A' to						n-Heptane	
B' °C						Ethanol	
C'						Water	
A** to						Water in	
B** °C							
Ac 137 to	7.3545	5					
Bc t_c °C	1633.	5					
Cc t_c °C	258.	5					
Cryos. A° const. B°							
t_e °C	118.26	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:							

NAME		2, 3, 3-Trimethyl-1-pentene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{C} \\ \\ \text{C} = \text{CH}_2 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	
		Ref.				Ref.
F. P. °C	-69.	2	dt/dP °C/mm			f to
F. P. 100%			25°C	0.6276	5	g °K
B. P. °C			BP	0.0459	4	h
760 mm	108.31	2	t _e	0.0363	5	f' to
100	50.12	4	t _e (d, e)			g' °K
30	24.45	4	ΔHm cal/g			h'
10	4.96	5	ΔHv cal/g			m to
1	-27.20	5	25°C	81.27	5	n °K
Pressure mm 25°C	30.87	5	30 mm	81.35	5	o
t _e	1027.	5	BP	69.75	5	m' to
Density g/ml 20°C	0.7352	2	t _e	68.30	5	n' °K
d ^t 25	0.7308	2	t _e	68.25	5	o'
d ^t 30	0.7263	4	ΔHv/T _e	19.53	5	
a	0.7529	4	d 20 to	84.73	5	Surface tension dynes/cm. 20°C
b	-0.0388	4	e 125 °C	0.1383	5	30
Ref. Index n _D 20°C	1.4174	2	d' to			40
25	1.4151	2	e' °C			23.25
30	1.4128	4	d _c g/ml	0.25	5	22.14
"C"	0.7552	4	v _c ml/g	4.0	5	21.06
MR (Obs.)	38.41	2	t _c °C	276.	5	Parachor [P] 20°C
MR (Calc.)	38.677	5	P _c mm	19451.	5	30
(n _D -d/2)	1.0498	2	PV/RT 25°C	1.0000	5	40
Dielectric			30 mm	1.0000	5	Sugd.
A 20 to	6.94586	5	BP	0.9500	5	335.2
B 139 °C	1328.2	5	t _e	0.9408	5	Exp. L. l. %/wt. u.
C	218.42	5	t _c	0.256	5	Dispersion
A* 20 to	1.39405	5	ΔHc kcal/m			122.
B* 130 °C	1247.2	5	ΔHf			Flash Point °C
K			ΔFf			Fire Point
c			Viscosity centistokes			M Spec. Ultra V.
t _k to			η °C			X-Ray Dif.
t _x °C						Infrared
A' to			B ^v to			Solubility in +
B' °C			A ^v °C			Acetone
C' °C			(B ^v) to			Carbon tet.
A* to			(A ^v) °C			Benzene
B* °C			c _p liq. °K			Ether
Ac 139 to	7.3573	5	c _p vap. °K			n-Heptane
Bc t _c °C	1638.	5	c _v vap.			Ethanol
Cc t _c °C	258.	5				Water
Cryos. A° const. B°						Water in
t _e °C	119.17	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:						

NAME		2, 3, 4-Trimethyl-1-pentene				STRUCTURAL FORMULA			
						$\begin{array}{c} \text{CH}_3\text{CH} \quad \text{CH} \quad \text{C} = \text{CH}_2 \\ \quad \quad \\ \text{CH}_3\text{CH}_3\text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208				
F. P. °C		Ref.		dt/dP °C/mm		Ref.		Ref.	
F. P. 100%								f to	
B. P. °C				25°C				g °K	
760 mm		108.		0.6194		5		h	
100		49.82		0.0459		4		f' to	
30		24.15		0.0363		5		g' °K	
10		4.67		0.6427		5		h'	
1		-27.47						m to	
Pressure mm 25°C		31.35		81.10		5		n °K	
t_e		1026.		81.22		5		o	
Density g/ml 20°C		0.729		69.63		5		m' to	
25		0.725		68.19		5		n' °K	
d_4^{25}		0.721		68.14		5		o'	
30				19.52		5		Surface tension dynes/cm. 20°C	
a		0.745		84.55		5		y	
b		-0.038		0.1381		5		30 22.47 5	
Ref. Index								40 21.50 5	
n_D^{20}		1.415						20.54 5	
25		1.413						Parachor [P]	
30		1.411						20°C	
"C"		0.7575						30	
MR (Obs.)		38.6		0.249		5		40	
MR (Calc.)		38.677		4.015		5		Sugd.	
(nD-d/2)		1.051		276.		5		335.2 5	
Dielectric				19460.		5		Exp. L. l. %/wt.	
A 20 to		6.9426		1.0000		5		u.	
B 139 °C		1326.1		1.0000		5		Dispersion	
C		218.48		0.9500		5		122. 2	
A* 20 to		1.39111		0.9408		5		Flash Point °C	
B* 129 °C		1245.2		0.256		5		Fire Point	
K								M. Spec.	
t_k to								Ultra V.	
t_x °C								X-Ray Dif.	
A' to								Infrared	
B' °C								Solubility in +	
C' °C								Acetone	
A'* to								Carbon tet.	
B'* °C								Benzene	
Ac 139 to		7.3541						Ether	
Bc t_c °C		1636.						n-Heptane	
Cc t_c °C		258.						Ethanol	
Cryos. A° const. B°								Water	
t_e °C		118.83						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:									

NAME		2, 4, 4-Trimethyl-1-pentene		STRUCTURAL FORMULA	
				$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} - \text{CH}_2\text{C} = \text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208
F. P. °C	-93.480	Ref.	2	dt/dP °C/mm	
F. P. 100%				25°C	0.4858
B. P. °C				BP	0.0452
760 mm	101.44	2		t_e	0.0363
100	44.14	4		30 mm	0.6326
30	18.87	4			
10	-0.30	5		ΔH_m cal/g	
1	-31.93	5		ΔH_v cal/g	
Pressure mm 25°C	41.10	5		25°C	78.75
t_e	1007.	5		30 mm	79.60
Density g/ml 20°C	0.7150	2		BP	68.26
d_4^{25}	0.7108	2		t_e	66.93
d_4^{30}	0.7065	4		t_e (d, e)	66.89
		2		$\Delta H_v/T_e$	19.52
a	0.7319	4		d 18 to	82.20
b	-0.0384	4		e 120 °C	0.1373
Ref. Index n_D				d °C	
20°C	1.4086	2		e °C	
25	1.4060	2		d_c g/ml	0.244
30	1.4034	4		v_c ml/g	4.10
"C"	0.7611	4		t_c °C	264.
MR (Obs.)	38.76	2		P °C	18658.
MR (Calc.)	38.677	5		PV/RT	
($n_D - d/2$)	1.0511	2		25°C	0.9984
Dielectric				30 mm	1.0000
A 15 to	6.93714	5		BP	0.9500
B 129 °C	1302.8	5		t_e	0.9414
C	219.73	5		t_c	0.256
A* 15 to	1.39284	5		ΔH_c kcal/m	
B* 120 °C	1223.1	5		ΔH_f	
K				ΔF_f	
t_x to				Viscosity centistokes	
t_x °C				η °C	
A' to				B^v to	
B' °C				A'v °C	
C' °C				(B ^v) to	
A'* to				(A ^v) °C	
B'* °C				c_p liq. °K	
Ac 129 to	7.3486	5		c_p vap. °K	
Bc t_c °C	1606.	5		c_v vap.	
Cc °C	258.	5			
Cryos. A° const. B°					
t_e °C	111.43	5			
$T_R = 0.75 T_c$					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

No. 147

NAME		3, 3, 4-Trimethyl-1-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}-\text{C}-\text{CH}=\text{CH}_2 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F. P. °C							
F. P. 100%							
B. P. °C							
760 mm	105.	2		0.5543	5	f	to
100	47.24	4		0.0456	4	g	°K
30	21.76	4		0.0363	5	h	
10	2.42	5		0.6380	5	f'	to
1	-29.49	5				g'	°K
						h'	
Pressure mm 25°C	35.46	5				m	to
t_e	1018.	5				n	°K
						o	
Density g/ml 20°C	0.729	2				m'	to
t	0.725	2				n'	°K
d ⁴	0.721	4				o'	
a	0.745	4				Surface tension dynes/cm. 20°C	
b	-0.038	4				γ	22.47
							30
							40
							20.55
Ref. Index n _D 20°C	1.4144	2				Parachor [P] 20°C	
25	1.4120	2					
30	1.4096	4					
"C"	0.7564	4					
MR (Obs.)	38.5	2					
MR (Calc.)	38.677	5					
(n _D -d/2)	1.0499	2					
Dielectric							
A 15 to	6.94133	5					
B 135 °C	1315.8	5					
C	219.	5					
A* 15 to	1.39312	5					
B* 120 °C	1235.5	5					
K							
c							
t _k to							
t _x °C							
A' to							
B' °C							
C'							
A* to							
B* °C							
A _c 135 to	7.3531	5					
B _c t _c °C	1624.	5					
C _c °C	258.	5					
Cryos. A° const. B°							
t _e °C	115.44	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:							

NAME		3, 4, 4-Trimethyl-1-pentene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}=\text{CH}_2 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	
		Ref.			Ref.	Ref.
F.P. °C			dt/dP °C/mm			f to °K
F.P. 100%			25°C	0.534	5	g to °K
B.P. °C			BP	0.0455	4	h to °K
760 mm	104.	2	t_e	0.0363	5	f' to °K
100	46.36	4	t_e (d, e)	0.0363	5	g' to °K
30	20.94	4	ΔH_m cal/g			h' to °K
10	1.65	5	25°C	79.69	5	m to °K
1	-30.18	5	30 mm	80.24	5	n to °K
Pressure mm 25°C	36.97	5	BP	68.81	5	o to °K
t_e	1015.	5	t_e	67.43	5	m' to °K
Density g/ml 20°C	0.719	2	t_e (d, e)	67.39	5	n' to °K
d_t 25	0.715	2	$\Delta H_v/T_e$	19.53	5	o' to °K
d_4 30	0.711	4	d 15 to °C	83.13	5	Surface tension dynes/cm. 20°C
a	0.735	4	e 120 °C	0.1377	5	30
b	-0.038	4	e'			40
Ref. Index n_D 20°C	1.412	2	d _c g/ml	0.247	5	21.26
25	1.410	2	v _c ml/g	4.055	5	20.31
30	1.408	4	t _c °C	268.	5	19.38
"C"	0.7628	4	P _c mm	18987.	5	Sugd.
MR (Obs.)	38.9	2	PV/RT 25°C	1.1161	5	335.2
MR (Calc.)	38.677	5	30 mm	1.0000	5	Exp. L.l./wt. u.
(nD-d/2)	1.053	2	BP	0.9500	5	Dispersion
Dielectric			t_e	0.9412	5	117.
A 15 to °C	6.93989	5	t_c	0.256	5	Flash Point °C
B 133 °C	1312.1	5	ΔH_c kcal/m			Fire Point
C	219.24	5	ΔH_f			M Spec. Ultra V.
A* 15 to °C	1.39277	5	ΔF_f			X-Ray Dif.
B* 120 °C	1231.9	5	Viscosity centistokes °C			Infrared
K			η			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
c			B ^v to °C			
t_k to °C			A ^v to °C			
t_x to °C			(B ^v) to °C			
A' to °C			(A ^v) to °C			
B' to °C			c _p liq. °K			
C' to °C			c _p vap. °K			
A'* to °C			c _v vap. °K			
B'* to °C						
Ac 133 to °C	7.3514	5				
Bc t_c °C	1618.	5				
Cc t_c °C	258.	5				
Cryos. A° const. B°						
t_e °C	114.32	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:						

NAME		3-Ethyl-2-methyl-2-pentene			STRUCTURAL FORMULA			
Mole % Pur.		Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	$CH_3CH_2C=CCH_3$ $C_2H_5CH_3$	
		Ref.			Ref.			
F.P. °C			dt/dP			f	to	
F.P. 100%			°C/mm			g	°K	
B.P. °C			25°C	0.8733	5	h		
760 mm	117.0	2	BP	0.0468	4	f'	to	
100	57.63	4	t _e	0.0363	5	g'	°K	
30	31.43	4	30 mm	0.6563	5	h'		
10	11.43	5	ΔHm cal/g			m	to	
1	-22.07	5				n	°K	
Pressure mm 25°C	21.47	5	ΔHv cal/g			o		
t _e	1052.	5	25°C	83.98	5			
Density g/ml 20°C	0.739	2	30 mm	83.48	5			
d ₄ 25	0.735	2	BP	71.55	5	m'	to	
d ₄ 30	0.731	4	t _e	69.94	5	n'	°K	
			t _e (d, e)	69.88	5	o'		
			ΔHv/T _e	19.51	5			
a	0.755	4	d 31 to	87.86	5	Surface tension dynes/cm. 20°C		
b	-0.038	4	e 129 °C	0.1394	5	γ	23.74	
Ref. Index			d' 15 to	85.95	5		30	
n _D 20°C	1.4247	2	e' 31 °C	0.0789	5		40	
25	1.4222	2	d _c g/ml	0.250	5	Parachor [P]		
30	1.4198	4	v _c ml/g	3.996	5		20°C	
"C"	0.7637	4	t _c °C	290.	5		30	
MR (Obs.)	39.0	2	P _c mm	20052.	5		40	
MR (Calc.)	38.677	2				Sugd.	335.2	
(n _D -d/2)	1.0552	2	PV/RT			Exp. L. l. %/wt.		
Dielectric			25°C	1.0000	5	u.		
A 31 to	6.95222	5	30 mm	1.0000	5	Dispersion	127.	
B 149 °C	1358.9	5	BP	0.9500	5	Flash Point °C		
C	216.77	5	t _e	0.9401	5	Fire Point		
A* 31 to	1.39108	5	t _c	0.256	5	M. Spec.		
B* 139 °C	1276.4	5	ΔHc kcal/m			Ultra V.		
K			ΔHf			X-Ray Dif.		
c			ΔFf			Infrared		
t _k to			Viscosity centistokes			Solubility in ⁺		
t _x °C			η			Acetone		
A' 15 to	7.34929	5				Carbon tet.		
B' 31 °C	1563.2	5	B ^v to			Benzene		
C'	234.77	5	A ^v °C			Ether		
A** 15 to	1.74633	5	(B ^v) to			n-Heptane		
B** 31 °C	1463.5	5	(A ^v) °C			Ethanol		
Ac 149 to	7.3633	5	c _p liq. °K			Water		
Bc t _c °C	1677.	5	c _p vap. °K			Water in		
Cc t _c °C	257.	5	c _v vap.					
Cryos. A° const. B°								
t _e °C	128.99	5						
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: API								
PURIFICATION: API								
LITERATURE REFERENCES:								

NAME		3-Ethyl-4-methyl-cis-2-pentene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} = \text{CHCH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	
F.P. °C		Ref.	dt/dP °C/mm			f to
F.P. 100%			25°C	0.8401	5	g °K
B.P. °C			BP	0.0467	4	h
760 mm	116.	2	t_e	0.0363	5	f' to
100	56.76	4	t_e (d, e)	69.68	5	g' °K
30	30.61	4	ΔH_m cal/g			h'
10	10.66	5	ΔH_v cal/g			m to
1	-22.77	5	25°C	83.66	5	n °K
Pressure mm 25°C	22.40	5	30 mm	83.22	5	o
t_e	1049.	5	BP	71.33	5	m' to
Density g/ml 20°C	0.739	2	t_e	69.74	5	n' °K
d_4^{25}	0.735	2	t_e	69.68	5	o'
d_4^{30}	0.731	4	$\Delta H_v/T_e$	19.51	5	
a	0.755	4	d 31 to	87.48	5	Surface tension dynes/cm. 20°C
b	-0.038	4	e 128 °C	0.1392	5	30
Ref. Index n_D^{20}	1.424	2	d' 15 to	85.60	5	40
25	1.422	2	e' 31 °C	0.0779	5	23.74
30	1.419	4	d c g/ml	0.250	5	22.72
"C"	0.7625	4	v c ml/g	3.995	5	21.72
MR (Obs.)	38.7	2	t c °C	289.	5	Parachor [P]
MR (Calc.) (nD-d/2)	38.677	5	P c mm	20021.	5	20°C
	1.054	2	PV/RT			30
Dielectric			25°C	1.0000	5	40
A 31 to	6.95084	5	30 mm	1.0000	5	Sugd. 335.2
B 148 °C	1355.2	5	BP	0.9500	5	Exp. L. l. %/wt. u.
C	217.	5	t_e	0.9401	5	Dispersion
A* 31 to	1.39076	5	t_c	0.256	5	124.
B* 138 °C	1272.8	5	ΔH_c kcal/m			Flash Point °C
K			ΔH_f			Fire Point
c			ΔF_f			M Spec. Ultra V. X-Ray Dif. Infrared
t_k to			Viscosity centistokes			Solubility in +
t_x °C			η			Acetone
A' 15 to	7.34881	5	B' v to			Carbon tet.
B' 31 °C	1559.4	5	A' v °C			Benzene
C' 31 °C	235.	5	(B' v) to			Ether
A'* 15 to	1.74623	5	(A' v) °C			n-Heptane
B'* 31 °C	1459.8	5	c _p liq. °K			Ethanol
Ac 148 to	7.3620	5	c _p vap. °K			Water
Bc t_c °C	1672.	5	c _v vap.			Water in
Cc t_c °C	257.	5				
Cryos. A° const. B°						
t_e °C	127.86	5				
$T_R = 0.75 T_c$						
REFERENCES:	1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE:	API					
PURIFICATION:	API					
LITERATURE REFERENCES:						

NAME		3-Ethyl-4-methyl-trans-2-pentene				STRUCTURAL FORMULA		
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} = \text{CHCH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}		Molecular Weight	112.208		
		Ref.			Ref.			
F.P. °C			dt/dP			f	to	
F.P. 100%			°C/mm			g	°K	
B.P. °C			25°C		0.7881	5		
760 mm	114.3	2	BP		0.0466	4		
100	55.31	4	t_e		0.0363	5	to	
30	29.27	4	30 mm		0.6520	5	°K	
10	9.40	5						
1	-23.89	5	ΔH_m cal/g					
Pressure mm 25°C	24.03	5	ΔH_v cal/g				to	
t_e	1044.	5	25°C		83.16	5	°K	
			30 mm		82.83	5		
Density g/ml 20°C	0.7350	2	BP		71.00	5		
t 25	0.7308	2	t_e (d, e)		69.44	5	to	
d_4 30	0.7266	4	t_e		69.38	5	°K	
			$\Delta H_v/T_e$		19.52	5		
a	0.7518	4	d 29 to		86.90	5	Surface tension	
b	-0.0383	4	e 26 °C		0.1391	5	dynes/cm. 20°C	
Ref. Index			d' 15 to		85.05	5	30	
n_D 20°C	1.4210	2	e' 29 °C		0.0760	5	40	
25	1.4183	2					23.23	
30	1.4158	4					22.17	
"C"	0.7615	4	d_c g/ml		0.248	5	5	
MR (Obs.)	38.71	2	v _c ml/g		4.028	5	Parachor [P]	
MR (Calc.)	38.677	5	t_c °C		285.	5	20°C	
(nD-d/2)	1.0535	2	P_c mm		19717.	5	30	
Dielectric							40	
A 29 to	6.95117	5					Sugd. 335.2	
B 146 °C	1349.7	5	PV/RT				Exp. L. l. %/wt.	
C	217.28	5	25°C		1.0000	5	u.	
A* 29 to	1.39291	5	30 mm		1.0000	5	Dispersion	
B* 136 °C	1267.6	5	BP		0.9500	5	124.	
K			t_e		0.9403	5	Flash Point °C	
c			t_c		0.256	5	Fire Point	
t_k to			ΔH_c kcal/m				M. Spec.	
t_x °C			ΔH_f				Ultra V.	
A' 15 to	7.35081	5	ΔF_f				X-Ray Dif.	
B' 29 °C	1553.9	5	Viscosity				Infrared	
C' 235.28	235.28	5	centistokes				Solubility in +	
A'* 15 to	1.74885	5	η				Acetone	
B'* 29 °C	1454.3	5					Carbon tet.	
			B _v to				Benzene	
			A _v °C				Ether	
			(B _v) to				n-Heptane	
			(A _v) °C				Ethanol	
Ac 146 to	7.3622	5					Water	
Bc t_c °C	1665.	5					Water in	
Cc 257.	257.	5						
Cryos. A° const. B°			c _p liq. °K					
t_e °C	125.93	5	c _p vap. °K					
			c _v vap.					
$T_R = 0.75 T_c$						+ 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:								

NAME		2, 3, 4-Trimethyl-2-pentene				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_3\text{CH}=\text{C}=\text{C}\cdot\text{CH}_3 \\ \text{CH}_3\text{CH}_3\text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208					
		Ref.			Ref.					
F.P. °C	-113.3	2	dt/dP			f		to		
F.P. 100%			°C/mm			g		°K		
B.P. °C			25°C	0.8499	5	h				
760 mm	116.26	2	BP	0.0467	4	f'		to		
100	57.02	4	t_e	0.0363	5	g'		°K		
30	30.86	4	30 mm	0.6550	5	h'				
10	10.90	5	$\Delta\text{Hm cal/g}$			m		to		
1	-22.54	5	$\Delta\text{Hv cal/g}$			n		°K		
Pressure mm 25°C	22.11	5	25°C	83.79	5	o				
t_e	1050.	5	30 mm	83.33	5					
Density g/ml 20°C	0.7434	2	BP	71.43	5	m'		to		
25	0.7391	2	t_e	69.83	5	n'		°K		
d_4^{25}	0.7348	4	t_e (d, e)	69.77	5	o'				
			$\Delta\text{Hv}/T_e$	19.52	5	Surface tension dynes/cm. 20°C				
a	0.7606	4	d 31 to	87.63	5	30	24.31	5		
b	-0.0385	4	e 135 °C	0.1394	5	40	23.19	5		
Ref. Index			d' 15 to	85.74	5		22.11	5		
n_D			e' 31 °C	0.0782	5	Parachor [P]				
25	1.4275	2	d_c g/ml	0.250	5	20°C				
30	1.4249	2	v_c ml/g	3.997	5	30				
	1.4223	4	t_c °C	289.	5	40				
"C"	0.7639	4	P_c mm	20011.	5	Sugd.	335.2	5		
MR (Obs.)	38.79	2	PV/RT			Exp. L. l. %/wt.				
MR (Calc.)	38.677	5	25°C	1.0000	5	u.				
(nD-d/2)	1.0558	2	30 mm	1.0000	5	Dispersion	127.	2		
Dielectric			BP	0.9500	5	Flash Point °C				
A 31 to	6.95353	5	t_e	0.9401	5	Fire Point				
B 149 °C	1356.9	5	t_c	0.256	5	M Spec.				
C	217.	5	$\Delta\text{Hc kcal/m}$			Ultra V.				
A* 31 to	1.39318	5	ΔHf			X-Ray Dif.				
B* 138 °C	1274.5	5	ΔFi			Infrared				
K			Viscosity centistokes			Solubility in +				
c			η °C			Acetone				
t_k to						Carbon tet.				
t_x °C						Benzene				
A' 15 to	7.35138	5	B^v to			Ether				
B' 31 °C	1561.2	5	A'v °C			n-Heptane				
C'	235.	5	(B ^v) to			Ethanol				
A ^{1*} 15 to	1.74869	5	(A ^v) °C			Water				
B ^{1*} 31 °C	1461.6	5	c_p liq. °K			Water in				
Ac 149 to	7.3646	5	c_p vap. °K							
Bc t_c -	1674.	5	c_v vap.							
Cc	257.	5								
Cryos. A°										
const. B°										
t_e °C	128.15	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:										

NAME		2, 4, 4-Trimethyl-2-pentene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{CH}=\text{C} \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F. P. °C	-106.330	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.5523	5	h	
760 mm	104.91	2	BP	0.0456	4	f'	to
100	47.15	4	t _e	0.0363	5	g'	°K
30	21.67	4	30 mm	0.6379	5	h'	
10	2.33	5	ΔHm cal/g			m	to
1	-29.57	5	ΔHv cal/g			n	°K
Pressure			25°C	80.01	5	o	
mm 25°C	35.62	5	30 mm	80.46	5	m'	to
t _e	1017.	5	BP	68.99	5	n'	°K
Density			t _e (d, e)	67.60	5	o'	
g/ml 20°C	0.7218	2	t _e	67.56	5		
25	0.7176	2	ΔHv/T _e	19.52	5		
d ₄ ^t	0.7133	4	d 15 to	83.45	5	Surface tension	
a	0.7387	4	e 120 °C	0.1378	5	dynes/cm. 20°C	
b	-0.0384	4	d'			30	21.60
Ref. Index			e'			40	20.59
n _D			d _c g/ml	0.245	5		19.60
20°C	1.4160	2	v _c ml/g	4.073	5	Parachor [P]	
25	1.4135	2	t _c °C	270.	5	20°C	
30	1.4110	4	P _c mm	18976.	5	30	
"C"	0.7668	4				40	
MR (Obs.)	39.01	2	PV/RT			Sugd. 335.2	
MR (Calc.)	38.677	5	25°C	1.0000	5	Exp. L. l. %/wt.	
(n _D -d/2)	1.0551	2	30 mm	1.0000	5	u.	
Dielectric			BP	0.9500	5	Dispersion	
A 15 to	6.94038	5	t _e	0.9411	5	125.	
B 134 °C	1315.2	5	t _c	0.256	5	Flash Point °C	
C	219.07	5	ΔHc kcal/m			Fire Point	
A* 15 to	1.39226	5	ΔHf			M. Spec.	
B* 120 °C	1234.9	5	ΔFf			Ultra V.	
K			Viscosity			X-Ray Dif.	
c			centistokes			Infrared	
t _k to			η			Solubility in +	
t _x °C						Acetone	
A' to			B _v to			Carbon tet.	
B' °C			A _v °C			Benzene*	
C'			(B _v) to			Ether	
A'* to			(A _v) °C			n-Heptane	
B'* °C			c _p liq. °K			Ethanol	
Ac 134 to	7.3517	5	c _p vap. °K			Water	
Bc t _c °C	1622.	5	c _v vap.			Water in	
Cc t _c °C	258.	5					
Cryos. A°							
const. B°							
t _e °C	115.34	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. 154

NAME		3, 4, 4-Trimethyl-cis-2-pentene				STRUCTURAL FORMULA			
		Molecular Formula		Molecular Weight		$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{C} = \text{CHCH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$			
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}		Molecular Weight	112.208			Ref.
F.P. °C		Ref.	dt/dP				f		Ref.
F.P. 100%			°C/mm				g		
B.P. °C			25°C		0.7214	5	h		
760 mm	112.	2	BP		0.0463	4	f'		
100	53.31	4	t _e		0.0363	5	g'		
30	27.41	4	30 mm		0.6486	5	h'		
10	7.64	5	ΔHm cal/g				m		
1	-25.47	5	ΔHv cal/g				n		
Pressure mm 25°C	26.48	5	25°C		82.58	5	o		
t _e	1038.	5	30 mm		82.25	5	m'		
Density g/ml 20°C	0.739	2	BP		70.51	5	n'		
d ₄ ^t 25	0.735	2	t _e		68.99	5	o'		
d ₄ ^t 30	0.731	4	t _e (d, e)		68.94	5	Surface tension dynes/cm. 20°C		
a	0.755	4	ΔHv/T _e		19.52	5	30		23.74
b	-0.038	4	d 20 to		86.05	5	40		22.71
Ref. Index n _D 20°C	1.423	2	e 123 °C		0.1387	5	40		21.72
25	1.421	2	d' °C				Parachor [P]		
30	1.418	4	e'				20°C		
"C"	0.7608	4	d _c g/ml		0.252	5	30		
MR (Obs.)	38.7	2	v _c ml/g		3.969	5	40		
MR (Calc.) (nD-d/2)	38.677	5	t _c °C		283.	5	Sugd.		335.2
	1.054	2	P _c mm		19940.	5	Exp. L. l. %/wt. u.		
Dielectric			PV/RT				Dispersion		124.
A 20 to	6.94826	5	25°C		1.0000	5	Flash Point °C		
B 144 °C	1341.1	5	30 mm		1.0000	5	Fire Point		
C 217.72	217.72	5	BP		0.9500	5	M Spec. Ultra V. X-Ray Dif. Infrared		
A* 20 to	1.39246	5	ΔHc kcal/m				Solubility in +		
B* 133 °C	1259.5	5	ΔHf				Acetone		
K			ΔFf				Carbon tet.		
c			Viscosity centistokes				Benzene		
t _k to			η °C				Ether		
t _x °C			B ^v to				n-Heptane		
A' to			A ^v °C				Ethanol		
B' °C			(B ^v) to				Water		
C' °C			(A ^v) °C				Water in		
A** to			c _p liq. °K						
B** °C			c _p vap. °K						
Ac 144 to	7.3598	5	c _v vap.						
Bc t _c °C	1655.	5							
Cc t _c °C	258.	5							
Cryos. A° const. B°									
t _e °C	123.34	5							
T _R = 0.75 T _c									
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula									
SOURCE: API									
PURIFICATION: API									
LITERATURE REFERENCES:									

NAME		3, 4, 4-Trimethyl-trans-2-pentene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{C} = \text{CHCH}_3 \\ \\ \text{CH}_3\text{CH}_3 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208	
F. P. °C						
F. P. 100%						
B. P. °C						
760 mm	112.	2		0.7214	5	
100	53.31	4		0.0463	4	
30	27.41	4		0.0363	5	
10	7.64	5		0.6486	5	
1	-25.47	5				
Pressure mm 25°C	26.48	5				
t_e	1038.	5				
Density g/ml 20°C	0.739	2				
d_t 25	0.735	2				
d_4 30	0.731	4				
a	0.755	4				
b	-0.038	4				
Ref. Index n_D 20°C	1.423	2				
25	1.421	2				
30	1.418	4				
"C"	0.7608	4				
MR (Obs.)	38.7	2				
MR (Calc.) (nD-d/2)	38.677	5				
	1.054	2				
Dielectric						
A 20 to	6.94826	5				
B 144 °C	1341.1	5				
C	217.72	5				
A* 20 to	1.39246	5				
B* 133 °C	1259.5	5				
K						
t_k — to —						
t_x — °C						
A' — to —						
B' — °C						
C'						
A** to						
B** °C						
Ac 144 to	7.3598	5				
Bc t_c °C	1655.	5				
Cc	258.	5				
Cryos. A°						
consts. B°						
t_e °C	123.34	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:						

NAME		2-Isopropyl-3-methyl-1-butene			STRUCTURAL FORMULA	
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \text{---} \text{C} = \text{CH}_2 \\ \\ \text{CH}(\text{CH}_3)_2 \end{array}$	
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	0.5340	5	g °K
B.P. °C			BP	0.0455	4	h to
760 mm	104.	2	t_e	0.0363	5	f' to
100	46.36	4	30 mm	0.6365	5	g' °K
30	20.94	4	ΔH_m cal/g			h' to
10	1.65	5	ΔH_v cal/g			m to
1	-30.18	5	25°C	79.69	5	n °K
Pressure mm 25°C	36.97	5	30 mm	80.24	5	o to
t_e	1015.	5	BP	68.81	5	m' to
Density g/ml 20°C	0.722	2	t_e	67.44	5	n' °K
d_t	0.718	2	t_e (d, e)	67.39	5	o' to
d_4	0.714	4	$\Delta H_v/T_e$	19.53	5	Surface tension dynes/cm. 20°C
a	0.738	4	d 15 to	83.13	5	30
b	-0.038	4	e 120 °C	0.1376	5	40
Ref. Index n_D 20°C	1.4085	2	d' to			21.62
25	1.4061	2	e' °C			20.66
30	1.4037	4				19.72
"C"	0.7535	4	d c g/ml	0.247	5	Parachor [P] 20°C
MR (Obs.)	38.4	2	v c ml/g	4.04	5	30
MR (Calc.)	38.677	5	t_c °C	269.	5	40
(nD-d/2)	1.0475	2	P c mm	19096.	5	Sugd.
Dielectric			PV/RT 25°C	1.0000	5	Exp. L. l. %/wt. u.
A 15 to	6.9399	5	30 mm	1.0000	5	Dispersion
B 133 °C	1312.1	5	BP	0.9500	5	122.
C	219.24	5	t_e	0.9412	5	Flash Point °C
A* 15 to	1.39277	5	t_c	0.256	5	Fire Point
B* 125 °C	1231.9	5	ΔH_c kcal/m			M Spec. Ultra V.
K			ΔH_f			X-Ray Dif.
c			ΔF_f			Infrared
t_k to			Viscosity centistokes			Solubility in +
t_x °C			η °C			Acetone
A' to						Carbon tet.
B' °C			B ^v to			Benzene
C' °C			A ^v °C			Ether
A* to			(B ^v) to			n-Heptane
B* °C			(A ^v) °C			Ethanol
Ac 133 to	7.3515	5	c _p liq. °K			Water
Bc t_c °C	1618.	5	c _v vap. °K			Water in
Gc t_c °C	258.	5				
Cryos. A° const. B°						
t_e °C	114.32	5				
$T_R = 0.75 T_c$						
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula						
SOURCE: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

No. 157

NAME		2-Ethyl-3,3-dimethyl-1-butene		2-tert-Butyl-1-butene		STRUCTURAL FORMULA	
						$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{C} \quad \text{C} = \text{CH}_2 \\ \\ \text{CH}_3\text{C}_2\text{H}_5 \end{array}$	
Mole % Pur.	Ref.	Molecular Formula	C_8H_{16}	Molecular Weight	112.208		
F.P. °C		Ref.				f	to
F.P. 100%						g	°K
B.P. °C						h	
760 mm	110.	2		0.6682	5	f'	to
100	51.56	4		0.0461	4	g'	°K
30	25.78	4		0.0363	5	h'	
10	6.10	5		0.6456	5	m	to
1	-26.86	5				n	°K
Pressure mm 25°C	28.82	5				o	
t_e	1032.	5				m'	to
Density g/ml 20°C	0.728	2				n'	°K
d_4^{25}	0.724	2				o'	
d_4^{30}	0.720	4				Surface tension dynes/cm. 20°C	
a	0.744	4				γ	22.35
b	-0.038	4					30
Ref. Index n_D^{20}	1.4159	2					40
25	1.4135	2				Parachor [P]	
30	1.4111	4					20°C
"C"	0.7601	4					30
MR (Obs.)	38.7	2					40
MR (Calc.)	38.677	5					Sugd.
(nD-d/2)	1.0519	2					335.2
Dielectric							5
A 20 to	6.94544	5					Exp. L. l. %/wt.
B 141 °C	1333.6	5					u.
C	218.	5					Dispersion
A* 20 to	1.39179	5					122.
B* 131 °C	1252.4	5					Flash Point °C
K							Fire Point
t_k to							M. Spec.
t_x °C							Ultra V.
A' to							X-Ray Dif.
B' °C							Infrared
C'							Solubility in ⁺
A'* to							Acetone
B'* °C							Carbon tet.
Ac 141 to	7.3567	5					Benzene
Bc t_c °C	1645.	5					Ether
Cc t_c	258.	5					n-Heptane
Cryos. A°							Ethanol
const. B°							Water
t_e °C	121.08	5					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:							

NAME		1-Nonene		STRUCTURAL FORMULA	
				$\text{CH}_3(\text{CH}_2)_6\text{CH}=\text{CH}_2$	
Mole % Pur.	Ref.	Molecular Formula	C_9H_{18}	Molecular Weight	126.234
F.P. °C	-81.37	2			
F.P. 100%					
B.P. °C					
760 mm	146.868	2		3.018	5
100	84.210	2		0.04944	4
30	56.55	2		0.0362	5
10	35.44	2		0.6928	5
1	1.1	5			
Pressure mm 25°C	5.339	5			
t_e	1132.	5			
Density g/ml 20°C	0.72922	2			
d_t 25	0.72531	2			
d_4 30	0.72140	4			
a	0.74485	4			
b	-0.03780	4			
Ref. Index n_D 20°C	1.41572	2			
25	1.41333	2			
30	1.41094	4			
"C"	0.7585	4			
MR (Obs.)	43.415	2			
MR (Calc.)	43.295	5			
(nD-d/2)	1.05111	2			
Dielectric					
A 25 to	6.95387	2			
B 173 °C	1435.4	2			
C	205.535	2			
A* 25 to	1.42403	5			
B* 165 °C	1352.0	5			
K					
c					
t_x to					
t_x °C					
A' to					
B' °C					
C' °C					
A!* to					
B!* °C					
Ac 173 to	7.1708	5			
Bc t_c °C	1518.	5			
Cc 211.		5			
Cryos. A°					
consts. B°					
t_e °C	162.52	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:					

NAME		1-Decene		STRUCTURAL FORMULA			
				CH ₃ (CH ₂) ₇ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula C ₁₀ H ₂₀	Molecular Weight 140.260				
		Ref.		Ref.			
F.P. °C	-66.310	2	dt/dP °C/mm		f to		
F.P. 100%			25°C	8,778	g °K		
B.P. °C			BP	0.05157	h		
760 mm	170.570	2	t _e	0.03615	f' to		
100	105.198	2	30 mm	0.7231	g' °K		
30	76.33	2			h'		
10	54.29	2	ΔHm cal/g				
1	18.2	5					
Pressure mm 25°C	1.632	5	ΔHv cal/g 25°C	86.70	m 300 to		
t _e	1197.	5	30 mm	79.78	n 600 °K		
Density g/ml 20°C	0.74081	2	BP	66.84	o		
d ₄ ²⁵	0.73693	2	t _e	64.46	m' 700 to		
d ₄ ³⁰	0.73305	4	t _e (d, e)	64.27	n' 1000 °K		
			ΔHv/T _e	19.55	o'		
a	0.75632	4	d 25 to	90.27	Surface tension dynes/cm. 20°C		
b	-0.03775	4	e 189 °C	0.1374	γ	22.68	
Ref. Index n _D 20°C	1.42146	2	d' to		30	21.75	
25	1.41913	2	e' °C		40	20.84	
30	1.41675	4	d _c g/ml	0.243	Parachor [P] 20°C		
"C"	0.7563	4	v _c ml/g	4.11	30		
MR (Obs.)	48.059	2	t _c °C	343.	40		
MR (Calc.) (nD-d/2)	47.913	5	P _c mm	16209.	Sugd.	413.2	
Dielectric			PV/RT 25°C	1.0000	Exp. L.l. %/wt. u.		
A 25 to	6.96034	2	30 mm	1.0000	Dispersion		
B 233 °C	1501.872	2	BP	0.9450	Flash Point °C		
C	197.58	2	t _e	0.9303	Fire Point		
A* 76 to	1.45987	5	t _e	0.243	M. Spec. Ultra V. X-Ray Dif. Infrared		
B* 199 °C	1417.2	5	ΔHc kcal/m	1488.82	Solubility in ⁺		
K			ΔHf		Acetone		
c			ΔFf		Carbon tet.		
t _k to			Viscosity centistokes		Benzene		
t _x °C			η 40°C	0.855	Ether		
A' to			60	0.692	n-Heptane		
B' °C			80	0.583	Ethanol		
C'			100	0.501	Water		
A'*			B ^v 30 to	479.3	Water in		
B'*			A ^v 70°C	2.40181			
Ac 233 to	7.8050	5	(B ^v) 70 to	433.9			
Bc t _c °C	2317.	5	(A ^v) 110°C	2.53743			
Cc t _c °C	302.	5	c _p liq. °K				
Cryos. A° const. B°			c _p vap. 300°K	0.38329			
t _e °C	189.28	5	400	0.48332			
			c _v vap.				
TR = 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.160

NAME		1 - Undecene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₈ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₁₁ H ₂₂	Molecular Weight	154.286
F. P. °C	-49.185	2	dt/dP °C/mm		
F. P. 100%			25°C	26.16	5
B. P. °C	192.671	2	BP	0.05348	2
760 mm	124.851	2	t _e	0.03615	5
100	94.89	4	30 mm	0.7506	5
30	72.02	5			
10	34.54	5	ΔHm cal/g		
1			25°C	86.85	5
Pressure mm 25°C	0.490	5	30 mm	77.50	5
t _e	1255.	5	BP	64.33	5
Density g/ml 20°C	0.75032	2	t _e	61.70	5
d ^t 25	0.74655	2	t _e (d, e)	61.44	5
d ₄ 30	0.74278	4	ΔHv/T _e	19.53	5
a	0.7654	4	d 25 to	90.27	5
b	-0.03754	4	e 215 °C	0.1346	5
Ref. Index n _D 20°C	1.42609	2	d' 25 to		
25	1.42383	2	e' 215 °C		
30	1.42167	4	d _c g/ml		
"C"	0.7545	4	v _c ml/g	364.	5
MR (Obs.)	52.696	2	t _c °C	14948.	5
MR (Calc.)	52.531	5	P mm		
(nD-d/2)	1.05093	2	PV/RT 25°C	1.0000	5
Dielectric			30 mm	1.0000	5
A 25 to	6.96662	2	BP	0.9420	5
B 257 °C	1562.47	2	t _e	0.9253	5
C 189.74		2	t _c		
A* 94 to	1.49542	5	ΔHc kcal/m	1635.75	2
B* 225 °C	1477.5	5	ΔHf		
K			ΔFf		
c			Viscosity centistokes		
t _k to			η 40 °C	1.054	2
t _x °C			60	0.835	2
A' to			80	0.691	2
B' °C			100	0.586	2
C' °C			B ^v 30 to	527.6	4
A'* to			A ^v 70 °C	2.33787	4
B'* °C			(B ^v) 70 to	471.6	4
Ac 257 to	7.9272	5	(A ^v) 110 °C	2.50397	4
Bc t _c °C	2539.	5	c _p liq. °K		
Cc 312.		5	c _p vap. 300°K	0.38403	2
Cryos. A°			c _p vap. 400	0.48443	2
const. B°			c _v vap.		
t _e °C	214.20	5			
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:					

NAME		1-Dodecene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₉ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula	C ₁₂ H ₂₄	Molecular Weight	168.312			
F. P. °C	-35.230	2			Ref.			
F. P. 100%			dt/dP °C/mm			f	to	
B. P. °C			25°C	71.96	5	g	°K	
760 mm	213.357	2	BP	0.05522	2	h	-----	
100	143.315	2	t _e	0.03609	5	f'	to	
30	112.35	4	30 mm	0.7757	5	g'	°K	
10	88.72	5	ΔHm cal/g			h'		
1	49.20	5	ΔHv cal/g			m	300 to	0.0231
Pressure mm	0.1446	5	25°C	86.74	5	n	600 °K	0.0014
t _e	1309.	5	30 mm	75.41	5	o		-0.0650
Density g/ml	0.75836	2	BP	62.15	5	m'	700 to	0.1145
t 25	0.75474	2	t _e (d, e)	59.30	5	n'	1000 °K	0.0011
d ₄ 30	0.75112	4	ΔHv/T _e	58.97	5	o'		-0.0638
				19.54	5	Surface tension dynes/cm. 20°C		
a	0.77284	4	d 25 to	90.16	5	γ	30	23.99
b	-0.03724	4	e 238 °C	0.1313	5		40	23.09
Ref. Index n _D 20°C	1.43002	2	d'			Parachor [P] 20°C		
25	1.42782	2	e'			30		22.21
30	1.42562	4	d _c g/ml			40		
"C"	0.7530	4	v _c ml/g	384.	5	Sugd.	491.2	5
MR (Obs.).	57.336	2	t _c °C			Exp. L. l. %/wt. u.		
MR (Calc.) (nD-d/2)	57.149	5	P _c mm	13911.	5	Dispersion		
	1.05084	2	PV/RT 25°C	1.0000	5	Flash Point °C		
Dielectric			30 mm	1.0000	5	Fire Point		
A 112 to	6.97522	2	BP	0.9400	5	M. Spec. Ultra V.		
B 280 °C	1619.86	2	t _e	0.9214	5	X-Ray Dif.		
C	182.27	2	t _c			Infrared		
A* 112 to	1.52979	5	ΔHc kcal/m	1782.68	2	Solubility in ⁺		
B* 248 °C	1534.3	5	ΔHf			Acetone		
K			ΔFf			Carbon tet.		
c			Viscosity centistokes			Benzene		
t _k to			η 40°C	1.286	2	Ether		
t _x °C			60	0.995	2	n-Heptane		
A' to			80	0.811	2	Ethanol		
B' °C			100	0.676	2	Water		
C'			B ^v to	581.2	4	Water in		
A'*	to		A ^v °C	2.25329	4			
B'*	°C		(B ^v)	521.0	4			
Ac 280 to	8.0711	5	(A ^v)	2.43370	4			
Bc t _c °C	2792.	5	c liq. °K					
Cc t _c °C	327.	5	c _p vap. 300°K	0.38464	2			
Cryos. A° const. B°			400	0.48529	2			
t _e °C	237.59	5	c _v vap.					
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:								

NAME		1-Tridecene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₁₀ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula C ₁₃ H ₂₆	Molecular Weight 182.338		
F. P. °C	-23.070	2			
F. P. 100%					
B. P. °C	232.78	2	dt/dP °C/mm	207.11	5
760 mm	160.7	2	BP	0.05680	2
100	128.84	4	t _e	0.0361	5
30	104.5	5	30 mm	0.7980	5
10	63.9	5			
1			ΔHm cal/g		
Pressure mm 25°C	0.05477	5	ΔHv cal/g	86.76	5
t _e	1358.	5	25°C	73.58	5
			30 mm	60.05	5
Density g/ml 20°C	0.7653	2	BP	56.96	5
d ^t 25	0.7617	2	t _e	56.57	5
d ^t 30	0.7581	4	t _e (d, e)	19.50	5
			ΔHv/T _e		
a	0.7797	4	d 25 to	90.36	5
b	-0.0372	4	e 265 °C	0.1302	5
			d' to		
			e' °C		
Ref. Index n _D 20°C	1.4336	2	d _c g/ml		
25	1.43118	2	v _c ml/g		
30	1.4291	4	t _c °C	401.	5
"C"	0.7518	4	P _c mm	12776.	5
MR (Obs.)	61.969	2	PV/RT		
MR (Calc.)	61.767	5	25°C	1.0000	5
(nD-d/2)	1.0508	2	30 mm	1.0000	5
			BP	0.9370	5
Dielectric			t _e	0.9165	5
A 128 to	6.9692	2	ΔHc kcal/m	1929.60	2
B 300°C	1662.68	2	ΔHf		
C	173.90	2	Δf		
A* 128 to	1.55088	5	Viscosity centistokes		
B* 270°C	1577.9	5	η		
K			40 °C	1.56	2
c			60	1.184	2
t _k to			80	0.945	2
t _x °C			100	0.780	2
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v)		
A'* to			(A ^v)		
B'* °C			c _p liq. °K		
			c _p vap. 300°K	0.38522	2
Ac 300 to	8,2020	5	c _v vap. 400	0.48602	2
Bc t _c °C	3037.	5			
Cc t _c °C	341.	5			
Cryos. A° const. B°					
t _e °C	259.52	5			
TR = 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:					

NAME		1-Tetradecene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₁₁ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula C ₁₄ H ₂₈	Molecular Weight 196.364					
	Ref.							Ref.
F. P. °C	-12.85	2	dt/dP °C/mm		f	to		
F. P. 100%			25°C	497.07	g	°K		
B. P. °C			BP	0.05820	h	---		
760 mm	251.100	2	t _e	0.0361	f'	to		
100	177.1	2	t _e 30 mm	0.8181	g'	°K		
30	144.40	4	ΔHm cal/g		h'			
10	119.0	5						
1	74.5	5	ΔHv cal/g		m	300 to	0.0231	4
Pressure mm 25°C	0.01815	5	25°C	86.67	n	600 °K	0.0014	4
t _e	1406.	5	30 mm	71.91	o		-0.0650	4
Density g/ml 20°C	0.7713	2	BP	58.18				
d ₄ ^t 25	0.7677	2	t _e	54.89	m'	700 to	0.1155	4
d ₄ ^t 30	0.7641	4	t _e (d, e)	54.42	n'	1000 °K	0.0011	4
			ΔHv/T _e	19.48	o'		-0.0638	4
a	0.7857	4	d _e 25 to	90.50	Surface tension dynes/cm. 20°C			
b	-0.0372	4	e 290°C	0.1288	30			
Ref. Index n _D 20°C	1.43631	2	d' to		40			
25	1.43415	2	e' °C		24.99			
30	1.4320	4			24.07			
"C"	0.7507	4	d _c g/ml		23.17			
MR (Obs.)	66.610	2	v _c ml/g		Parachor [P] 20°C			
MR (Calc.)	66.385	5	t _c °C	416.	30			
(n _D -d/2)	1.0508	2	P _c mm	11740.	40			
Dielectric			PV/RT 25°C		Sugd. 569.2			
A 144 to	6.9615	2	25°C	1.0000	Exp. L. l. %/wt. u.			
B 319 °C	1699.76	2	30 mm	1.0000	Dispersion			
C	165.53	2	BP	0.9350	109.			
A* 144 to	1.56703	5	t _e	0.9129	Flash Point °C			
B* 290 °C	1615.5	5	t _c		Fire Point			
K			ΔHc kcal/m	2067.52	M. Spec. Ultra V. X-Ray Dif. Infrared			
t _k to °C			ΔHf		Solubility in +			
t _k °C			ΔFf		Acetone			
A' 20 to	7.63041	5	Viscosity centistokes		Carbon tet.			
B' 144 °C	2139.5	5	η 40°C	1.85	Benzene			
C'	203.3	5	60	1.40	Ether			
A** 20 to	2.21444	5	80	1.097	n-Heptane			
B** 144 °C	2037.5	5	100	0.891	Ethanol			
Ac 319 to	8.3416	5	B ^v to °C		Water			
Bc t _c °C	3298.	5	A ^v °C		Water in			
Cc t _c °C	356.	5	(B ^v)					
Cryos. A° const. B°			(A ^v)					
t _e °C	280.17	5	c _p liq. °K					
			c _p vap. 300°K	0.38566				
			c _p vap. 400	0.48665				
			c _v vap.					
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:								

NAME		1-Pentadecene		STRUCTURAL FORMULA			
				$\text{CH}_3(\text{CH}_2)_{12}\text{CH}=\text{CH}_2$			
Mole % Pur.	Ref.	Molecular Formula $\text{C}_{15}\text{H}_{30}$	Molecular Weight 210.390				
F. P. °C	-3.730	2		dt/dP °C/mm			
F. P. 100%				25°C	1629.5	5	f to °K
B. P. °C	268.17	2		BP	0.0596	4	g
760 mm	192.5	2		t_e	0.0361	5	h
100	159.1	4		30 mm	0.8362	5	f' to °K
30	133.7	5					g'
10	91.2	5					h'
1							
Pressure mm 25°C	0.00609	5		ΔHm cal/g			m 300 to 600 °K
t_e	1448.0	5		25°C	86.60	5	n
Density g/ml 20°C	0.77641	2		30 mm	70.37	5	o
d_4^{25}	0.77290	2		BP	56.41	5	
d_4^{30}	0.7694	4		t_e	52.92	5	m' 700 to 1000 °K
				t_e (d, e)	52.39	5	n'
				ΔHv/T _e	19.44	5	o'
a	0.7904	4		d 159 to 290 °C	90.75	5	Surface tension dynes/cm. 20°C
b	-0.0370	4		e 20 to 159 °C	0.1280	5	30
Ref. Index n_D^{20}	1.4389	2		d' 20 to 159 °C	89.62	5	40
25	1.4368	2			0.1210	5	Sugd.
30	1.4347	4		d c g/ml	431.	5	608.2
"C"	0.7497	4		v c ml/g	10918.	5	
MR (Obs.)	71.251	2		t_c °C			Parachor [P] 20°C
MR (Calc.)	71.003	5		P c mm			30
(nD-d/2)	1.0506	2					40
Dielectric				PV/RT 25°C	1.0000	5	Dispersion
A 159 to 337°C	6,9503	2		30 mm	1.0000	5	108.
B 337°C	1730.301	2		BP	0.9325	5	Flash Point °C
C	157.	2		t_e	0.9086	5	Fire Point
A* 159 to 305°C	1,58000	5		ΔHc kcal/m	2223.44	2	M Spec. Ultra V. X-Ray Dif. Infrared
B* 305°C	1647.3	5		ΔHf			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in
K				ΔFf			
c				Viscosity centistokes			
t_x to °C				40 °C	2.21	2	
A' to °C				60	1.64	2	
B' to °C				80	1.265	2	
C' to °C				100	1.016	2	
A** to °C				B ^v to °C			
B** to °C				A ^v to °C			
Ac 337 to °C	8,5072	5		(B ^v)			
Bc t_c °C	3608.	5		(A ^v)			
Cc t_c °C	376.	5		c _p liq. °K			
Cryos. A° const. B°				c _p vap. 300°K	0.38609	2	
t_e °C	299.58	5		400	0.48719	2	
				c _v vap.			
$T_R = 0.87 T_c$				+ 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:							

NAME		1-Hexadecene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₁₃ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₁₆ H ₃₂	Molecular Weight	224.416
F.P. °C	4.120	2	dt/dP °C/mm		
F.P. 100%			25°C	4630.	5
B.P. °C			BP	0.0610	4
760 mm	284.4	2	t _e	0.0362	5
100	207.2	2	30 mm	0.8527	5
30	173.13	4	ΔHm cal/g		
10	147.2	5	ΔHv cal/g		
1	103.9	5	25°C	86.45	5
Pressure mm 25°C	0.0352	5	30 mm	68.96	5
t _e	1487.	5	BP	54.75	5
Density g/ml 20°C	0.78112	2	t _e	51.07	5
d ₄ 25	0.77759	2	t _e (d, e)	50.46	5
d ₄ 30	0.77406	4	ΔHv/T _e	19.39	5
a	0.79524	4	d _e 173 to	91.08	5
b	-0.03706	4	e 310 °C	0.1277	5
Ref. Index n _D 20°C	1.44120	2	d'		
25	1.43907	2	d'		
30	1.43694	4	e'		
"C"	0.7489	4	d _c g/ml		
MR (Obs.)	75.898	2	v _c ml/g	444.	5
MR (Calc.)	75.621	5	t _c °C		
(nD-d/2)	1.05064	2	P _c mm	10008.	5
Dielectric			PV/RT		
A 173 to	6.936	2	25°C	1.0000	5
B 352°C	1755.2	2	30 mm	1.0000	5
C	148.	2	BP	0.9300	5
A* 173 to	1.59011	5	t _e	0.9043	5
B* 325 °C	1674.1	5	t _c		
K			ΔHc kcal/m	2370.37	2
c			ΔHf		
t _h to			ΔFi		
t _h °C			Viscosity centistokes		
A' to			η		
B' °C			40 °C	2.62	2
C'			60	1.89	2
A* to			80	1.46	2
B* °C			100	1.149	2
Ac 352 to	8.6611	5	B _v 35 to	740.1	5
Bc t _c °C	3905.	5	A _v 70 °C	Z.05527	5
Cc	394.	5	(B _v) 70 to	685.6	5
Cryos. A°			(A _v) 105 °C	Z.22324	5
const. B°			c _p liq. °C		
t _e °C	317.97	5	c _p vap. 300°K	0.38643	2
			400	0.48767	2
			c _v vap.		
T _R = 0.87T _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:					

NAME		1-Heptadecene			STRUCTURAL FORMULA				
					$\text{CH}_3(\text{CH}_2)_{14}\text{CH}=\text{CH}_2$				
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{17}\text{H}_{34}$	Molecular Weight	238.442				
F.P. °C	11.2	2		dt/dP °C/mm		f		to °K	
F.P. 100%				25°C	12449.	g			
B.P. °C				BP	0.0622	h			
760 mm	299.7	2		t_e	0.0362	f'		to °K	
100	221.0	2		30 mm	0.8672	g'			
30	186.34	4		ΔH_m cal/g		h'			
10	160.	2		ΔH_v cal/g		m	300	to	0.0229
1	116.	5		25°C	86.40	n	600	°K	0.0014
Pressure mm 25°C	0.0 ₃ 708	5		30 mm	67.65	o			-0.0650
t_e	1522.	5		BP	53.06				
Density g/ml 20°C	0.7852	2		t_e	49.31	m'	700	to	0.1160
d_t 25	0.7817	2		t_e (d, e)	48.51	n'	1000	°K	0.0011
d_4 30	0.7782	4		$\Delta H_v/T_e$	19.33	o'			-0.0638
a	0.7992	4		d 186 to	91.63	Surface tension dynes/cm. 20°C			
b	-0.0 ₃ 70	4		e 325 °C	0.1287	30			
Ref. Index n_D 20°C	1.4432	2		d'		40			
25	1.4411	2		e'		26.07			
30	1.4390	4				25.16			
"C"	0.7482	4		d_c g/ml		24.26			
MR (Obs.)	80.54	2		v_c ml/g		Parachor [P] 20°C			
MR (Calc.) (nD-d/2)	80.293	5		t_c °C	455.	30			
Dielectric				P_c mm	9252.	40			
A 186 to	6.920	2		PV/RT		Sugd. 686.2			
B 366 °C	1774.6	2		25°C	1.0000	Exp. L.l.%/wt. u.			
C	139.7	2		30 mm	1.0000	Dispersion			
A* 186 to	1.59829	5		BP	0.9250	107.			
B* 340 °C	1695.7	5		t_e	0.8995	Flash Point °C			
K				ΔH_c kcal/m	2517.30	Fire Point			
c				ΔH_f		M Spec. Ultra V.			
t_k --- to				ΔF_f		X-Ray Dif.			
t_x --- °C				Viscosity centistokes		Infrared			
A' --- to				η 40 °C	3.08	Solubility in +			
B' --- °C				60	2.18	Acetone			
C' --- °C				80	1.66	Carbon tet.			
A'* to				100	1.30	Benzene			
B'* °C				B ^v 35 to	783.1	Ether			
				A ^v 70 °C	3.98823	n-Heptane			
				(B ^v) 70 to	699.7	Ethanol			
				(A ^v) 105 °C	Z.23908	Water			
Ac 366 to	8.8342	5		c_p liq. °K		Water in			
Bc t_c °C	4239.	5		c_p vap. 300°K	0.38672				
Cc t_c °C	416.	5		400	-0.48809				
Cryos. A° const. B°				c_v vap.					
t_e °C	335.11	5							
$T_R = 0.88 T_c$						+ 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:									

NAME		1-Octadecene			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₁₅ CH=CH ₂				
Mole % Pur.	Ref.	Molecular Formula	C ₁₈ H ₃₆	Molecular Weight	252.468				
		Ref.			Ref.				Ref.
F.P. °C	17.6	2	dt/dP			f		to	
F.P. 100%			°C/mm			g		°K	
B.P. °C			BP	0.0633	4	h			
760 mm	314.2	2	t _e	0.03596	5	f'		to	
100	234.2	2	30 mm	0.8805	5	g'		°K	
30	198.91	4	ΔHm cal/g			h'			
10	172.	2	ΔHv cal/g			m	300 to	0.0230	4
1	128.	5	25°C			n	600 °K	0.0014	4
Pressure mm 93.77 °C	0.1000	5	30 mm	66.44	5	o		-0.0650	4
t _e	1575.	5	BP	52.04	5	m'	700 to	0.1164	4
Density g/ml 20°C	0.7888	2	t _e	48.18	5	n'	1000 °K	0.0011	4
d ^t 25	0.7853	2	t _e (d, e)	47.31	5	o'		-0.0638	4
d ^t 30	0.7818	4	ΔHv/T _e	19.45	5	Surface tension dynes/cm. 20°C			
a	0.8028	4	d 199 to	91.20	5	26.36			
b	-0.0370	4	e 360 °C	0.1246	5	30° 25.43			
Ref. Index			e' to °C			40 24.53			
n _D 20°C	1.4449	2	d _c g/ml			Parachor [P]			
25	1.4428	2	v _c ml/g			20°C			
30	1.4408	4	t _c °C	466.	5	30			
"C"	0.7476	4	P _c mm	8609.	5	40			
MR (Obs.)	85.185	2	PV/RT			Sugd. 725.2			
MR (Calc.)	84.851	5	25°C	1.0000	5	Exp. L. l. %/wt.			
(n _D -d/2)	1.0506	2	30 mm	1.0000	5	u.			
Dielectric			BP	0.9303	5	Dispersion			
A 199 to	6.901	2	t _e	0.9053	5	107.			
B 380 °C	1789.4	2	t _c			Flash Point °C			
C	131.	2	ΔHc kcal/m	2664.22	2	Fire Point			
A* 199 to	1.58563	5	ΔHf			M. Spec.			
B* 361 °C	1707.4	5	ΔFf			Ultra V.			
K			Viscosity centistokes			X-Ray Dif.			
c			η			Infrared			
t _k - to -			40 °C	3.59	2	Solubility in +			
t _x °C			60	2.51	2	Acetone			
A' to			80	1.87	2	Carbon tet.			
B' °C			100	1.46	2	Benzene			
C'			B ^v 35 to	810.4	5	Ether			
A'* to			A ^v 70 °C	3,96761	5	n-Heptane			
B'* °C			(B ^v) 70 to	560.8	5	Ethanol			
Ac 380 to	9.04000	5	(A ^v) 105 °C	2,69007	5	Water			
Bc t _c °C	4643.	5	c _p liq. °K			Water in			
Cc 443.1	443.1	5	c _p vap. 300°K	0.38702	2				
Cryos. A° const. B°			c _v vap. 400	0.48846	2				
t _e °C	352.14	5							
T _R = 0.88 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:									

NAME		1-Nonadecene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₁₆ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₁₉ H ₃₈	Molecular Weight	266.494		
		Ref.			Ref.		
F.P. °C	23.4	2	dt/dP °C/mm			f	to
F.P. 100%			106.43 °C	125.89	5	g	°K
B.P. °C			BP	0.06429	2	h	---
760 mm	328.0	2	t _e	0.03604	5	f'	to
100	247.	4	t _e (d, e)	0.8925	5	g'	°K
30	211.15	4	ΔHm cal/g			h'	
10	184.	2	ΔHv cal/g			m	300 to
1	138.8	5	25°C	86.30	5	n	600 °K
Pressure mm 106.43°C	0.1000	5	30 mm	65.33	5	o	0.0230
t _e	1606.06	5	BP	50.79	5		0.0014
Density g/ml 20°C	0.7920 [‡]	2	t _e	46.63	5	m'	700 to
d ₄ ^t 25	0.7886	2	ΔHv/T _e	45.83	5	n'	1000 °K
d ₄ ^t 30	0.7852	4	d	19.38	5	o'	0.1187
a	0.8056	4	e	91.62	5		0.0011
b	-0.0368	4	d'	0.1245	5		-0.0638
Ref. Index n _D 20°C	1.4465 [‡]	2	e'			Surface tension dynes/cm. 20°C	
25	1.4445	2	d _c g/ml			y	26.60
30	1.4424	4	v _c ml/g				30
"C"	0.7471	4	t _c °C	477.	5		40
MR (Obs.)	89.83 [‡]	2	P _c mm	8079.4	5		24.83
MR (Calc.) (nD-d/2)	89.475 [‡]	5	PV/RT			Parachor [P] 20°C	
Dielectric	1.0506 [‡]	2	106.43 °C	1.0000	5		764.2
A 211 to	6.881	2	30 mm	1.0000	5	Exp. L. l. %/wt. u.	
B 1394 °C	1800.3	2	BP	0.9300	5	Dispersion	
C	122.	2	t _e	0.9005	5	106.	
A* 211 to	1.58837	5	t _c			Flash Point °C	
B* 377 °C	1720.93	5	ΔHc kcal/m	2811.14	2	Fire Point	
K			ΔHf			M Spec. Ultra V.	
c			ΔFf			X-Ray Dif.	
t _k --- to			Viscosity centistokes			Infrared	
t _x --- °C			η			Solubility in +	
A' to			40 °C	4.17	2	Acetone	
B' --- °C			60	2.87	2	Carbon tet.	
C' --- °C			80	2.12	2	Benzene	
A** to			100	1.63	2	Ether	
B** °C			B ^v 35 to	846.6	4	n-Heptane	
			A ^v 70 °C	3.91708	4	Ethanol	
			(B ^v) 70 to	752.3	4	Water	
			(A ^v) 105 °C	2.19638	4	Water in	
Ac 394 to	9.29778	5	c _p liq. °K				
Bc t _c °C	5158.13	5	c _p vap. 300°K	0.38725	2		
Cc t _c °C	479.41	5	400	0.48879	2		
Cryos. A° const. B°			c _v vap.				
t _e °C	367.84	5					
T _R = 0.89 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:							

NAME		1-Eicosene			STRUCTURAL FORMULA				
					CH ₃ (CH ₂) ₁₇ CH=CH ₂				
Mole % Pur.	Ref.	Molecular Formula	C ₂₀ H ₄₀	Molecular Weight					280.520
		Ref.			Ref.				
F.P. °C	28.6	2	dt/dP °C/mm			f	to		
F.P. 100%			117.0°C	127.12	5	g	°K		
B.P. °C			BP	0.06527	4	h			
760 mm	341.2	2	t _e	0.03634	5	f'	to		
100	259.	2	30 mm	0.9036	5	g'	°K		
30	222.92	4	ΔHm cal/g			h'			
10	195.	2	ΔHv cal/g			m	300 to	0.0230	
1	149.	5	25°C	86.27	5	n	600 °K	0.0014	
Pressure mm 117.0°C	0.1000	5	30 mm	64.32	5	o		-0.050	
t _e	1622.	5	BP	49.34	5				
Density g/ml 20°C	0.7950 [‡]	2	t _e	44.87	5	m'	700 to	0.1166	
t	0.7916 [‡]	2	t _e (d, e)	44.12	5	n'	1000 °K	0.0011	
t ₄	0.7882 [‡]	4	ΔHv/T _e	19.19	5	o'		-0.038	
d ₄						Surface tension dynes/cm. 20°C			
a	0.8086	4	d 223 to	92.55	5	30 25.94			
b	-0.0368	4	e 383 °C	0.1266	5	40 25.06			
Ref. Index			d'			Parachor [P] 20°C			
n _D 20°C	1.4480 [‡]	2	e'			30 803.2			
25	1.4459 [‡]	2	d _e g/ml			40 Sugd.			
30	1.4439 [‡]	4	v _c ml/g	486.	5	Exp. L. l. %/wt. u.			
"C"	0.7466	4	t _c °C	7425.	5	Dispersion 106. [‡]			
MR (Obs.)	94.47 [‡]	2	P _c mm			Flash Point °C			
MR (Calc.)	94.093	5	PV/RT 25°C	1.0000	5	Fire Point			
(n _D -d/2)	1.0506 [‡]	2	30 mm	1.0000	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
Dielectric			BP	0.9250	5	Solubility in ⁺			
A 223 to	6.859	2	t _e	0.8894	5	Acetone			
B 405 °C	1807.9	2	t _c			Carbon tet.			
C	113.	2	ΔHc kcal/m		2958.06	2	Benzene		
A* 223 to	1.59840	5	ΔHf			Ether			
B* 393 °C	1734.6	5	ΔFf			n-Heptane			
K			Viscosity centistokes			Ethanol			
c			η			Water			
t _k to			40 °C	4.81	2	Water in			
t _x °C			60	3.27	2				
A' to			80	2.38	2				
B' °C			100	1.81	2				
C'			B ^v 35 to	874.5	5				
A'* to			A ^v 70 °C	3.89001	5				
B'* °C			(B ^v) 70 to	783.6	5				
Ac 405 to	9.50720	5	(A ^v) 105 °C	Z. 15801	5				
Bc t _c °C	5591.	5	c _p liq. °K						
Cc	505.	5	c _p vap. 300°K	0.38749	2				
Cryos. A° const. B°			c _p vap. 400	0.48909	2				
t _e °C	382.48	5	c _v vap.						
T _R = 0.89T _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:									
PURIFICATION:									
LITERATURE REFERENCES:									

NAME		1-Heneicosene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₁₈ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₂₁ H ₄₂	Molecular Weight	294.546		
		Ref.			Ref.		
F.P. °C	33.3	2	dt/dP °C/mm			f to	
F.P. 100%			0.1 mm	146.20	5	g °K	
B.P. °C			BP	0.0646	4	h + - - -	
760 mm	355.	2	t _e	0.0354	5	f' to	
100	271.27	5	30 mm	0.9666	5	g' °K	
30	233.06	5	ΔHm cal/g			h'	
10	203.53	5	ΔHv cal/g			m to	
1	153.75	5	0.1 mm	69.75	5	n °K	
0.1	115.62	5	30 mm	59.60	5	o	
Press. mm	1602.	5	BP	47.98	5	m' to	
t _e			t _e	44.61	5	n' °K	
Density g/ml 20°C	0.7977 [‡]	2	t _e (d, e)	44.22	5	o'	
25	0.7943 [‡]	2	ΔHv/T _e	19.39	5	Surface tension dynes/cm. 20°C	
d ₄ 30	0.7909 [‡]	4				30	27.06
a	0.8113	4	d 233 to	81.80	5	40	26.15
b	-0.0368	4	e 393 °C	0.0953	5	γ	25.27
Ref. Index			d' 115 to	79.74	5	Parachor [P]	
n _D 20°C	1.4494 [‡]	2	e' 233 °C	0.0864	5	20°C	
25	1.4473 [‡]	2				30	
30	1.4452 [‡]	2	d _c g/ml			40	
"C"	0.7461	4	v _c ml/g			Sugd.	842.2
MR (Obs.)	99.09	4	t _c °C			Exp. L. l. %/wt.	
MR (Calc.)	98.711	5	P _c mm			u.	
(n _D -d/2)	1.0505 [‡]	2	PV/RT			Dispersion	105. [‡]
Dielectric	2.10	5	0.1 mm	1.0000	5	Flash Point °C	
A 233 to	7.54372	4	30 mm	1.0000	5	Fire Point	
B 443 °C	2457.3	4	BP	0.8948	5	M Spec.	
C	172.	5	t _e	0.8627	5	Ultra V.	
A* 233 to	2.31717	5	t _c			X-Ray Dif.	
B* 403 °C	2377.8	5	ΔHc kcal/m			Infrared	
K			ΔHf			Solubility in +	
c			Viscosity centistokes			Acetone	
t _x to			η °C			Carbon tet.	
t _x °C						Benzene	
A' to						Ether	
B' °C						n-Heptane	
C'						Ethanol	
A* 115 to	2.23287	5				Water	
B* 233 °C	2343.6	5				Water in	
Ac to							
Bc t _c to							
Cc °C							
Cryos. A°							
consts. B°							
t _e °C	394.33	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:							

NAME		1-Docosene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₁₉ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula C ₂₂ H ₄₄	Molecular Weight 308.572				
		Ref.			Ref.		
F.P. °C	37.8	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	148.82	5	g	°K
B.P. °C			BP	0.0656	4	h	---
760 mm	367.	2	t _e	0.0354	5	f'	to
100	281.87	5	30 mm	0.9831	5	g'	°K
30	243.02	5	ΔHm cal/g			h'	
10	212.98	5	ΔHv cal/g			m	to
1	162.33	5	0.1 mm	68.09	5	n	°K
0.1	123.52	5	30 mm	58.15	5	o	
Press. mm t _e	1632.3	5	BP	47.39	5	m'	to
Density g/ml 20°C	0.8002 [‡]	2	t _e	43.34	5	n'	°K
t 25	0.7967 [‡]	2	t _e (d, e)	43.0	5	o'	
t 30	0.7934 [‡]	4	ΔHv/T _e	19.63	5	Surface tension dynes/cm. 20°C	
a	0.8138	4	d 243 to	80.49	5	γ	27.27
b	-0.0368	4	e 408 °C	0.0919	5		30
Ref. Index n _D 20°C	1.4505 [‡]	2	d' 122 to	78.37	5		40
25	1.4485 [‡]	2	e' 243 °C	0.0832	5	Parachor [P] 20°C	
30	1.4464 [‡]	4	d _c g/ml			30	
"C"	0.7457	4	v _c ml/g			40	
MR (Obs.)	103.73	2	t _c °C			Sugd.	881.2
MR (Calc.)	103.329	5	P _c mm			Exp. L.l.%/wt. u.	
(nD-d/2)	1.0505 [‡]	2	PV/RT			Dispersion	105. [‡]
Dielectric	2.10	5	0.1 mm	1.0000	5	Flash Point °C	
A 243 to	7.55128	4	30 mm	1.0000	5	Fire Point	
B 458 °C	2505.7	4	BP	0.8943	5	M. Spec.	
C	169.5	5	t _e	0.8612	5	Ultra V.	
A* 243 to	2.33832	5	t _c			X-Ray Dif.	
B* 418 °C	2425.4	5	ΔHc kcal/m			Infrared	
K			ΔHf			Solubility in ⁺	
c			ΔFf			Acetone	
t _k to			Viscosity centistokes			Carbon tet.	
t _x °C			η			Benzene	
A' to						Ether	
B' °C			B ^v to			n-Heptane	
C'			A ^v °C			Ethanol	
A'* 122 to	2.25251	5	(B ^v)			Water	
B'* 243 °C	2390.03	5	(A ^v)			Water in	
Ac to			c _p liq. °K				
Bc t _c °C			c _p vap. °K				
Cc			c _v vap.				
Cryos. A° const. B°							
t _e °C	408.05	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. 172

NAME		1-Tricosene			STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula	$C_{23}H_{46}$	Molecular Weight	322.598	$CH_3(CH_2)_{20}CH=CH_2$
		Ref.			Ref.		
F. P. °C	41.6	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			0.1 mm	151.55	5	h	
760 mm	379.	2	BP	0.0667	4		
100	292.47	5	t_e	0.0355	5	f'	to
30	252.95	5	30 mm	1.0001	5	g'	°K
10	222.39	5				h'	
1	170.83	5					
0.1	131.32	5					
Press. mm	1662.0	5	ΔH_m cal/g			m	to
t_e			0.1 mm	66.50	5	n	°K
Density			30 mm	56.80	5	o	
g/ml 20°C			BP	45.63	5		
d_{25}^t	0.8023 [‡]	2	t_e	42.20	5	m'	to
d_4^{30}	0.7990 [‡]	2	t_e (d, e)	41.85	5	n'	°K
	0.7958 [‡]	4	$\Delta H_v/T_e$	19.59	5	o'	
a	0.8156	4	d 254 to	79.22	5	Surface tension	
b	-0.0366	4	e 419 °C	0.0886	5	dynes/cm. 20°C	
Ref. Index			d' 132 to	76.96	5	27.44	5
$n_D^{20°C}$			e' 254 °C	0.0797	5	30	5
25	1.4516 [‡]	2				40	5
30	1.4496 [‡]	2	d	g/ml		Parachor [P]	
	1.4475 [‡]	4	v_c	ml/g		20°C	
"C"	0.7453	4	t_c	°C		30	
MR (Obs.)	108.39	2	P	mm		40	
MR (Calc.)	107.947	5				Sugd.	920.2
(nD-d/2)	1.0505 [‡]	2	PV/RT				
Dielectric	2.11	5	0.1 mm	1.0000	5	Exp. L. l. %/wt.	
A 254 to	7.56305	4	30 mm	1.0000	5	u.	
B 469 °C	2558.84	4	BP	0.8936	5	Dispersion	105. [‡]
C	167.5	5	t_e	0.8596	5	Flash Point °C	
A* 254 to	2.36314	5	t_c			Fire Point	
B* 429 °C	2477.9	5				M Spec.	
K			ΔH_c kcal/m			Ultra V.	
c			ΔH_f			X-Ray Dif.	
t_x to			ΔF_f			Infrared	
t_x °C			Viscosity			Solubility in +	
A' to			centistokes			Acetone	
B' °C			η			Carbon tet.	
C' °C						Benzene	
A* 132 to	2.27521	5	B ^v to			Ether	
B* 254 °C	2440.9	5	A ^v °C			n-Heptane	
			(B ^v)			Ethanol	
			(A ^v)			Water	
Ac to						Water in	
Bc °C			c_p liq. °K				
Cc °C			c_p vap. °K				
Cryos. A°			c_v vap.				
const. B°							
t_e °C	421.77	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:							

NAME		1-Tetracosene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₂₁ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula	C ₂₄ H ₄₈	Molecular Weight	336.624			
		Ref.			Ref.			
F.P. °C	45.3	2	dt/dP °C/mm			f	to	
F.P. 100%			0.1 mm	153.90	5	g	°K	
B.P. °C			BP	0.0677	4	h	-----	
760 mm	390.	2	t _e	0.0355	5	f'	to	
100	302.20	5	30 mm	1.0151	5	g'	°K	
30	262.09	5	ΔH _m cal/g			h'		
10	231.06	5	ΔH _v cal/g			m	to	
1	178.73	5	0.1 mm	65.04	5	n	°K	
0.1	138.61	5	30 mm	55.51	5	o		
Press. mm	1690.	5	BP	44.52	5	m'		
t _e			t _e	41.05	5	to		
Density			t _e (d, e)	40.70	5	°K		
g/ml 20°C	0.8045 [‡]	2	t _c	19.69	5			
t	0.8011 [‡]	2	ΔH _v /T _e					
d ₄	0.7977 [‡]	4	d 263 to	78.01	5	Surface tension		
a	0.8181	4	e 431 °C	0.0859	5	dynes/cm. 20°C		
b	-0.0368	4	d' 140 to	75.73	5	27.62		
Ref. Index			e' 263 °C	0.0772	5	30 26.69		
n _D 20°C	1.4527 [‡]	2	d _e g/ml			40 25.80		
25	1.4506 [‡]	2	v _c ml/g			Parachor [P]		
30	1.4485 [‡]	4	t _c °C			20°C		
"C"	0.7449	4	P _c mm			30		
MR (Obs.)	113.03	2	PV/RT			40		
MR (Calc.)	112.565	5	0.1 mm	1.0000	5	Sugd. 959.2		
(n _D -d/2)	1.0505 [‡]	2	30 mm	1.0000	5	Exp. L. l. %/wt.		
Dielectric	2.11	5	BP	0.8933	5	u.		
A 263 to	7.56767	4	t _e	0.8585	5	Dispersion		
B 481 °C	2601.2	4	t _c			104. [‡]		
C	165.	5	ΔH _c kcal/m			Flash Point °C		
A* 263 to	2.38017	5	ΔH _f			Fire Point		
B* 441 °C	2519.5	5	ΔF _f			M. Spec.		
K			Viscosity			Ultra V.		
c			centistokes			X-Ray Dif.		
t _k to			η °C			Infrared		
t _x °C						Solubility in ⁺		
A' to						Acetone		
B' °C						Carbon tet.		
C'						Benzene		
A' * 140 to	2.29129	5				Ether		
B' * 263 °C	2481.6	5				n-Heptane		
Ac to						Ethanol		
Bc t _c °C						Water		
Cc °C						Water in		
Cryos. A°								
const. B°								
t _e °C	434.4	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:								

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		1-Pentacosene		STRUCTURAL FORMULA	
				CH ₃ (CH ₂) ₂₂ CH=CH ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₂₅ H ₅₀	Molecular Weight	350.650
F. P. °C	48.7	Ref.			
F. P. 100%					
B. P. °C					
760 mm	401.	2	dt/dP °C/mm	156.49	5
100	311.91	5	0.1 mm	0.0686	4
30	271.18	5	BP	0.0355	5
10	239.66	5	t _e	1.0309	5
1	186.48	5	30 mm		
0.1	145.70	5	ΔHm cal/g		
Press. mm			ΔHv cal/g		
t _e	1717.3	5	0.1 mm	63.53	5
Density g/ml 20°C			30 mm	54.27	5
d ₄ ²⁵	0.8063 [‡]	2	BP	43.51	5
d ₄ ³⁰	0.7998 [‡]	4	t _e	40.02	5
			t _e (d, e)	39.69	5
			ΔHv/T _e	19.48	5
a	0.8196	4	d 272 to	76.74	5
b	-0.0366	4	e 443 °C	0.0829	5
Ref. Index n _D 20°C			d' 147 to	74.29	5
25	1.4536 [‡]	2	e' 272 °C	0.0738	5
30	1.4495 [‡]	4			
"C"	0.7447	4	d _c g/ml		
MR (Obs.)	117.68	2	v _c ml/g		
MR (Calc.)	117.183	5	t _c °C		
(nD-d/2)	1.0505 [‡]	2	P _c mm		
Dielectric	2.11	5	PV/RT		
A 272 to	7.58080	4	0.1 mm	1.0000	5
B 493 °C	2653.1	4	30 mm	1.0000	5
C	163.5	5	BP	0.8927	5
A* 272 to	2.40531	5	t _e	0.8571	5
B* 453 °C	2570.2	5	t _c		
K			ΔHc kcal/m		
c			ΔHf		
t _x --- to			ΔFf		
t _x --- °C			Viscosity centistokes		
A' --- to			η °C		
B' --- to					
C' --- to			B ^v --- to		
A* 147 to	2.31448	5	A ^v --- °C		
B* 272 °C	2531.2	5	(B ^v)		
Ac to			(A ^v)		
Bc t _c °C			c _p liq. °K		
Cc t _c °C			c _p vap. °K		
Cryos. A° const. B°			c _v vap.		
t _e °C	446.99	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:					

NAME		1-Hexacosene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₃ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₂₆ H ₅₂	Molecular Weight	364.676		
		Ref.			Ref.		Ref.
F.P. °C	51.8	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	158.69	5	g	°K
B.P. °C			BP	0.0695	4	h	-----
760 mm	411.	2	t _e	0.0356	5	f'	to
100	320.74	5	30 mm	1.0448	5	g'	°K
30	279.47	5	ΔHm cal/g			h'	
10	247.53	5	ΔHv cal/g			m	to
1	193.62	5	0.1 mm	62.15	5	n	°K
0.1	152.26	5	30 mm	53.07	5	o	
Press. mm	1742.7	5	BP	42.50	5	m'	to
t _e			t _e	38.98	5	n'	°K
Density			t _e (d, e)	38.66	5	o'	
g/ml 20°C	0.8082 [‡]	2	ΔHv/T _e	19.43	5	Surface tension	
d ₄ ^t 25	0.8048 [‡]	2				dynes/cm. 20°C	
d ₄ ^t 30	0.8014 [‡]	4	d 280 to	75.52	5	27.92	
a	0.8218	4	e 454 °C	0.0804	5	30 26.99	
b	-0.0368	4	d' 154 to	73.02	5	40 26.09	
Ref. Index			e' 280 °C	0.0714	5		
n _D 20°C	1.4545 [‡]	2	d _c g/ml			Parachor [P]	
25	1.4524 [‡]	2	v _c ml/g			20°C	
30	1.4503 [‡]	4	t _c °C			30	
"C"	0.7443	4	P _c mm			40	
MR (Obs.)	122.31	2	PV/RT			Sugd. 1037.2	
MR (Calc.)	122.101	5	0.1 mm	1.0000	5	Exp. L. l. %/wt.	
(nD-d/2)	1.0504 [‡]	2	30 mm	1.0000	5	u.	
Dielectric			BP	0.8924	5	Dispersion	
A 280 to	7.58699	4	t _e	0.8561	5	104. [‡]	
B 504 °C	2694.3	4	t _c			Flash Point °C	
C	161.5	5	ΔHc kcal/m			Fire Point	
A* 280 to	2.42316	5	ΔHf			M. Spec.	
B* 464 °C	2611.2	5	ΔFf			Ultra V.	
K			Viscosity			X-Ray Dif.	
t _c --- to			centistokes			Infrared	
t _k --- °C			η			Solubility in ⁺	
A' --- to						Acetone	
B' --- °C			B ^v --- to			Carbon tet.	
C' --- °C			A ^v --- °C			Benzene	
A* 154 to	2.33132	5	(B ^v) ---			Ether	
B* 280 °C	2570.7	5	(A ^v)			n-Heptane	
Ac to			c _p liq. °K			Ethanol	
Bc t _c °C			c _p vap. °K			Water	
Cc t _c °C			c _v vap.			Water in	
Cryos. A°							
const. B°							
t _e °C	458.48	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:

NAME		1-Heptacosene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₂₄ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula	C ₂₇ H ₅₄	Molecular Weight				378.702
		Ref.				Ref.		
F.P. °C	54.7	2	dt/dP °C/mm				f to	
F.P. 100%			0.1 mm	160.89	5		g °K	
B.P. °C	421.	2	BP	0.0704	4		h ---	
760 mm	329.58	5	t _e	0.0356	5		f' to	
100	287.77	5	30 mm	1.0587	5		g' °K	
30	255.40	5	ΔHm cal/g				h'	
10	200.76	5	ΔHv cal/g				m to	
1	158.83	5	0.1 mm	60.86	5		n °K	
0.1	1767.5	5	30 mm	51.96	5		o	
Press. mm			BP	41.57	5		m' to	
t _e			t _e	38.04	5		n' °K	
Density g/ml 20°C	0.8097 [‡]	2	t _e (d, e)	37.74	5		o'	
d ₄ ²⁵	0.8064 [‡]	2	t _e	19.11	5		Surface tension	
d ₄ ³⁰	0.8032 [‡]	4	ΔHv/T _e				dynes/cm. 20°C	28.05
a	0.8230	4	d 289 to	74.39	5		30	27.14
b	-0.0366	4	e 465 °C	0.0780	5		40	26.26
Ref. Index			d' 161 to	71.84	5		Parachor [P]	
n _D 20°C	1.4552 [‡]	2	e' 289 °C	0.0691	5		20°C	
25	1.4532 [‡]	2	d _c g/ml				30	
30	1.4513 [‡]	4	t _c ml/g				40	
"C"	0.7441	4	t _c °C				Sugd.	1076.2
MR (Obs.)	126.95	2	P _c mm				Exp. L. l. %/wt.	
MR (Calc.)	126.219	5	PV/RT				u.	
(n _D -d/2)	1.0504 [‡]	2	0.1 mm	1.0000	5		Dispersion	104. [‡]
Dielectric	2.12	5	30 mm	1.0000	5		Flash Point °C	
A 289 to	7.59302	4	BP	0.8919	5		Fire Point	
B 515 °C	2735.4	4	t _e	0.8549	5		M Spec.	
C	159.5	5	t _c				Ultra V.	
A* 289 to	2.44072	5	ΔHc kcal/m				X-Ray Dif.	
B* 475 °C	2651.9	5	ΔHf				Infrared	
K			ΔFf				Solubility in +	
c			Viscosity				Acetone	
t _k to			centistokes				Carbon tet.	
t _x °C			η				Benzene	
A' to							Ether	
B' °C			B ^v to				n-Heptane	
C'			A ^v °C				Ethanol	
A' * 161 to	2.34745	5	(B ^v)				Water	
B' * 289 °C	2610.2	5	(A ^v)				Water in	
Ac to			c _p liq. °K					
Bc t _c °C			c _p vap. °K					
Cc			c _v vap.					
Cryos. A°								
const. B°								
t _e °C	469.86	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:								

NAME		1-Octacosene		STRUCTURAL FORMULA			
				CH ₃ (CH ₂) ₂₅ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula C ₂₈ H ₅₆	Molecular Weight 392.728				
		Ref.			Ref.	Ref.	
F.P. °C	57.5	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	163.06	5	g	°K
B.P. °C			BP	0.0712	2	h	-----
760 mm	430.	2	t _e	0.0356	5	f'	to
100	337.52	5	30 mm	1.0718	5	g'	°K
30	295.19	5	ΔHm cal/g			h'	
10	262.42	5	ΔHv cal/g			m	to
1	207.07	5	0.1 mm	59.46	5	n	°K
0.1	164.59	5	30 mm	50.81	5	o	
Press. mm	1789.2	5	BP	40.61	5	m'	to
t _e			t _e	37.06	5	n'	°K
Density g/ml 20°C	0.8114 [‡]	2	t _e (d, e)	36.82	5	o'	
25	0.8080 [‡]	2	ΔHv/T _e	19.32	5	Surface tension dynes/cm. 20°C	
d ₄ 30	0.8046 [‡]	4	d 297 to	73.13	5	γ	28.18
a	0.8250	4	e 475 °C	0.0756	5		27.25
b	-0.0368	4	d' 168 to	70.37	5		26.34
Ref. Index n _D 20°C	1.4560 [‡]	2	e' 297 °C	0.0663	5	Parachor [P] 20°C	
25	1.4540 [‡]	2	d _c g/ml				
30	1.4519 [‡]	4	v _c ml/g				
"C"	0.7438	4	t _c °C				
MR (Obs.)	131.57	2	P _c mm				
MR (Calc.)	131.337	5	PV/RT				
(n _D -d/2)	1.0504 [‡]	2	0.1 mm	1.0000	5	Exp. L.l./wt. u.	
Dielectric	2.12	5	30 mm	1.0000	5	Dispersion	103. [‡]
A 297 to	7.60499	4	BP	0.8912	5	Flash Point °C	
B 525 °C	2780.18	4	t _e	0.8535	5	Fire Point	
C	158.5	5	t _c			M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 297 to	2.46441	5	ΔHc kcal/m			Solubility in ⁺	
B* 485 °C	2696.18	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to			η			Ether	
t _x °C						n-Heptane	
A' to			B _v to			Ethanol	
B' °C			A _v °C			Water	
C'			(B _v)			Water in	
A'* 168 to	2.36904	5	(A _v)				
B'* 297 °C	2652.91	5	c _p liq. °K				
Ac to			c _p vap. °K				
Bc t _c °C			c _v vap.				
Cc °C							
Cryos. A° const. B°							
t _e °C	480.28	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:

NAME		1-Nonacosene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₆ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₂₉ H ₅₈	Molecular Weight	406.754		
		Ref.			Ref.		
F. P. °C	60.0	2	dt/dP °C/mm			f	to
F. P. 100%			0.1 mm	165.14	5	g	°K
B. P. °C	440.	2	BP	0.0721	4	h	---
760 mm	346.37	5	t _e	0.0357	5	f'	to
100	303.51	5	30 mm	1.0853	5	g'	°K
30	270.33	5	ΔHm cal/g			h'	
10	214.28	5	ΔHv cal/g			m	to
1	171.26	5	0.1 mm	58.43	5	n	°K
0.1			30 mm	49.87	5	o	
Press. mm	1814.7	5	BP	39.82	5	m'	to
t _e			t _e	36.26	5	n'	°K
Density			t _e (d, e)	36.0	5	o'	
g/ml 20°C	0.8127 [#]	2	ΔHv/T _e	19.28	5		
d ^t 25	0.8094 [#]	2	d 305 to	72.22	5	Surface tension	
d ^t 30	0.8062 [#]	2	e 485 °C	0.0736	5	dynes/cm. 20°C	
a	0.8260	4	d' 174 to	69.51	5	28.30	5
b	-0.0366	4	e' 305 °C	0.0647	5	30	5
Ref. Index			d _c g/ml			40	5
n _D 20°C	1.4567 [#]	2	v _c ml/g			Parachor [P]	
25	1.4547 [#]	2	t _c °C			20°C	
30	1.4526 [#]	2	p _c mm			30	
"C"	0.7436	4	PV/RT			40	
MR (Obs.)	136.23	2	0.1 mm	1.0000	5	Sugd.	1154.2
MR (Calc.)	135.955	5	30 mm	1.0000	5	Exp. L.l. %/wt.	
(nD-d/2)	1.0504 [#]	2	BP	0.8910	5	u.	
Dielectric	2.12	5	t _e	0.8526	5	Dispersion	103. [#]
A 305 to	7.60654	4	t _c			Flash Point °C	
B 535 °C	2816.5	4	ΔHc kcal/m			Fire Point	
C	156.	5	ΔHf			M Spec.	
A* 305 to	2.47604	5	ΔFf			Ultra V.	
B* 495 °C	2732.0	5	Viscosity			X-Ray Dif.	
K			centistokes			Infrared	
c			η °C			Solubility in +	
t _x --- to			B ^v to			Acetone	
t _x --- °C			A ^v --- °C			Carbon tet.	
A' --- to			(B ^v)			Benzene	
B' --- °C			(A ^v)			Ether	
C'			c _p liq. °K			n-Heptane	
A' 174 to	2.38008	5	c _p vap. °K			Ethanol	
B' 305 °C	2687.9	5	c _v vap.			Water	
Ac to						Water in	
Bc t _c °C							
Cc t _c °C							
Cryos. A°							
const. B°							
t _e °C	491.82	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:							

NAME		1-Triacontene			STRUCTURAL FORMULA			
					$\text{CH}_3(\text{CH}_2)_{27}\text{CH}=\text{CH}_2$			
Mole % Pur.	Ref.	Molecular Formula $\text{C}_{30}\text{H}_{60}$	Molecular Weight 420.780					
	Ref.							Ref.
F.P. °C	62.4	2	dt/dP			f	to	
F.P. 100%			°C/mm			g	°K	
B.P. °C			0.1 mm	166.92	5	h	---	
760 mm	448.	2	BP	0.0728	4	f'	to	
100	353.43	5	t _e	0.0357	5	g'	°K	
30	310.14	5	30 mm	1.0964	5	h'		
10	276.61	5	ΔHm cal/g			m	to	
1	219.97	5				n	°K	
0.1	176.49	5	ΔHv cal/g			o		
Press. mm			0.1 mm	57.20	5			
t _e	1834.4	5	30 mm	48.82	5			
Density			BP	38.95	5	m'	to	
g/ml 20°C	0.8141 [‡]	2	t _e	35.37	5	n'	°K	
d ₄ ^t 25	0.8107 [‡]	2	t _e (d, e)	35.17	5	o'		
d ₄ ^t 30	0.8075 [‡]	4	ΔHv/T _e	19.22	5			
a	0.8273	4	d 313 to	71.04	5	Surface tension		
b	-0.0366	4	e 495 °C	0.0716	5	dynes/cm. 20°C		
Ref. Index			d' 180 to	68.27	5	γ	30	27.49
n _D 20°C	1.4573 [‡]	2	e' 313 °C	0.0627	5		40	26.60
25	1.4553 [‡]	2				Parachor [P]		
30	1.4534 [‡]	2	d _c g/ml			20°C		
"C"	0.7433	4	v _c ml/g			30		
MR (Obs.)	140.85	2	t _c °C			40		
MR (Calc.)	140.373	5	P _c mm			Sugd. 1193.2		
(n _D -d/2)	1.0503 [‡]	2	PV/RT			Exp. L. l. %/wt.		
Dielectric	2.12	5	0.1 mm	1.0000	5	u.		
A 313 to	7.61184	4	30 mm	1.0000	5	Dispersion		
B 545 °C	2850.4	4	BP	0.8906	5	Flash Point °C		
C	154.5	5	t _e	0.8517	5	Fire Point		
A* 313 to	2.49231	5	t _c			M. Spec.		
B* 505 °C	2765.5	5	ΔHc kcal/m			Ultra V.		
K			ΔHf			X-Ray Dif.		
c			ΔFf			Infrared		
t _k to			Viscosity			Solubility in ⁺		
t _x °C			centistokes			Acetone		
A' to			η			Carbon tet.		
B' °C						Benzene		
C' °C			B ^v to			Ether		
A*180 to	2.39519	5	A ^v °C			n-Heptane		
B*313 °C	2720.4	5	(B ^v)			Ethanol		
A _c to			(A ^v)			Water		
B _c °C			c _p liq. °K			Water in		
C _c °C			c _p vap. °K					
Cryos. A°			c _v vap.					
consts. B°								
t _e °C	501.03	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:

NAME		1-Hentriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₂₈ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₃₁ H ₆₂	Molecular Weight	434.806		
F.P. °C	64.6	2		dt/dP °C/mm		f	to
F.P. 100%				0.1 mm	168.97	g	°K
B.P. °C				BP	0.0736	h	
760 mm	457.	2		t _e	0.0357	f'	to
100	361.38	5		30 mm	1.1092	g'	°K
30	317.59	5		ΔHm cal/g		h'	
10	283.67	5		ΔHv cal/g		m	to
1	226.36	5		0.1 mm	56.12	n	°K
0.1	182.35	5		30 mm	47.91	o	
Press. mm				BP	38.20		
t _e	1857.6	5		t _e	34.61	m'	to
Density g/ml 20°C				t _e (d, e)	34.43	n'	°K
d ₄ ^t 25	0.8153 [‡]	2		ΔHv/T _e	19.17	o'	
d ₄ ^t 30	0.8088 [‡]	2		d 320 to	70.02	Surface tension dynes/cm. 20°C	
a	0.8286	4		e 504 °C	0.0696	30	28.51
b	-0.0366	4		d' 185 to	67.19	40	27.60
Ref. Index n _D 20°C				e' 320 °C	0.0607	40	26.71
25	1.4580 [‡]	2		d _c g/ml		Parachor [P]	
30	1.4560 [‡]	2		v _c ml/g		20°C	
	1.4540 [‡]	4		t _c °C		30	
"C"	0.7431	4		P _c mm		40	
MR (Obs.)	145.52	2		PV/RT		Sugd.	1232.2
MR (Calc.) (nD-d/2)	144.991	5		0.1 mm	1.0000	Exp. L. l. %/wt. u.	
	1.0503 [‡]	2		30 mm	1.0000	Dispersion	
Dielectric	2.12	5		BP	0.8905	103. [‡]	
A 320 to	7.61918	4		t _e	0.8510	Flash Point °C	
B 554 °C	2890.4	4		t _c		Fire Point	
C	153.	5		ΔHc kcal/m		M Spec. Ultra V.	
A* 320 to	2.50893	5		ΔHf		X-Ray Dif.	
B* 514 °C	2804.6	5		ΔFf		Infrared	
K				Viscosity centistokes		Solubility in +	
c				η °C		Acetone	
t _k to						Carbon tet.	
t _k °C						Benzene	
A' to						Ether	
B' °C						n-Heptane	
C' °C						Ethanol	
A' * 187 to	2.41119	5		B ^v to		Water	
B' * 320 °C	2758.7	5		A ^v °C		Water in	
Ac to				(B ^v)			
Bc t _c °C				(A ^v)			
Cc °C				c _p liq. °K			
Cryos. A°				c _p vap. °K			
const. B°				c _v vap.			
t _e °C	511.43	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:							

NAME		1-Dotriacontene				STRUCTURAL FORMULA				
						CH ₃ (CH ₂) ₂₉ CH=CH ₂				
Mole % Pur.	Ref.	Molecular Formula	C ₃₂ H ₆₄	Molecular Weight	448.832					
		Ref.			Ref.					
F.P. °C	66.7	2	dt/dP			f		to		
F.P. 100%			°C/mm			g		°K		
B.P. °C			0.1 mm	170.75	5	h				
760 mm	465.	2	BP	0.0743	4	f'		to		
100	368.45	5	t _e	0.0357	5	g'		°K		
30	324.22	5	30 mm	1.1203	5	h'				
10	289.96	5	ΔHm cal/g			m		to		
1	232.06	5	ΔHv cal/g			n		°K		
0.1	187.58	5	0.1 mm	55.04	5	o				
Press. mm	1879.8	5	30 mm	46.98	5					
t _e			BP	37.47	5					
Density			t _e	33.87	5					
g/ml 20°C	0.8165 [‡]	2	t _e (d, e)	33.70	5					
25	0.8132 [‡]	2	t _e	19.14	5					
d ₄ 30	0.8100 [‡]	4	ΔHv/T _e							
a	0.8298	4	d	327	to					
b	-0.0366	4	e	513	°C	68.90				
Ref. Index			d'	192	to	0.0676				
n _D 20°C	1.4585 [‡]	2	e'	327	°C	66.11				
25	1.4565 [‡]	2	dc g/ml			0.0590				
30	1.4546 [‡]	4	vc ml/g							
"C"	0.7429	4	t _c °C							
MR (Obs.)	150.13	2	P _c mm							
MR (Calc.)	149.609	5	PV/RT							
(n _D -d/2)	1.0503 [‡]	2	0.1 mm	1.0000	5					
Dielectric	2.13	5	30 mm	1.0000	5					
A 327 to	7.62424	4	BP	0.8910	5					
B 563 °C	2924.3	4	t _e	0.8511	5					
C	151.5	5	t _c							
A* 327 to	2.52222	5	ΔHc kcal/m							
B* 523 °C	2837.3	5	ΔHf							
K			ΔFf							
c			Viscosity							
t _k to			centistokes							
t _x °C			η							
A' to			B ^v to							
B' °C			A ^v °C							
C'			(B ^v)							
A ¹ * 192 to	2.42526	5	(A ^v)							
B ¹ * 327 °C	2791.2	5	c _p liq. °K							
Ac to			c _p vap. °K							
Bc t _c °C			c _v vap.							
Cc										
Cryos. A ^o										
consts. B ^o										
t _e °C	520.74	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:

NAME		1-Tritriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₀ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₃₃ H ₆₆	Molecular Weight	462.858		
		Ref.			Ref.		
F. P. °C	68.7	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			0.1 mm	172.53	5	h	
760 mm	473.	2	BP	0.0750	2	h	
100	375.52	5	t _e	0.0356	5	f'	to
30	330.85	5	30 mm	1.1315	5	g'	°K
10	296.24	5				h'	
1	237.75	5	ΔHm cal/g			m	to
0.1	192.82	5				n	°K
Press. mm			ΔHv cal/g			o	
t _e	1906.4	5	0.1 mm	54.03	5		
Density			30 mm	46.12	5	m'	to
g/ml 20°C			BP	36.84	5	n'	°K
25	0.8176 [#]	2	t _e	33.23	5	o'	
d ₄ ^t	0.8143 [#]	2	t _e (d, e)	33.1	5		
30	0.8111 [#]	4	ΔHv/T _e	20.49	5		
a	0.8309	4	d 334 to	67.70	5	Surface tension	
b	-0.0366	4	e 522 °C	0.0653	5	dynes/cm. 20°C	
Ref. Index			d' 198 to	65.09	5	28.69	5
n _D 20°C	1.4591 [#]	2	e' 334 °C	0.0573	5	30	5
25	1.4571 [#]	2				40	5
30	1.4550 [#]	4	d _c g/ml			Parachor [P]	
"C"	0.7428	4	v _c ml/g			20°C	
MR (Obs.)	154.79	2	t _c °C			30	
MR (Calc.)	154.227	2	P _c mm			40	
(nD-d/2)	1.0503 [#]	5	P _c mm			Sugd.	1310.2
Dielectric	2.13	5	PV/RT			Exp. L.l. %/wt.	
A 334 to	7.62921	4	0.1 mm	1.0000	5	u.	
B 572°C	2958.3	4	30 mm	1.0000	5	Dispersion	103. [#]
C	150.	5	BP	0.8930	5	Flash Point °C	
A* 334 to	2.53183	5	t _e	0.8529	5	Fire Point	
B* 532°C	2868.4	5	t _c			M Spec.	
K			ΔHc kcal/m			Ultra V.	
c			ΔHf			X-Ray Dif.	
t _x to			ΔFf			Infrared	
t _x °C			Viscosity			Solubility in +	
A' to			centistokes			Acetone	
B' °C			η			Carbon tet.	
C' °C						Benzene	
A' * 198 to	2.43886	5	B ^v to			Ether	
B' * 334 °C	2823.7	5	A ^v °C			n-Heptane	
Ac to			(B ^v)			Ethanol	
Bc °C			(A ^v)			Water	
Cc t _c °C			c _p liq. °K			Water in	
Cryos. A°			c _p vap. °K				
const. B°			c _v vap.				
t _e °C	530.21	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:							

NAME		1-Tetratriacontene			STRUCTURAL FORMULA			
					CH ₃ (CH ₂) ₃₁ CH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula	C ₃₄ H ₆₈	Molecular Weight	476.884			
F.P. °C	70.5	Ref.			Ref.			
F.P. 100%			dt/dP °C/mm			f	to	
B.P. °C			0.1 mm	174.32	5	g	°K	
760 mm	481.	2	BP	0.0757	4	h	---	
100	382.59	5	t _e	0.0358	5	f'	to	
30	337.48	5	30 mm	1.1427	5	g'	°K	
10	302.53	5	ΔHm cal/g			h'		
1	243.45	5	ΔHv cal/g			m	to	
0.1	198.06	5	0.1 mm	53.08	5	n	°K	
Press. mm			30 mm	45.30	5	o		
t _e	1917.3	5	BP	36.03	5	m'	to	
Density g/ml 20°C			t _e	32.40	5	n'	°K	
g/ml 25	0.8186 [‡]	2	t _e (d, e)	32.29	5	o'		
d ₄ ^t 25	0.8153 [‡]	2	ΔHv/T _e	19.02	5	Surface tension dynes/cm. 20°C		
d ₄ ^t 30	0.8121 [‡]	4	d 341 to	67.11	5	γ	28.78	5
a	0.8319	4	e 531 to	0.0646	5		27.87	5
b	-0.0366	4	d' 204 to	64.13	5		26.97	5
Ref. Index			e' 341 °C	0.0558	5	Parachor [P]		
n _D 20°C	1.4596 [‡]	2	d _c g/ml			20°C		
25	1.4576 [‡]	2	v _c ml/g			30		
30	1.4556 [‡]	4	t _c °C			40		
"C"	0.7425	4	P _c mm			Sugd.	1349.2	5
MR (Obs.)	159.44	2	PV/RT			Exp. L.l. %/wt.		
MR (Calc.)	158.845	5	0.1 mm	1.0000	5	u.		
(nD-d/Z)	1.0503 [‡]	2	30 mm	1.0000	5	Dispersion	103. [‡]	2
Dielectric	2.13	5	BP	0.8895	5	Flash Point °C		
A 341 to	7.63409	4	t _e	0.8484	5	Fire Point		
B 581 °C	2992.2	4	ΔHc kcal/m			M. Spec.		
C	148.5	5	ΔHf			Ultra V.		
A* 341 to	2552.8	5	ΔFf			X-Ray Dif.		
B* 541 °C	2905.2	5	Viscosity centistokes			Infrared		
K			η			Solubility in ⁺		
c						Acetone		
t _k to						Carbon tet.		
t _x °C						Benzene		
A' to						Ether		
B' °C						n-Heptane		
C'						Ethanol		
A* 204 to	2.45201	5	B ^v to			Water		
B* 341 °C	2856.2	5	A ^v °C			Water in		
Ac to			(B ^v)					
Bc °C			(A ^v)					
Cc t _c °C			c _p liq. °K					
Cryos. A°			c _p vap. °K					
const. B°			c _v vap.					
t _e °C	539.14	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:

NAME		1-Pentatriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₂ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₃₅ H ₇₀	Molecular Weight	490.910		
F. P. °C	72.3	2	dt/dP °C/mm			f to	
F. P. 100%			0.1 mm	176.10	5	g °K	
B. P. °C	489.	2	BP	0.0764	4	h	
760 mm	389.65	5	t _e	0.0358	5	f' to	
100	344.11	5	30 mm	1.1538	5	g' °K	
30	308.82	5	ΔHm cal/g			h'	
10	249.15	5	ΔHv cal/g			m to	
1	203.29	5	0.1 mm	52.18	5	n °K	
0.1			30 mm	44.53	5	o	
Press. mm	1937.2	5	BP	35.38	5	m' to	
t _e			t _e	31.74	5	n' °K	
Density			t _e (d, e)	31.65	5	o'	
g/ml 20°C	0.8196 [‡]	2	ΔHv/T _e	18.89	5		
d ^t 25	0.8163 [‡]	2	d 347 to	66.25	5	Surface tension	
d ₄ 30	0.8131 [‡]	4	e 539 °C	0.0631	5	dynes/cm. 20°C	
a	0.8329	4	d' 209 to	63.22	5	γ	28.87
b	-0.0366	4	e' 347 °C	0.0543	5		27.95
Ref. Index							27.05
n _D 20°C	1.4601 [‡]	2	d _v g/ml			Parachor [P]	
25	1.4581 [‡]	2	v _c ml/g			20°C	
30	1.4560 [‡]	4	t _c °C			30	
"C"	0.7425	4	P _c mm			40	
MR (Obs.)	164.08	2	PV/RT			Sugd. 1388.2	
MR (Calc.)	163.463	5	0.1 mm	1.0000	5	Exp. L.l. %/wt.	
(n _D -d/2)	1.0503 [‡]	2	30 mm	1.0000	5	u.	
Dielectric	2.13	5	BP	0.8892	5	Dispersion	
A 347 to	7.63888	4	t _e	0.8475	5	102. [‡]	
B 589°C	3026.1	4	t _c			Flash Point °C	
C	147.	5	ΔHc kcal/m			Fire Point	
A* 347 to	2.56641	5	ΔHf			M Spec.	
B* 549°C	2938.7	5	ΔFf			Ultra V.	
K			Viscosity			X-Ray Dif.	
c			centistokes			Infrared	
t _x to			η			Solubility in +	
t _x °C						Acetone	
A' to			B ^v to			Carbon tet.	
B' °C			A ^v °C			Benzene	
C'			(B ^v)			Ether	
A'* 209 to	2.46475	5	(A ^v)			n-Heptane	
B'* 347 °C	2888.7	5	c _p liq. °K			Ethanol	
Ac to			c _p vap. °K			Water	
Bc °C			c _v vap.			Water in	
Cc °C							
Cryos. A°							
const. B°							
t _e °C	548.39	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:							

NAME		1-Hexatriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₃ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula C ₃₆ H ₇₂	Molecular Weight 504.936				
	Ref.					Ref.	
F.P. °C	73.9	2	dt/dP °C/mm		f	to	
F.P. 100%			0.1 mm	177.73	g	°K	
B.P. °C			BP	0.077	h	---	
760 mm	496.	2	t _e	0.0358	f'	to	
100	395.83	5	30 mm	1.1638	g'	°K	
30	349.90	5	ΔHm cal/g		h'		
10	314.30	5	ΔHv cal/g		m	to	
1	227.27	5	0.1 mm	51.22	n	°K	
0.1	207.81	5	30 mm	43.73	o		
Press. mm	1957.8	5	BP	34.77	m'	to	
t _e			t _e	31.12	n'	°K	
Density g/ml 20°C	0.8205 [‡]	2	t _e (d, e)	31.06	o'		
d ₄ ²⁵	0.8172 [‡]	2	ΔHv/T _e	20.46			
d ₄ ³⁰	0.8140 [‡]	4					
a	0.8337	4	d 353 to	65.18	Surface tension dynes/cm. 20°C		
b	-0.0366	4	e 546 °C	0.0613	γ	30	28.93
Ref. Index n _D 20°C	1.4605 [‡]	2	d' 214 to	62.18		40	28.01
25	1.4585 [‡]	2	e' 353 °C	0.0527			27.11
30	1.4566 [‡]	4	d _c g/ml		Parachor [P] 20°C		
"C"	0.7423	4	v _c ml/g			30	
MR (Obs.)	168.71	2	t _c °C			40	
MR (Calc.)	168.081	5	P _c mm			Sugd.	1427.2
(n _D -d/2)	1.0503 [‡]	2	PV/RT				
Dielectric	2.13	5	0.1 mm	1.0000	Exp. L. l. %/wt. u.		
A 353 to	7.64540	4	30 mm	1.0000	Dispersion		102. [‡]
B 596 °C	3058.9	4	BP	0.8900	Flash Point °C		
C	146.	5	t _e	0.8480	Fire Point		
A* 353 to	2.57957	5	t _c		M. Spec. Ultra V. X-Ray Dif. Infrared		
B* 556 °C	2969.8	5	ΔHc kcal/m		Solubility in ⁺		
K			ΔHf		Acetone		
t _k to			ΔFf		Carbon tet.		
t _x °C			Viscosity centistokes η °C		Benzene		
A' to					Ether		
B' °C					n-Heptane		
C' °C					Ethanol		
A' * 214 to	2.47928	5	B _v to		Water		
B' * 353 °C	2920.1	5	A _v °C		Water in		
Ac to			(B _v)				
Bc t _c °C			(A _v)				
Cc °C			c _p liq. °K				
Crys. A° const. B°			c _p vap. °K				
t _e °C	556.60	5	c _v vap.				

[‡] 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:

NAME		1-Heptatriacontene			STRUCTURAL FORMULA		
					$\text{CH}_3(\text{CH}_2)_{34}\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{37}\text{H}_{74}$	Molecular Weight	518.962		
		Ref.			Ref.		
F.P. °C	75.5	2	dt/dP °C/mm			f to	
F.P. 100%			0.1 mm	179.12	5	g °K	
B.P. °C			BP	0.0776	4	h - - -	
760 mm	503.	2	t _e	0.0359	5	f' to	
100	402.03	5	t _e (d, e)	1.1731	5	g' °K	
30	355.74	5	ΔHm cal/g			h'	
10	319.85	5	ΔHv cal/g			m to	
1	259.17	5	0.1 mm	50.43	5	n °K	
0.1	212.53	5	30 mm	43.01	5	o	
Press. mm	1972.4	5	BP	34.11	5	m' to	
t _e			t _e	30.45	5	n' °K	
Density g/ml 20°C	0.8214 [‡]	2	t _e (d, e)	30.4	5	o'	
25	0.8181 [‡]	2	ΔHv/T _e	20.46	5		
d ₄ ^t 30	0.8149 [‡]	4	d 359 to	64.49	5	Surface tension dynes/cm. 20°C	
a	0.8347	4	e 554 °C	0.0604	5	30	29.02
b	-0.0366	4	d' 219 to	61.44	5	40	28.10
Ref. Index n _D 20°C	1.4610 [‡]	2	e' 359 °C	0.0518	5		27.20
25	1.4590 [‡]	2	d _c g/ml			Parachor [P]	
30	1.4570 [‡]	4	v _c ml/g			20°C	
"C"	0.7421	4	t _c °C			30	
MR (Obs.)	173.37	2	P _c mm			40	
MR (Calc.) (n _D -d/2)	172.699	5	PV/RT			Sugd.	1466.2
	1.0502 [‡]	2	0.1 mm	1.0000	5	Exp. L. l. %/wt.	
Dielectric	2.13	5	30 mm	1.0000	5	u.	
A 359 to	7.64418	4	BP	0.8888	5	Dispersion	102. [‡]
B 604 °C	3081.9	4	t _e	0.8462	5	Flash Point °C	
C	144.	5	t _c			Fire Point	
A* 359 to	2.58930	5	ΔHc kcal/m			M Spec.	
B* 564 °C	2993.7	5	ΔHf			Ultra V.	
K			ΔFf			X-Ray Dif.	
c			Viscosity centistokes			Infrared	
t _k to			η °C			Solubility in +	
t _x °C			B ^v to			Acetone	
A' to			A ^v °C			Carbon tet.	
B' °C			(B ^v)			Benzene	
C' °C			(A ^v)			Ether	
A* 219 to	2.48644	5	c _p liq. °K			n-Heptane	
B* 359 °C	2942.3	5	c _p vap. °K			Ethanol	
Ac to			c _v vap.			Water	
Bc t _c °C						Water in	
Cc t _c °C							
Cryos. A° const. B°							
t _e °C	564.62	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:							

NAME		1-Octatriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₅ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula C ₃₈ H ₇₆	Molecular Weight 532.988				
		Ref.			Ref.	Ref.	
F.P. °C	77.0	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	180.76	5	g	°K
B.P. °C			BP	0.0782	4	h	
760 mm	510.	2	t _e	0.0359	5	f'	to
100	408.21	5	30 mm	1.1831	5	g'	°K
30	361.52	5	ΔHm cal/g			h'	
10	325.33	5	ΔHv cal/g			m	to
1	264.11	5	0.1 mm	49.56	5	n	°K
0.1	217.05	5	30 mm	42.29	5	o	
Press. mm	1990.9	5	BP	33.54	5	m'	to
t _e			t _e (d, e)	29.86	5	n'	°K
Density g/ml 20°C	0.8223 [‡]	2	t _e	29.81	5	o'	
25	0.8190 [‡]	2	ΔHv/T _e	20.36	5	Surface tension dynes/cm. 20°C	
d ₄ 30	0.8158 [‡]	4	d 365 to	63.59	5	γ	29.10
a	0.8356	4	e 562 °C	0.0589	5		28.17
b	-0.0366	4	d' 224 to	60.50	5		27.27
			e' 365 °C	0.0504	5	Parachor [P] 20°C	
Ref. Index n _D 20°C	1.4614 [‡]	2	d _c g/ml			30	
25	1.4594 [‡]	2	v _c ml/g			40	
30	1.4574 [‡]	4	t _c °C			Sugd.	1505.2
"C"	0.7419	4	P _c mm			Exp. L.l. %/wt. u.	
MR (Obs.)	177.99	2	PV/RT			Dispersion	
MR (Calc.)	177.317	5	0.1 mm	1.0000	5	Flash Point °C	
(nD-d/2)	1.0502 [‡]	2	30 mm	1.0000	5	Fire Point	
Dielectric	2.13	5	BP	0.8889	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
A 365 to	7.65055	4	t _e	0.8459	5	Solubility in +	
B 612 °C	3114.6	4	t _c			Acetone	
C	143.	5	ΔHc kcal/m			Carbon tet.	
A* 365 to	2.60324	5	ΔHf			Benzene	
B* 572 °C	3025.6	5	ΔFf			Ether	
K			Viscosity centistokes η °C			n-Heptane	
t _k to						Ethanol	
t _x °C						Water	
A' to						Water in	
B' °C							
C'							
A' * 224 to	2.50025	5	B ^v to				
B' * 365 °C	2973.6	5	A ^v °C				
Ac to			(B ^v)				
Bc t _c °C			(A ^v)				
Cc			c _p liq. °K				
Crys. A°			c _p vap. °K				
const. B°			c _v vap.				
t _e °C	572.76	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:

NAME		1-Nonatriacontene			STRUCTURAL FORMULA		
					CH ₃ (CH ₂) ₃₆ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₃₉ H ₇₈	Molecular Weight	547.014		
F. P. °C	78.4	2	dt/dP °C/mm			f	to
F. P. 100%			0.1 mm	182.40	5	g	°K
B. P. °C			BP	0.0788	2	h	
760 mm	517.	2	t _e	0.0359	5	f'	to
100	414.39	5	30 mm	1.1931	5	g'	°K
30	367.31	5				h'	
10	330.81	5	ΔHm cal/g			m	to
1	269.06	5	ΔHv cal/g			n	°K
0.1	221.57	5	0.1 mm	48.75	5	o	
Press. mm			30 mm	41.60	5		
t _e	2006.7	5	BP	32.96	5	m'	to
Density g/ml 20°C			t _e	29.27	5	n'	°K
25	0.8231 [#]	2	t _e (d, e)	29.25	5	o'	
d ₄ ²⁵	0.8198 [#]	2	ΔHv/T _e	20.35	5		
d ₄ ³⁰	0.8166 [#]	4	d 370	62.82	5	Surface tension dynes/cm. 20°C	
a	0.8364	4	e 569	0.0578	5	30	29.16
b	-0.0366	4	d' 228	59.61	5	40	28.24
Ref. Index n _D 20°C			e' 370	0.0490	5		27.34
25	1.4618 [#]	2	d _c g/ml			Parachor [P] 20°C	
30	1.4598 [#]	2	v _c ml/g			30	
	1.4618 [#]	4	t _c °C			40	
"C"	0.7418	4	P _c mm			Sugd.	1544.2
MR (Obs.)	182.63	2	PV/RT			Exp. L. l. %/wt. u.	
MR (Calc.) (n _D -d/2)	181.935	5	0.1 mm	1.0000	5	Dispersion	
	1.0502 [#]	2	30 mm	1.0000	5	Flash Point °C	
Dielectric	2.14	5	BP	0.8881	5	Fire Point	
A 370 to	7.65683	4	t _e	0.8446	5	M Spec. Ultra V. X-Ray Dif. Infrared	
B 619 °C	3147.4	4	t _c			Solubility in +	
C	142.	5	ΔHc kcal/m			Acetone	
A* 370 to	2.61874	5	ΔHf			Carbon tet.	
B* 579 °C	3058.4	5	ΔFf			Benzene	
K			Viscosity centistokes			Ether	
t _k to			η °C			n-Heptane	
t _x °C			B ^v to			Ethanol	
A' to			A ^v °C			Water	
B' °C			(B ^v)			Water in	
C' °C			(A ^v)				
A ¹ *228 to	2.51369	5	c _p liq. °K				
B ¹ *370 °C	3004.9	5	c _p vap. °K				
Ac to			c _v vap.				
Bc t _c °C							
Cc °C							
Cryos. A ¹ const. B ¹							
t _e °C	580.82	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:							

NAME		1-Tetracontene		STRUCTURAL FORMULA			
				$\text{CH}_3(\text{CH}_2)_{37}\text{CH}=\text{CH}_2$			
Mole % Pur.	Ref.	Molecular Formula	$\text{C}_{40}\text{H}_{80}$	Molecular Weight	561.040		
	Ref.						Ref.
F. P. °C	79.8	2	dt/dP °C/mm		f	to	
F. P. 100%			0.1 mm	183.76	g	°K	
B. P. °C			BP	0.0794	h	-----	
760 mm	523.	2	t _e	0.0359	g'	to	
100	419.69	5	30 mm	1.2016	h'	°K	
30	372.28	5	ΔHm cal/g		m	to	
10	335.51	5	ΔHv cal/g		n	°K	
1	273.31	5	0.1 mm	47.92	o		
0.1	225.48	5	30 mm	40.90			
Press. mm	2022.3	5	BP	32.39	m'	to	
t _e			t _e	28.70	n'	°K	
Density g/ml 20°C			t _e (d, e)	28.73	o'		
t ₂₅	0.8238 [#]	2	ΔHv/T _e	20.33			
t ₃₀	0.8205 [#]	2					
d ₄ ²⁰	0.8173 [#]	4	d 376 to	61.94			
a	0.8371	4	e 575 °C	0.0565			
b	-0.0366	4	d' 232 to	58.70			
Ref. Index			e' 376 °C	0.0478			
n _D 20°C	1.4622 [#]	2	d _c g/ml				
25	1.4602 [#]	2	v _c ml/g				
30	1.4582 [#]	4	t _c °C				
"C"	0.7417	4	P _c mm				
MR (Obs.)	187.30	2	PV/RT				
MR (Calc.)	186.553	5	0.1 mm	1.0000			
(n _D -d/2)	1.0502 [#]	2	30 mm	1.0000			
Dielectric	2.14	5	BP	0.8881			
A 376 to	7.66107	4	t _e	0.8443			
B 625 °C	3174.1	4	t _c				
C	141.	5	ΔHc kcal/m				
A* 376 to	2.63081	5	ΔHf				
B* 585 °C	3084.5	5	ΔFf				
K			Viscosity centistokes				
t _k to °C			η °C				
t _x to °C							
A' to °C			B _v to °C				
B' to °C			A _v to °C				
C' to °C			(B _v)				
A' * 232 to	2.52552	5	(A _v)				
B' * 376 °C	3030.5	5	c _p liq. °K				
A _c to °C			c _p vap. °K				
B _c to °C			c _v vap.				
C _c to °C							
Cryos. A° const. B°							
t _e °C	587.80	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. 1

NAME		Vinyl bromide		STRUCTURAL FORMULA	
		Bromoethene		CHBr=CH ₂	
Mole % Pur.	100.00	Ref. 1	Molecular Formula C ₂ H ₃ Br	Molecular Weight 106.960	
		Ref.			Ref.
F.P. °C	-139.54	1	dt/dP °C/mm		f to
F.P. 100%	-139.54	1	25°C	0.0300	g °
B.P. °C	+15.80	2	BP	0.038	h ---
760 mm	-31.7	5	t _e	0.03736	f' to
100	-52.3	5	30 mm	0.5224	g' °
30			ΔHm cal/g	11.44	h'
10			ΔHv cal/g		m to
1			25°C	50.5	n °K
Pressure mm 25°C	1033.	5	30 mm	80.8	o
t _e	777.0	5	BP	52.4	m' to
Density g/ml 20°C	1.4933 [‡]	2	t _e	51.6	n' °K
d ₄ ^t 25	1.4738 [‡]	2	t _e (d, e)	51.2	o'
d ₄ 30	1.4542 [‡]	5	ΔHv/T _e	19.12	
a	1.5730	4	d -55 to	58.0	Surface tension dynes/cm. 20°C
b	-0.00372	4	e -20 to	0.417	25
Ref. Index n _D 20°C	1.441 [‡]	2	d' to		30
25	1.435 [‡]	2	e' °C		17.92 [‡]
30			d c g/ml		20.04 [‡]
"C"	0.5847	5	v c ml/g		25
MR (Obs.)	18.917	4	t c °C		30
MR (Calc.)	18.734	5	P c mm		40
(nD-d/2)	0.6944	5	PV/RT		Sugd. 152.1
Dielectric	5.628 [#]	1	25°C	0.9512	5
A -60 to	6.66715	5	30 mm	1.0000	5
B 60 °C	953.4	5	BP	0.9650	5
C	236.0	5	t _e	0.9642	5
A* -60 to	1.23701	5	ΔHc kcal/m		
B* 20 °C	899.8	5	ΔHf		
K			ΔFf		
c			Viscosity centistokes		
t _k to			η -20 °C	0.2759	1
t _x °C			-10	0.2528	1
A' to			0	0.2393	1
B' °C			B ^v -30 to	213.8	4
C' °C			A ^v 10 °C	Z.59636	4
A** to			(B ^v)		
B** °C			(A ^v)		
Ac to			c _p liq. °		
Bc t _c °C			c _p vap. °K		
Cc °C			c _v vap.		
Cryos. A° const. B°	0.03453	1			
t _e °C	16.44	5			
‡ for the liquid at saturation pressure # at 5°C + grams/100 grams solvent					
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: 1, 2					
PURIFICATION: 1, 2					
LITERATURE REFERENCES:					

NAME	Vinyl chloride			STRUCTURAL FORMULA		
	Chloroethene					
				$\text{CH}_2=\text{CHCl}$		
Mole % Pur. 100.0	Ref. 1	Molecular Formula $\text{C}_2\text{H}_3\text{Cl}$	Molecular Weight 62.501			
	Ref.			Ref.		Ref.
F.P. °C	-153.79	1	dt/dP °C/mm		f	to
F.P. 100%			25°C	0.01355	g	°K
B.P. °C			BP	0.03423	h	
760 mm	-13.37	1	t _e	0.03675	g'	to
100	-55.8	4	30 mm	0.4500	g'	°K
30	-73.95	4	ΔHm cal/g	18.14	h'	
10	-87.5	4	ΔHv cal/g		m	to
1	-109.42	4	25°C	71.26	n	°K
Pressure mm 25°C	2660.0	4	30 mm	93.50	o	
t _e	692.3	5	BP	79.53		
Density g/ml -30°C	0.99986	1	t _e	79.84	m'	to
d ₄ ^t -25	0.99176	1	t _e (d, e)	80.08	n'	°K
d ₄ ^t -20	0.98343	1	ΔHv/T _e	19.38	o'	
a	0.95421	4	d _e -80 to	76.45	Surface tension dynes/cm -30°C	
b	-0.00158	4	e -20 °C	0.2306	γ	23.87
Ref. Index n _D -10°C	1.4046	5	d'		-20	22.27
25			e'		-10	20.88
30			d _v g/ml	0.370	Parachor [P]	
"C"	0.54	5	v _c ml/g	2.70	20°C	
MR (Obs.)			t _c °C	156.5	30	
MR (Calc.)	15.836	5	P _c mm	42000.	40	Sugd. 138.4
(n _D -d/2)-10°C	0.9213	5	PV/RT		40	
Dielectric	6.26±	1	25°C	0.9178	20°C	Exp. L. l. %/wt. 2.5
A -100 to	6.49712	4	30 mm	1.0000	30	u. 69.9
B -50 °C	783.4	4	BP	0.9640	40	Dispersion
C	230.0	4	t _e	0.9652	40	Flash Point °C -78.0
A* -80 to	0.84290	5	t _c	0.264	5	Fire Point
B* 0 °C	727.85	5	ΔHc kcal/m			M. Spec. Ultra V.
K			ΔHf	-144.0	5	X-Ray Dif. Infrared
c			ΔFf			
t _k - to			Viscosity centistokes			Solubility in +
t _x °C			η			Acetone
A' to			-40 °C	0.3339	1	Carbon tet.
B' °C			-30	0.3026	1	Benzene
C'			-20	0.2780	1	Ether
A''* to			-10	0.2563	5	n-Heptane
B''* °C			B _v -50 to	234.945	4	Ethanol
			A _v -10 °C	Σ. 51616	4	Water
			(B _v) to			Water in
			(A _v) °C			0.11
Ac 50 to	10.71749	5	c _p liq. 293°K	0.38	1	
Bc t _c °C	4927.2	5	c _p vap. 298°K	0.205	1	
Cc	652.	5	c _v vap.			
Cryos. A° const. B°	0.04002	1				
t _e °C	-15.76	5				
T _R = 0.75 T _c			≠ 17.2°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:						

NAME		cis-1-Chloro-1-propene			STRUCTURAL FORMULA		
					CHCl=CH-CH ₃		
Mole % Pur.	Ref. 2	Molecular Formula	C ₃ H ₅ Cl	Molecular Weight	76.527		
F. P. °C		-134.8	2	dt/dP °C/mm		Ref.	
F. P. 100%				25°C		5	
B. P. °C		+32.8	2	BP		5	
760 mm		-15.1	5	t _e		5	
100		-36.2	5	30 mm		5	
30		-52.1	5	ΔHm cal/g			
10				ΔHv cal/g			
1				25°C		5	
Pressure mm 25°C		575.0	5	30 mm		5	
t _e		817.9	5	BP		5	
Density g/ml 20°C		0.9347	2	t _e		5	
d ^t 25		0.9271	2	t _e (d, e)		5	
d ₄ 30		0.9193	5	ΔHv/T _e		5	
a		0.9656	4	d -40 to		5	
b		-0.00144	4	e 40 °C		5	
Ref. Index n _D 20°C		1.4055	2	d'			
25		1.400	2	e'			
30				d _c g/ml		5	
"C"		0.5780	4	v _c ml/g		5	
MR (Obs.)		20.828	4	t _c °C		5	
MR (Calc.)		20.454	5	P mm		5	
(nD-d/2)		0.9382	4	PV/RT		5	
Dielectric				25°C		5	
A -40 to		6.88871	5	30 mm		5	
B 95 °C		1065.3	5	BP		5	
C		233.	5	t _e		5	
A* -40 to		1.24621	5	t _c		5	
B* 45 °C		994.8	5	ΔHc kcal/m			
K				ΔHf			
c				ΔFf			
t _k				Viscosity centistokes			
t _x				η			
A' to				B ^v to			
B' °C				A ^v °C			
C' °C				(B ^v)			
A'* to				(A ^v)			
B'* °C				c _p liq. °			
Ac 95 to		7.26279	5	c _p vap. °K			
Bc t _c °C		1322.0	5	c _v vap.			
Cc t _c °C		270.	5				
Cryos. A°							
const. B°							
t _e °C		34.93	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:							

NAME		trans-1-Chloro-1-propene			STRUCTURAL FORMULA		
					CHCl=CH-CH ₃		
Mole % Pur.	Ref. 2	Molecular Formula C ₃ H ₅ Cl	Molecular Weight 76.527				
	Ref.						Ref.
F.P. °C	-99.0	2	dt/dP °C/mm		f	to	
F.P. 100%			25°C	0.05405	g	°C	
B.P. °C			BP	0.0385	h		
760 mm	37.4	2	t _e	0.03594	f'	to	
100	-11.2	5			g'	°C	
30	-32.6	5	30 mm	0.5341	h'		
10	-48.7	5	ΔHm cal/g				
1							
Pressure mm 25°C	487.2	5	ΔHv cal/g		m	to	
t _e	830.8	5	25°C	83.51	n	°K	
			30 mm	93.81	o		
Density g/ml 20°C	0.935	2	BP	81.57			
t _e	0.927	2	t _e	81.03	m'	to	
d ₄ ^t	0.9185	4	t _e (d, e)	81.11	n'	°K	
			ΔHv/T _e	19.82	o'		
a	0.9696	5	d -40 to	88.11	Surface tension dynes/cm. 20°C		
b	-0.00162	5	e 50 °C	0.1748	5	21.77	5
			d'		5	25	5
Ref. Index n _D 25°C	1.4054	2	e'		5	20.33	5
20	1.400	2					
30			d _v g/ml	0.333	Parachor [P] 20°C		
"C"	0.578	5	v _c ml/g	3,000	30		
MR (Obs.)	20.828	4	t _c °C	225.0	40		
MR (Calc.)	20.454	5	P _c mm	35900.	Sugd. 177.4		
(n _D -d/2)	0.9379	4			Exp. L. l. %wt. u.		
Dielectric			PV/RT 25°C	0.9654	Dispersion		
A -40 to	6.88340	5	30 mm	1.0000	Flash Point °C		
B 100 °C	1078.3	5	BP	0.9560	Fire Point		
C	232.	5	t _e	0.9525	M. Spec. Ultra V.		
A* -40 to	1.24083	5	t _c	0.265	X-Ray Dif.		
B* 50 °C	1007.1	5			Infrared		
K			Viscosity centistokes η °C		Solubility in +		
t _k to °C					Acetone		
t _x °C					Carbon tet.		
A' to °C					Benzene		
B' °C					Ether		
C' °C					n-Heptane		
A'*	to		B _v to °C		Ethanol		
B'*	°C		A _v °C		Water		
			(B _v)		Water in		
Ac 100 to	7.28034	5	(A _v)				
Bc t _c °C	1349.	5	c _p liq. °C				
Cc	270.	5					
Cryos. A° const. B°			c _p vap. °K				
t _e °C	40.03	5	c _v vap.				
+ grams/100 grams solvent							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		1, 1, 2-Trichloroethylene			STRUCTURAL FORMULA		
					C Cl ₂ =CHCl		
Mole % Pur.	Ref.	Molecular Formula	C ₂ HCl ₃	Molecular Weight	131.399		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.2890	5	g	°K
B. P. °C			BP	0.04369	5	h	
760 mm	87.08	1	t _e	0.0359	5	f'	to
100	31.54	4	30 mm	0.6178	5	g'	°K
30	6.90	5	ΔHm cal/g			h'	
10	-11.85	5	ΔHv cal/g			m	to
1	-42.89	5	25°C	62.33	5	n	°K
Pressure mm 25°C	74.31	5	30 mm	64.02	5	o	
t _e	975.52	5	BP	56.43	5	m'	to
Density g/ml 20°C	1.46422	1	t _e	55.61	5	n'	°K
d _t 25	1.45541	1	t _e (d, e)	55.62	5	o'	
d ₄ 60	1.39501	1	ΔHv/T _e	19.81	5	Surface tension dynes/cm. 20°C	
a	1.49948	4	d 7 to	64.67	5	30	29.28
b	-0.00174	4	e 96 °C	0.0946	5	40	27.94
Ref. Index n _D 20°C	1.47734	1	d'				26.76
25	1.47457	1	e'			Parachor [P]	
50	1.46056	1	d _c g/ml	0.513	5	20°C	208.7
"C"	0.4302	4	v _c ml/g	1.950	5	30	208.8
MR (Obs.)	25.37	4	t _c °C	298.	5	40	209.0
MR (Calc.)	25.57	5	P _c mm	36876.	5	Sugd.	212.8
(n _D -d/2)	0.74523	4	PV/RT 25°C	0.9957	5	Exp. L.l./wt. u.	
Dielectric			30 mm	1.0000	5	Dispersion	
A 7 to	7.02808	4	BP	0.9578	5	Flash Point °C	
B 155 °C	1315.0	4	t _e	0.9507	5	Fire Point	
C	230.	4	t _c	0.265	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* 7 to	1.54642	5	ΔHc kcal/m			Solubility in +	
B* 106 °C	1230.2	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _x to			η 20 °C	0.3844	1	Ether	
t _x °C			40	0.3291	1	n-Heptane	
A' to			60	0.2867	1	Ethanol	
B' °C			80	0.2553	1	Water	
C' °C			B ^v 10 to	311.03	4	Water in	
A'* to			A ^v 70 °C	Z.52395	4		
B'* °C			(B ^v) to				
Ac 155 to	7.4675	5	(A ^v) °C				
Bc t _c °C	1675.	5	c _p liq. °K				
Cc °C	280.	5	c _p vap. °K				
Cryos. A° const. B°			c _v vap.				
t _e °C	95.60	5					
TR = 0.75 T _c							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: Dow							
PURIFICATION: Distillation							
LITERATURE REFERENCES:							

NAME		Perchloroethylene			STRUCTURAL FORMULA		
					$\text{CCl}_2=\text{CCl}_2$		
Mole % Pur.	Ref.	Molecular Formula C_2Cl_4	Molecular Weight 165.848				
		Ref.			Ref.		Ref.
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	1.0102	5	g	°K
B. P. °C			BP	0.04721	5	h	
760 mm	120.97	1	t _e	0.0357	5	f'	to
100	60.97	4	30 mm	0.6670	5	g'	°K
30	34.37	4	ΔHm cal/g			h'	
10	14.02	5				m	to
1	-20.12	5	ΔHv cal/g			n	°K
Pressure mm 25°C	18.47	5	25°C	57.09	5	o	
t _e	1086.	5	30 mm	56.65	5		
Density g/ml 20°C	1.62272	1	BP	50.0	5	m'	to
d ₄ 25	1.61446	1	t _e	48.96	5	n'	°K
d ₄ 30	1.60590	4	t _e (d, e)	48.98	5	o'	
			ΔHv/T _e	19.93	5		
a	1.65599	4	d 34 to	59.29	5	Surface tension dynes/cm. 20°C	
b	-0.00166	4	e 134 °C	0.0768	5	γ	31.33
Ref. Index n _D 20°C	1.50534	1	d' 25 to	58.27	5		30.81
25	1.50284	1	e' 34 °C	0.0472	5		30.20
30	1.50004	4	d _c g/ml	0.573	4	Parachor [P]	
"C"	0.4095	4	v _c ml/g	1.745	4	20°C	241.8
MR (Obs.)	30.34	4	t _c °C	340.	5	30	243.3
MR (Calc.) (nd-d/2)	0.69417	4	P _c mm	33687.	5	40	244.6
Dielectric						250.0	5
A 34 to	7.02003	4	PV/RT			Exp. L. l. %/wt.	
B 187 °C	1415.5	4	25°C	1.0000	5	u.	
C	221.	4	30 mm	1.0000	5	Dispersion	
A* 34 to	1.58865	5	BP	0.9672	5	Flash Point °C	
B* 144 °C	1321.5	5	t _e	0.9580	5	Fire Point	
K			t _c	0.255	5	M. Spec. Ultra V.	
c			ΔHc kcal/m			X-Ray Dif. Infrared	
t _k to °C			ΔHf			Solubility in +	
t _x to °C			ΔFf			Acetone	
A' 25 to	7.41073	5	Viscosity centistokes			Carbon tet.	
B' 34 °C	1622.1	5	η	0.54976	1	Benzene	
C'	239.	5	20 °C	0.45702	1	Ether	
A'' 25 to	1.96901	5	40	0.39347	1	n-Heptane	
B'' 34 °C	1518.6	5	60	0.34061	1	Ethanol	
Ac 187 to	7.4489	5	80			Water	
Bc t _c °C	1787.	5	B ^v 10 to	353.2	4	Water in	
Cc t _c °C	271.	5	A ^v 90 °C	2.53223	4		
Cryos. A° const. B°			(B ^v) to				
t _e °C	134.28	5	(A ^v) °C				
T _R = 0.75 T _c			c _p liq. °K				
			c _p vap. °K				
			c _v vap.				
+ 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:							

NAME		Hexachloropropene		Hexachloropropylene		STRUCTURAL FORMULA	
		Molecular Formula C ₃ Cl ₆		Molecular Weight 248.772		C ₃ Cl ₃ C=CCl ₂	
Mole % Pur.	Ref.	Molecular Formula	C ₃ Cl ₆	Molecular Weight	248.772		
F.P. °C	-57.12	1					
F.P. 100%							
B.P. °C							
760 mm	214.14	1		48.562	5	f	to °K
100	141.13	1		0.05767	4	g	
30	108.97	4		0.03718	5	h	
10	84.5	5		0.8050	4	f'	to °K
1	43.5	5				g'	
						h'	
Pressure mm 25°C	0.2717	5				m	to °K
t _e	1336.0	5				n	
Density g/ml 20°C	1.76376	1				o	
d ₄ ^t 25	1.75656	1				m'	to °K
d ₄ ^t 30	1.7494	4				n'	
						o'	
a	1.79256	4				Surface tension dynes/cm. 20°C	
b	-0.00144	4				30	38.12
						40	36.95
Ref. Index n _D 25	1.54956	1				40	35.87
25	1.54720	1				Parachor [P]	
30	1.53570	1				20°C	350.5
"C"	0.40748	4				30	349.2
MR (Obs.)	44.903	4				40	350.9
MR (Calc.)	44.787	5				Sugd.	363.4
(nD-d/2)	0.66768	4				Exp. L.l. %/wt. u.	
Dielectric	2.682	1				Dispersion	
A 109 to	6.92329	1				Flash Point °C	
B 267°C	1649.33	1				Fire Point	
C	193.87	1				M Spec. Ultra V. X-Ray Dif. Infrared	
A* 110 to	1.61793	5				Solubility in +	
B* 250°C	1550.51	5				Acetone	
K						Carbon tet.	
c						Benzene	
t _k						Ether	
x						n-Heptane	
A' 20 to	7.2664	5				Ethanol	
B' 109°C	1863.7	5				Water	
C'	212.95	5				Water in	
A** 20 to	1.9832	5					
B** 109°C	1765.4	5					
Ac 269 to	7.3256	5					
Bc t _c °C	2041.	5					
Gc t _c °C	245.7	5					
Cryos. A° const. B°							
t _e °C	240.45	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:		Dow					
PURIFICATION:		Dist. chromat.					
LITERATURE REFERENCES:							

No. 1

NAME		Propadiene			STRUCTURAL FORMULA		
		Allene			CH ₂ =C=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₃ H ₄	Molecular Weight	40.062		
F.P. °C	-136.	2		dt/dP °C/mm		f	to
F.P. 100%				25°C	0.0110	g	°C
B.P. °C				BP	0.033	h	
760 mm	-34.5	2		t _e	0.0372	f'	to
100	-73.0	4		30 mm	0.3674	g'	°C
30	-88.2	4		ΔHm cal/g		h'	
10	-99.	4		ΔHv cal/g		m	to
1				25°C		n	°K
Pressure mm 25°C	4286.	5		30 mm	153.8	o	
t _e	637.1	5		BP	109.0	m'	to
Density g/ml 20°C				t _e	112.0	n'	°K
d ₄ ^t 25				t _e (d, e)	112.5	o'	
d ₄ ^t 30				ΔHv/T _e	19.23	Surface tension dynes/cm. 20°C	
a				d -90 to °C	80.2	30	
b				e -30 to °C	0.834	40	
Ref. Index n _D 20°C				d' to °C		Parachor [P] 20°C	
25				e' to °C		30	
30				d _c g/ml		40	
"C"				v _c ml/g	120.0	Sugd.	
MR (Obs.)				t _c °C		Exp. L. l. %/wt. u.	
MR (Calc.) (n _D -d/2)				P _c mm		Dispersion	
Dielectric				PV/RT 25°C	0.8750	Flash Point °C	
A -95 to	5.6457	2		30 mm	1.0000	Fire Point	
B 25 °C	441.0	2		BP	0.9700	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	194.0	2		t _e	0.9769	Solubility in ⁺ Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* -90 to	T. 89775	5		t _c			
B* 15 °C	410.5	5		ΔHc kcal/m			
K				ΔHf			
t _k to °C				ΔFf			
t _x to °C				Viscosity centistokes η °C			
A' to °C				B ^v to °C			
B' to °C				A ^v to °C			
C' to °C				(B ^v) to °C			
A'*	to °C			(A ^v) to °C			
B'*	to °C			c _p liq. °C			
Ac to °C				c _p vap. °K			
Bc to °C				c _v vap.			
Cc to °C							
Cryos. A* const. B*							
t _e °C	-38.8	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, 2-Butadiene		STRUCTURAL FORMULA	
				CH ₂ =C=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₄ H ₆	Molecular Weight	54.088
F. P. °C	-136.190	2	dt/dP °C/mm		
F. P. 100%			25°C	0.0234	5
B. P. °C	10.85	2	BP	0.03495	4
760 mm	-33.83	2	t _e	0.03500	5
100	-54.	2	30 mm	0.5022	5
30	-69.07	2			
10	-94.48	5	ΔHm cal/g		
1			25°C	104.13	5
Pressure mm 25°C	1259.8	5	30 mm	117.39	5
t _e	758.60	5	BP	106.74	5
Density g/ml 20°C	0.652 [‡]	2	t _e	106.76	5
d ^t 25	0.646 [‡]	2	t _e (d, e)	106.75	5
d ^t 30	0.640	4	ΔHv/T _e	20.33	5
a	0.6770	4	d -54 to	108.53	5
b	-0.0011	4	e 11 °C	0.1646	5
Ref. Index n _D 20°C			d' to		
25			e' °C		
30			d c g/ml	0.2468	3
"C"			v c ml/g	4.051	3
MR (Obs.)			t _c °C	170.6	3
MR (Calc.) (n _D -d/2)	19.738	5	P c mm	33770.	3
Dielectric			PV/RT 25°C	0.9461	5
A -54 to	7.1619	2	30 mm	1.0000	5
B 68 °C	1121.	2	BP	0.9600	5
C	251.0	2	t _e	0.9601	5
A* -54 to	1.37634	5	t _c		
B* 21 °C	1045.57	5	ΔHc kcal/m	588.37	2
K			ΔHf gas	38.77	2
c			ΔFf gas	47.43	2
t _k to			Viscosity centistokes °C		
t _x °C			η		
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v) to		
A'* to			(A ^v) °C		
B'* °C			c _p liq. °K		
Ac 68 to	7.62883	5	c _p vap. 300°K	0.35553	2
Bc t _c °C	1438.26	5	400	0.43522	2
Cc °C	293.28	5	c _v vap.		
Cryos. A° const. B°					
t _e °C	10.80	5			
T _R = 0.75 T _c † at saturation pressure † grams/100 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 Sp. Tech. Pub. 109					

NAME		1,3-Butadiene			STRUCTURAL FORMULA			
					CH ₂ =CHCH=CH ₂			
Mole % Pur.	Ref.	Molecular Formula C ₄ H ₆	Molecular Weight 54.088					
	Ref.							Ref.
F. P. °C	-108.915	2	dt/dP			f		
F. P. 100%			°C/mm			g	to	
B. P. °C			25°C	0.0154	5	h	°K	
760 mm	-4.413	2	BP	0.03377	4			
100	-47.035	2	t _e	0.03542	5	f'	to	
30	-65.74	2	30 mm	0.4675	5	g'	°K	
10	-79.89	2	ΔHm cal/g			h'		
1	-103.17	5						
Pressure mm 25°C	2104.5	5	ΔHv cal/g			m	300 to	-0.0514
t _e	714.96	5	25°C	92.25	5	n	600 °K	0.0016
			30 mm	112.75	5	o		-0.0698
Density g/ml 20°C	0.6211 [±]	2	BP	98.89	5			
t _e 25	0.6149 [±]	2	t _e	99.26	5	m'	700 to	0.1766
d ₄ 30	0.6086	4	t _e (d, e)	99.25	5	n'	1000 °K	0.0387
			ΔHv/T _e	20.09	5	o'		-0.0630
a	0.6480	4	d -66 to	97.90	5	Surface tension dynes/cm. 20°C		
b	-0.0011	4	e -6 °C	0.2259	5	γ	30	13.41
Ref. Index n _D 20°C			d' to				40	12.20
25			e' °C			Parachor [P] 20°C		
30			d _c g/ml	0.245	2			
"C"			v _c ml/g	4.082	2			
MR (Obs.)			t _c °C	152.	2			
MR (Calc.) (nD-d/2)	21.008	5	P _c mm	32452.	2			
Dielectric			PV/RT			Sugd. 168.2		
A -66 to	6.85941	2	25°C	0.9269	5	Exp. L. l. %/wt.		
B 46 °C	935.53	2	30 mm	1.0000	5	u.		
C	239.55	2	BP	0.9600	5	Dispersion		
A* -66 to	1.11738	5	t _e	0.9616	5	Flash Point °C		
B* 5 °C	872.39	5	t _c	0.271	2	Fire Point		
K			ΔHc kcal/m	575.93	2	M. Spec. Ultra V.		
t _c to			ΔHf	21.21	2	X-Ray Dif. Infrared		
t _k °C			ΔFf			Solubility in ⁺		
A' to			Viscosity centistokes			Acetone		
B' °C			η			Carbon tet.		
C' °C						Benzene		
A* to			B ^v to			Ether		
B* °C			A ^v °C			n-Heptane		
Ac 46 to	7.29710	5	(B ^v) to			Ethanol		
Bc t _c °C	1202.54	5	(A ^v) °C			Water		
Cc t _c °C	277.80	5	c _p liq. °K			Water in		
Cryos. A° const. B°			c _p vap. 300°K	0.35331	2			
t _e °C	-5.97	5	400	0.44908	2			
			c _v vap.					
T _R = 0.75 T _c			± at saturation pressure			+ grams/100 grams solvent		
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula								
SOURCE: API								
PURIFICATION: API								
LITERATURE REFERENCES:								

NAME		1,2-Pentadiene			STRUCTURAL FORMULA		
					CH ₂ =C=CHCH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₅ H ₈	Molecular Weight 68.114				
F.P. °C	-137.26						
F.P. 100%							
B.P. °C							
760 mm	44.856	2					
100	-4.27	2					
30	-26.04	2					
10	-42.6	2					
1	-69.99	5					
Pressure mm 25°C	367.26	5					
t _e	853.68	5					
Density g/ml 20°C	0.69257	2					
d ₄ ^t 25	0.68760	2					
d ₄ ^t 30	0.68259	4					
a	0.71265	4					
b	-0.03947	4					
Ref. Index n _D 20°C	1.42091	2					
25	1.41773	2					
30	1.41446	4					
"C"	0.8080	4					
MR (Obs.)	24.936	2					
MR (Calc.)	24.356	5					
(nD-d/2)	1.07462	2					
Dielectric	2.02	5					
A -26 to	7.01100	2					
B 97°C	1154.42	2					
C	234.65	2					
A* -26 to	1.29889	5					
B* 58°C	1079.85	5					
K							
c							
t _k to							
t _x °C							
A' to							
B' °C							
C' °C							
A'* to							
B'* °C							
Ac 97 to	7.44719	5					
Bc t _c °C	1462.26	5					
Cc t _c °C	276.31	5					
Cryos. A° const. B°							
t _e °C	48.31	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:							

NAME		1, cis-3-Pentadiene			STRUCTURAL FORMULA		
					CH ₂ =CHCH=CHCH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₅ H ₈	Molecular Weight 68.114				
	Ref.			Ref.			Ref.
F. P. °C	-140.820	2	dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.0673	g	°K	
B. P. °C			BP	0.03875	h		
760 mm	44.068	2	t _e	0.03544	f'	to	
100	-5.02	2	30 mm	0.5421	g'	°K	
30	-26.67	2			h'		
10	-43.1	2	ΔHm cal/g		m	300 to	-0.0544
1	-70.22	5	25°C	98.84	n	600 °K	0.0015
Pressure mm 25°C	379.07	5	30 mm	109.02	o		-0.073
t _e	851.42	5	BP	95.09			0.6
Density g/ml 20°C	0.69102	2	t _e	94.44	m'	700 to	0.1498
d ₄ ²⁵	0.68592	2	t _e (d, e)	94.42	n'	1000 °K	0.0391
d ₄ ³⁰	0.68078	4	ΔHv/T _e	20.06	o'		-0.029
a	0.7116	4	d -27 to	103.76	Surface tension dynes/cm. 20°C		
b	-0.037	4	e -47 °C	0.1969	30 18.21		
Ref. Index n _D 20°C	1.43634	2	e' to °C		40 17.05		
25	1.43291	2	d _c g/ml		Parachor [P] 20°C		
30	1.42943	4	v _c ml/g	219.	30		
"C"	0.8377	4	t _c °C		40		
MR (Obs.)	25.790	2	P _c mm	30901.	Sugd. 207.2		
MR (Calc.) (n _D ² -d/2)	25.626	5	PV/RT 25°C	0.9739	Exp. L. l. %/wt. u.		
Dielectric	2.06	5	30 mm	1.0000	Dispersion 243.8		
A -27 to	6.94178	2	BP	0.9575	Flash Point °C		
B 96 °C	1118.37	2	t _e	0.9543	Fire Point		
C	231.33	2	t _c		M. Spec. Ultra V. X-Ray Dif. Infrared		
A* -27 to	1.23515	5	ΔHc kcal/m	720.15	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in		
B* 57 °C	1046.11	5	ΔHf gas	18.70			
K			ΔFi gas	34.88			
t _k to °C			Viscosity centistokes η °C				
t _x to °C			B ^v to °C				
A' to °C			A ^v to °C				
B' to °C			(B ^v) to °C				
C' to °C			(A ^v) °C				
A'*	to °C		c _p liq. °K				
B'*	to °C		c _p vap 300°K	0.33326			
Ac 96 to	7.37139	5	400	0.43310			
Bc t _e °C	1417.55	5	c _v vap.				
Cc	272.55	5					
Cryos. A° const. B°							
t _e °C	47.45	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:							

NAME		1, trans-3-Pentadiene			STRUCTURAL FORMULA			
					CH ₂ =CHCH=CHCH ₃			
Mole % Pur.	Ref.	Molecular Formula	C ₅ H ₈	Molecular Weight	68.114			
F.P. °C	-87.470	2	dt/dP			f	to	
F.P. 100%			25°C	0.0632	5	g	°K	
B.P. °C			BP	0.03879	4	h		
760 mm	42.032	2	t _e	0.03567	5	f'	to	
100	-7.06	2	t _e (d, e)			g'	°K	
30	-28.7	2	ΔHv cal/g			h'		
10	-45.1	2	ΔHv cal/g			m	300 to	
1	-72.15	5	25°C	97.06	5	n	600 °K	
Pressure mm 25°C	410.5	5	30 mm	107.39	5	o	0.0087	
t _e	845.6	5	BP	93.76	5		0.0014	
Density g/ml 20°C	0.67603	2	t _e	93.17	5		-0.0666	
t	0.67102	2	t _e (d, e)	93.15	5	m'	700 to	
d	0.66597	4	ΔHv/T _e	19.93	5	n'	1000 °K	
d		2	d	-29 to	101.86	5	o'	0.1303
a	0.6963	4	e	45 °C	0.1926	5		0.0010
b	-0.0395	4	e'	°C				-0.0637
Ref. Index n _D			d _c g/ml			Surface tension dynes/cm. 20°C		
25	1.43008	2	v _c ml/g			30	17.75	5
30	1.42669	2	t _c °C	214.	5	40	16.66	5
"C"	0.8448	4	P _c mm	29456.	5		15.58	5
MR (Obs.)	26.032	2	PV/RT			Parachor [P] 20°C		
MR (Calc.)	25.626	5	25°C	0.9724	5	30		
(nD-d/2)	1.09206	2	30 mm	1.0000	5	40		
Dielectric	2.04	5	BP	0.9575	5	Sugd.	207.2	5
A -29 to	6.92257	2	t _e	0.9545	5	Exp. L. l. %/wt. u.		
B 92 °C	1108.94	2	t _c			Dispersion	245.7	2
C	232.34	2	ΔHc kcal/m	720.05	2	Flash Point °C		
A* -29 to	1.21772	5	ΔHf gas	18.60	2	Fire Point		
B* 55 °C	1036.67	5	ΔFf gas	35.07	2	M Spec. Ultra V.		
K			Viscosity centistokes			X-Ray Dif.		
c			η °C			Infrared		
t _k to			B ^v to			Solubility in +		
t _x °C			A ^v °C			Acetone	∞	
A' to			(B ^v) to			Carbon tet.	∞	
B' °C			(A ^v) °C			Benzene	∞	
C' °C			c _p liq. °K			Ether	∞	
A'* to			c _p vap. 300°K	0.36556	2	n-Heptane	∞	
B'* °C			c _p vap. 400	0.45806	2	Ethanol	∞	
Ac 92 to	7.35341	5	c _v vap.			Water	∞	
Bc t _c °C	1406.44	5				Water in		
Cc °C	273.32	5						
Cryos. A°								
const. B°								
t _e °C	45.22	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:								

NAME		1,4-Pentadiene			STRUCTURAL FORMULA				
					$\text{CH}_2=\text{CHCH}_2\text{CH}=\text{CH}_2$				
Mole % Pur.	Ref.	Molecular Formula	C_5H_8	Molecular Weight	68.114				
		Ref.			Ref.				Ref.
F.P. °C	-148.275	2	dt/dP °C/mm			f	to		
F.P. 100%			25°C		0.0382	g	°K		
B.P. °C			BP		0.03720	h			
760 mm	25.967	2	t_e		0.03573	g'	to		
100	-20.96	2	30 mm		0.5142	h'	°K		
30	-41.5	2							
10	-57.1	2	ΔH_m cal/g						
1	-82.69	5							
Pressure mm 25°C	734.3	5	ΔH_v cal/g		88.28	m	300 to		0.0221
t_e	800.1	5	25°C		101.49	n	600 °K		0.0013
Density g/ml 20°C	0.66076	2	30 mm		88.09	o			-0.0666
d_t 25	0.65571	2	BP		87.82				
d_4 30	0.6506	4	t_e		87.80	m'	700 to		0.1175
			t_e (d, e)		19.90	n'	1000 °K		0.0010
			$\Delta H_v/T_e$			o'			-0.0637
a	0.6816	4	d -41 to		93.24	Surface tension dynes/cm. 20°C			
b	-0.0392	4	e 27 °C		0.1985	30			
Ref. Index n_D 20°C	1.38876	2	d' to			40			
25	1.38542	2	e' °C			16.09			
30	1.38247	4	d_c g/ml			15.03			
"C"	0.7857	4	v_c ml/g		187.	13.98			
MR (Obs.)	24.367	2	t_c °C			Parachor [P] 20°C			
MR (Calc.)	24.356	5	P_c mm		27238.	30			
($n_D-d/2$)	1.05838	2				40			
Dielectric	1.93	5	PV/RT			Sugd. 207.2			
A -41 to	6.84880	2	25°C		0.9589	Exp. L. l. %/wt. u.			
B 72 °C	1025.016	2	30 mm		1.0000	Dispersion			
C	232.354	2	BP		0.9580	153.1			
A* -41 to	1.1686	5	t_e		0.9565	Flash Point °C			
B* 37 °C	957.53	5	t_c			Fire Point			
K			ΔH_c kcal/m		726.65	M. Spec.			
t_k to			ΔH_f gas		25.20	Ultra V.			
t_x °C			ΔF_f gas		40.69	X-Ray Dif.			
A' to			Viscosity centistokes			Infrared			
B' °C			η °C			Solubility in +			
C' °C			B ^v to			Acetone			
A'* to			A ^v °C			Carbon tet.			
B'* °C			(B ^v) to			Benzene			
A ^c 72 to	7.27510	5	(A ^v) °C			Ether			
B ^c t_c °C	1301.04	5	c_p liq. °K			n-Heptane			
C ^c t_c °C	270.91	5	c_p vap. 300°K		0.36997	Ethanol			
Cryos. A° const. B°			c_p vap. 400		0.45952	Water			
t_e °C	27.43	5	c_v vap.			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:									

NAME		2,3-Pentadiene			STRUCTURAL FORMULA			
					CH ₃ CH=C=CHCH ₃			
Mole % Pur.	Ref.	Molecular Formula	C ₅ H ₈	Molecular Weight	68.114			
		Ref.			Ref.			
F. P. °C	-125.650	2	dt/dP °C/mm			f	to °K	
F. P. 100%			25°C	0.0768	5	g		
B. P. °C	48.265	2	BP	0.03870	4	h		
760 mm	-0.64	2	t _e	0.03505	5	f'	to °K	
100	-22.1	2	30 mm	0.5377	5	g'		
30	-38.4	2	ΔHm cal/g			h'		
10	-65.24	5	ΔHv cal/g			m	300 to °K	
1			25°C	102.91	5	n	600 °K	
Pressure mm 25°C	320.0	5	30 mm	114.00	5	o	0.0660	
t _e	862.8	5	BP	97.70	5		0.0011	
Density g/ml 20°C	0.69502	2	t _e	96.86	5		-0.0637	
d ^t 25	0.69000	2	t _e (d, e)	96.82	5	m'	700 to °K	
d ₄ 30	0.68494	4	ΔHv/T _e	20.28	5	n'	1000 °K	
a	0.7152	4	d	-22 to °C	108.87	5	o'	-0.0637
b	-0.0396	4	e	-52 to °C	0.2315	5	Surface tension dynes/cm. 20°C	
Ref. Index n _D 20°C	1.42842	2	d'				30	19.87
25	1.42509	2	e'				40	18.69
30	1.42170	4	d _c g/ml					17.53
"C"	0.8187	4	v _c ml/g					
MR (Obs.)	25.235	2	t _c °C	226.	5	Parachor [P] 20°C		
MR (Calc.) (nD-d/2)	1.08091	2	P _c mm	31482.	5	30		
Dielectric	2.04	5	PV/RT 25°C	0.9770	5	40		
A	-22 to 6.88603	2	BP	1.0000	5	Sugd.	207.2	5
B	1086.64	2	t _e	0.9570	5	Exp. L.l. %/wt. u.		
C	223.04	2	t _c	0.9534	5	Dispersion 174.5		
A*	-22 to 1,18444	5	ΔHc kcal/m	734.55	2	Flash Point °C		
B*	62 °C	5	ΔHf gas	33.10	2	Fire Point		
K	1018.30	5	ΔFf gas	49.22	2	M Spec. Ultra V. X-Ray Dif. Infrared		
c			Viscosity centistokes η °C			Solubility in +		
t _k						Acetone		∞
t _x						Carbon tet.		∞
A'						Benzene		∞
B'						Ether		∞
C'						n-Heptane		∞
A**						Ethanol		∞
B**						Water		∞
						Water in		
Ac	101 to 7.30054	5	B ^v					
Bc	t _c °C	5	A ^v					
Cc	263.23	5	(B ^v)					
			(A ^v)					
Cryos. A° const. B°			c _p liq. °K					
t _e °C	52.05	5	c _p vap. 300°K	0.35675	2			
			400	0.43897	2			
			c _v vap.					
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:								

NAME		3-Methyl-1,2-butadiene				STRUCTURAL FORMULA				
						$\begin{array}{c} \text{CH}_2=\text{C}=\text{C} \text{ CH}_3 \\ \\ \text{CH}_3 \end{array}$				
Mole % Pur.	Ref.	Molecular Formula	C_5H_8	Molecular Weight	68.114					
		Ref.			Ref.	Ref.				
F.P. °C				dt/dP		f		to		
F.P. 100%				°C/mm		g		°K		
B.P. °C				25°C	0.0588	5	h			
760 mm	40.	2		BP	0.03796	4				
100	-8.	2		t_e	0.03507	5	f'		to	
30	-30.	2		30 mm	0.5353	5	g'		°K	
10	-46.	2					h'			
1	-72.69	5		$\Delta\text{Hm cal/g}$						
Pressure mm 25°C	438.6	5		$\Delta\text{Hv cal/g}$		m	300 to	0.0588	4	
t_e	840.4	5		25°C	97.50	5	n	600 °K	0.0012	4
Density g/ml 20°C	0.680	2		30 mm	107.81	5	o		-0.0651	4
d_4^{25}	0.675	2		BP	94.63	5				
d_4^{30}	0.670	4		t_e	94.08	5	m'	700 to	0.1525	4
				t_e (d, e)	94.08	5	n'	1000 °K	0.0391	4
				$\Delta\text{Hv}/T_e$	20.27	5	o'		-0.0329	4
a	0.7002	4					Surface tension dynes/cm. 20°C			
b	-0.0394	4		d -30 to	102.21	5		30	17.05	5
				e 43 °C	0.1894	5		40	15.95	5
				d'			Parachor [P]			
Ref. Index n_D 20°C	1.410	2		e'			20°C			
25	1.407	2					30			
30	1.404	4		d_c g/ml			40			
"C"	0.8028	4		v_c ml/g	212.	5	Sugd. 207.2			
MR (Obs.)	24.818	4		t_c °C			Exp. L. l. %/wt. u.			
MR (Calc.)	24.356	5		P_c mm	31519.	5	Dispersion			
(nD-d/2)	1.070	2		PV/RT			Flash Point °C			
Dielectric	1.99	5		25°C	0.9713	5	Fire Point			
A -30 to	7.005	2		30 mm	1.0000	5	M. Spec. Ultra V.			
B 90 °C	1130.	2		BP	0.9580	5	X-Ray Dif.			
C	234.	2		t_e	0.9555	5	Infrared			
A* -30 to	1.29994	5		t_c			Solubility in ⁺			
B* 53 °C	1057.09	5		$\Delta\text{Hc kcal/m}$	732.45	2	Acetone			
K				$\Delta\text{Hf gas}$	31.00'	2	Carbon tet.			
t_k to				$\Delta\text{Ff gas}$	47.47	2	Benzene			
t_x °C				Viscosity centistokes η °C			Ether			
A' to							n-Heptane			
B' °C							Ethanol			
C'							Water			
A** to							Water in			
B** °C				B^v to						
				A^v °C						
Ac 90 to	7.43814	5		(B^v) to						
Bc t_c °C	1428.51	5		(A^v) °C						
Cc	274.34	5		c_p liq. °K						
Cryos. A° const. B°				c_p vap. 300°K	0.37144	2				
t_e °C	42.93	5		400	0.45512	2				
				c_v vap.						
$T_R = 0.75 T_c$										⁺ 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:										

NAME		2-Methyl-1,3-butadiene			STRUCTURAL FORMULA						
		Isoprene			$\text{CH}_2=\text{C} \begin{array}{c} \text{CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$						
Mole % Pur.	Ref.	Molecular Formula	C_5H_8	Molecular Weight	68.114						
		Ref.			Ref.						
F.P. °C	-145.950	2	dt/dP °C/mm			f			to		
F.P. 100%			25°C	0.0492	5	g			°K		
B.P. °C			BP	0.03817	4	h					
760 mm	34.067	2	t _e	0.03582	5	f'			to		
100	-14.21	2	30 mm	0.5315	5	g'			°K		
30	-35.5	2	ΔHm cal/g			h'					
10	-51.6	2	ΔHv cal/g			m			300 to	-0.0351	4
1	-78.08	5	25°C	92.34	5	n			600 °K	0.0016	4
Pressure mm 25°C	550.0	5	30 mm	103.42	5	o				-0.0695	4
t _e	824.2	5	BP	90.67	5	m'			700 to	0.1880	4
Density g/ml 20°C	0.68095	2	t _e	90.23	5	n'			1000 °K	0.0388	4
t _e	0.67587	2	t _e (d, e)	90.24	5	o'				-0.0729	4
d ₄ ^t	0.67074	4	ΔHv/T _e	19.85	5	Surface tension dynes/cm. 20°C					
a	0.7017	4	d -35 to	96.92	5	30					
b	-0.0395	4	e -36 °C	0.1834	5	40					
Ref. Index n _D 20°C	1.42194	2	d'			Parachor [P] 20°C					
25	1.41852	2	e'			30					
30	1.41524	4	d'			40					
"C"	0.8237	4	e'			Sugd. 207.2					
MR (Obs.)	25.416	2	d _c g/ml			Exp. L. l. %/wt. u.					
MR (Calc.)	25.626	2	v _c ml/g	202.	5	Dispersion					
(n _D -d/2)	1.08146	2	t _c °C	28860.	5	224.8					
Dielectric	2.02	5	P _c mm			Flash Point °C					
A -35 to	6.90334	2	PV/RT			Fire Point					
B 84 °C	1080.996	2	25°C	0.9671	5	M Spec. Ultra V. X-Ray Dif. Infrared					
C	234.67	2	30 mm	1.0000	5	Solubility in +					
A* -35 to	1.20523	5	BP	0.9590	5	Acetone					
B* 46 °C	1009.21	5	t _e	0.9568	5	Carbon tet.					
K			t _c			Benzene					
c			ΔHc kcal/m	719.55	2	Ether					
t _x			ΔHf	11.80	2	n-Heptane					
t _x			ΔFf			Ethanol					
A' to			Viscosity centistokes			Water					
B' to			γ °C			Water in					
C'			B ^v to								
A* to			A ^v to								
B* °C			(B ^v) to								
Ac 84 to	7.33735	5	(A ^v)								
Bc t _c °C	1374.92	5	c _p liq. °K								
Cc	275.34	5	c _p vap. 300°K	0.36997	2						
Cryos. A°			400	0.46686	2						
const. B°			c _v vap.								
t _e °C	36.44	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. 11

NAME		1,2-Hexadiene			STRUCTURAL FORMULA	
					CH ₂ =C=CH(CH ₂) ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140	
F. P. °C						f
F. P. 100%						g
B. P. °C						h
760 mm	76.	2		0.2012	5	
100	23.40	5		0.04136	4	
30	0.064	5		0.03497	5	f'
10	-17.70	5		0.5853	5	g'
1	-47.11	5				h'
Pressure mm						m
25°C	107.7	5		98.35	5	n
t _e	940.1	5		102.88	5	o
Density g/ml						m'
25°C	0.7149	2		89.22	5	n'
t	0.7102	2		88.03	5	o'
d ₄	0.7055	4		87.99	5	
a	0.7337	4		20.31	5	
b	-0.0392	4				
Ref. Index n _D						
20°C	1.4282	2				
25	1.4252	2				
30	1.4222	4				
"C"	0.7955	4				
MR (Obs.)	29.572	4				
MR (Calc.)	28.974	5				
(n _D -d/2)	1.0708	2				
Dielectric	2.04	5				
A	0 to 7.03380	4				
B	123 °C 1248.39	4				
C	224.6	5				
A*	0 to 1.37445	5				
B*	93 °C 1171.46	5				
K						
c						
t _k						
t _x						
A'						
B'						
C'						
A'*						
B'*						
Ac						
Bc						
Cc						
Cryos. A°						
const. B°						
t _e °C	82.84	5				
dt/dP °C/mm						
25°C						
BP						
t _e						
30 mm						
ΔHm cal/g						
ΔHv cal/g						
25°C						
30 mm						
BP						
t _e						
t _e (d, e)						
ΔHv/T _e						
d	0 to 102.89	5				
e	83 °C 0.1799	5				
d'						
e'						
d _e g/ml						
v _c ml/g						
t _c °C						
P _c mm						
PV/RT						
25°C						
30 mm						
BP						
t _e						
t _c						
ΔHc kcal/m						
ΔHf						
ΔFf						
Viscosity centistokes						
η °C						
B ^v						
A ^v						
(B ^v)						
(A ^v)						
c _p liq. °K						
c _p vap. °K						
c _v vap.						
+ grams/100 grams solvent						
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula						
SOURCE: API						
PURIFICATION: API						
LITERATURE REFERENCES:						

NAME		1, cis-3-Hexadiene		STRUCTURAL FORMULA	
				CH ₂ =CHCH=CHCH ₂ CH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140
F. P. °C		Ref.		Ref.	
F. P. 100%					
B. P. °C			dt/dP °C/mm		f to
760 mm	73.	2	25°C	0.1807	g °K
100	20.78	5	BP	0.04106	h
30	-2.37	5	t _e	0.03498	f' to
10	-20.00	5	30 mm	0.5808	g' °K
1	-49.18	5	ΔHm cal/g		h'
Pressure mm 25°C			ΔHv cal/g		m to
t _e	121.55	5	25°C	96.88	n °K
	931.49	5	30 mm	101.84	o
Density g/ml 20°C			BP	88.32	
d ₄ ^t 25	0.705	2	t _e	87.17	m' to
d ₄ ^t 30	0.700	2	t _e (d, e)	87.16	n' °K
	0.6950	4	ΔHv/T _e	20.30	o'
a	0.7250	4	d -2 to	101.41	Surface tension
b	-0.0398	4	e -79 °C	0.1793	dynes/cm. 20°C
Ref. Index n _D 20°C			d' to		30
25	1.438	2	e' °C		40
30	1.435	2			19.89
	1.432	4	d _c g/ml		18.76
"C"	0.8241	4	v _c ml/g		17.65
MR (Obs.)	30.585	4	t _c °C		
MR (Calc.) (nD-d/2)	30.244	5	P _c mm		Parachor [P]
	1.086	2			20°C
Dielectric	2.07	5	PV/RT		30
A -2 to	7.02864	4	25°C	0.9901	40
B 118 °C	1236.47	4	30 mm	1.0000	Sugd. 246.2
C	225.1	5	BP	0.9550	Exp. L. l. %/wt. u.
A* -2 to	1.37294	5	t _e	0.9493	Dispersion
B* 89 °C	1160.15	5	t _c		225.
K			ΔHc kcal/m		Flash Point °C
c			ΔHf		Fire Point
t _k to			ΔFf		M Spec.
t _x °C			Viscosity centistokes		Ultra V.
A' to			η °C		X-Ray Dif.
B' °C					Infrared
C' °C			B ^v to		Solubility in +
A'* to			A ^v °C		Acetone
B'* °C			(B ^v) to		Carbon tet.
Ac to			(A ^v) °C		Benzene
Bc °C			c _p liq. °K		Ether
Cc °C			c _p vap. °K		n-Heptane
Cryos. A°			c _v vap.		Ethanol
const. B°					Water
t _e °C	79.49	5			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:					

NAME		1, trans-3-Hexadiene			STRUCTURAL FORMULA		
					CH ₂ =CHCH=CHCH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm		f	to °K	
F. P. 100%			25°C	0.1807	g		
B. P. °C			BP	0.04106	h		
760 mm	73.	2	t _e	0.03498	f'	to °K	
100	20.78	5	30 mm	0.5808	g'		
30	-2.37	5	ΔHm cal/g		h'		
10	-20.00	5	ΔHv cal/g		m	to °K	
1	-49.18	5	25°C	96.88	n		
Pressure mm 25°C	121.55	5	30 mm	101.84	o		
t _e	931.49	5	BP	88.32	m'	to °K	
Density g/ml 20°C	0.705	2	t _e (d, e)	87.17	n'	to °K	
t	0.700	2	ΔHv/T _e	20.30	o'		
d ₄	0.6950	4	d -2 to	101.41	Surface tension dynes/cm. 20°C		
a	0.7250	4	e -79 °C	0.1793	y		
b	-0.0398	4	d'		30		
Ref. Index n _D 20°C	1.438	2	e'		40		
25	1.435	2	d _c g/ml		Parachor [P]		
30	1.432	4	v _c ml/g		20°C		
"C"	0.8241	4	t _c °C		30		
MR (Obs.)	30.585	4	P _c mm		40		
MR (Calc.)	30.244	5	PV/RT		Sugd. 246.2		
(nD-d/2)	1.086	2	25°C	0.9901	Exp. L. l. %/wt. u.		
Dielectric	2.07	5	30 mm	1.0000	Dispersion 225.		
A -2 to	7.02864	4	BP	0.9550	Flash Point °C		
B 118 °C	1236.47	4	t _e	0.9493	Fire Point		
C	225.1	5	t _c		M. Spec. Ultra V. X-Ray Dif. Infrared		
A* -2 to	1.37294	5	ΔHc kcal/m		Solubility in +		
B* 89 °C	1160.15	5	ΔHf		Acetone		
K			ΔFf		Carbon tet.		
t _k to			Viscosity centistokes		Benzene		
t _x °C			η °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 to			c _p vap. °K				
Bc t _c °C			c _v vap.				
Cc °C							
Cryos. A°							
consts. B°							
t _e °C	79.49	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:

NAME		1, cis-4-Hexadiene		STRUCTURAL FORMULA	
				CH ₂ =CHCH ₂ CH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140
		Ref.		Ref.	
F.P. °C			dt/dP °C/mm		f to
F.P. 100%			25°C	0.1363	g °K
B.P. °C	65.	2	BP	0.04028	h
760 mm	13.80	5	t _e	0.03499	f' to
100	-8.88	5	30 mm	0.5689	g' °K
30	-26.15	5	ΔHm cal/g		h'
10	-54.71	5	ΔHv cal/g		m to
1			25°C	92.97	n °K
Pressure mm 25°C	167.20	5	30 mm	99.03	o
t _e	908.62	5	BP	85.91	m' to
Density g/ml 20°C	0.700	2	t _e	84.95	n' °K
d _t 25	0.695	2	t _e (d, e)	84.93	o'
d ₄ 30	0.690	4	ΔHv/T _e	20.30	
a	0.7200	4	d -9 to	97.45	Surface tension dynes/cm. 20°C
b	-0.0397	4	e 71 °C	0.1774	30
Ref. Index n _D 20°C	1.415	2	e' to		40
25	1.412	2	e' °C		19.31
30	1.409	4	d _c g/ml		18.19
"C"	0.7888	4	v _c ml/g		17.10
MR (Obs.)	29.385	4	t _c °C		5
MR (Calc.)	28.974	5	P _c mm		5
(nD-d/2)	1.065	2	PV/RT 25°C	0.9860	5
Dielectric	2.00	5	30 mm	1.0000	5
A -9 to	7.01701	4	BP	0.9550	5
B 108°C	1206.11	4	t _e	0.9500	5
C	226.6	5	t _c		
A* -9 to	1.37095	5	ΔHc kcal/m		
B* 81°C	1131.31	5	ΔHf		
K			ΔFf		
c			Viscosity centistokes		
t _k to			η °C		
t _x °C			B ^v to		
A' °C			A ^v °C		
B' °C			(B ^v) to		
C' °C			(A ^v) °C		
A'* to			c _p liq. °K		
B'* °C			c _p vap. °K		
Ac to			c _v vap. °K		
Bc °C					
Cc °C					
Cryos. A° const. B°					
t _e °C	70.57	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:					

NAME		1, trans-4-Hexadiene			STRUCTURAL FORMULA		
					CH ₂ =CHCH ₂ CH=CHCH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140		
		Ref.			Ref.		
F. P. °C			dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	0.1363	5	h	
760 mm	65.	2	BP	0.04028	4		
100	13.80	5	t _e	0.03496	5	f'	to
30	-8.88	5	30 mm.	0.5689	5	g'	°K
10	-26.15	5				h'	
1	-54.71	5	ΔHm cal/g			m	to
Pressure mm 25°C	167.20	5	ΔHv cal/g			n	°K
t _e	909.69	5	25°C	93.02	5	o	
Density g/ml 20°C	0.700	2	30 mm	99.03	5		
t	0.695	2	BP	86.00	5	m'	to
d ₄ 30	0.6900	4	t _e	85.03	5	n'	°K
			t _e (d, e)	85.02	5	o'	
			ΔHv/T _e	20.31	5		
a	0.7200	4	d -9 to	97.46	5	Surface tension dynes/cm. 20°C	
b	-0.0397	4	e -71 to	0.1762	5	γ	19.31
			d' -71 to				30
			e' to °C				18.19
Ref. Index n _D 20°C	1.415	2	d _c g/ml				40
25	1.412	2	v _c ml/g				17.10
30	1.409	4	t _c °C				
"C"	0.7888	4	P _c mm			Parachor [P] 20°C	
MR (Obs.)	29.385	4	PV/RT				30
MR (Calc.)	28.974	5	25°C	0.9866	5		40
(nD-d/2)	1.065	2	30 mm	1.0000	5		Sugd. 246.2
Dielectric	2.00	5	BP	0.9560	5	Exp. L. l. %/wt. u.	
A -9 to	7.01701	4	t _e	0.9510	5	Dispersion	
B 108 °C	1206.11	4	t _c			Flash Point °C	
C	226.6	5	ΔHc kcal/m			Fire Point	
A* -9 to	1.36916	5	ΔHf			M. Spec. Ultra V.	
B* 81 °C	1130.92	5	ΔFf			X-Ray Dif. Infrared	
K			Viscosity centistokes η °C			Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
t _k to °C			B ^v to °C				
t _x to °C			A ^v to °C				
A' to °C			(B ^v) to °C				
B' to °C			(A ^v) °C				
C' to °C			c _p liq. °K				
A* to °C			c _p vap. °K				
B* to °C			c _v vap.				
Ac to °C							
Bc to °C							
Cc to °C							
Cryos. A° const. B°							
t _e °C	70.61	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:

NAME		1,5-Hexadiene		STRUCTURAL FORMULA		
				CH ₂ =CH(CH ₂) ₂ CH=CH ₂		
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140	
		Ref.		Ref.		
F.P. °C			dt/dP °C/mm		f to	
F.P. 100%			25°C	0.1125	5	g °K
B.P. °C			BP	0.03976	4	h
760 mm	59.46	2	t _e	0.03499	5	f' to
100	8.95	5				g' °K
30	-13.43	5	30 mm	0.5609	5	h'
10	-30.44	5	ΔHm cal/g			m to
1	-58.59	5	ΔHv cal/g			n °K
Pressure mm 25°C	208.01	5	25°C	90.27	5	o
t _e	893.84	5	30 mm	97.02	5	m' to
Density g/ml 20°C	0.6923	2	BP	84.29	5	n' °K
d ₄ ^t 25	0.6878	2	t _e	83.44	5	o'
d ₄ 30	0.6833	4	t _e (d, e)	83.42	5	Surface tension dynes/cm. 20°C
			ΔHv/T _e	20.30	5	30
a	0.7104	4	d -13 to	94.68	5	40
b	-0.0386	4	e 64 °C	0.1746	5	40
Ref. Index n _D 20°C	1.4042	2	d' °C			18.46
25	1.4010	2	e' °C			17.47
30	1.3978	4				16.50
"C"	0.7780	4	d g/ml			Parachor [P] 20°C
MR (Obs.)	29.030	4	v _c ml/g			30
MR (Calc.)	28.974	5	t _c °C			40
(nD-d/2)	1.0580	2	P _c mm			Sugd. 246.2
Dielectric	1.97	5	PV/RT 25°C	0.9834	5	Exp. L. l. %/wt. u.
A -13 to	7.00740	4	30 mm	1.0000	5	Dispersion
B 02 °C	1184.99	4	BP	0.9560	5	Flash Point °C
C	227.7	5	t _e	0.9515	5	Fire Point
A* -13 to	1.36628	5	ΔHc kcal/m			M Spec. Ultra V.
B* 74 °C	1110.81	5	ΔHf			X-Ray Dif.
K			ΔFf			Infrared
c to			Viscosity centistokes °C			Solubility in +
t _x °C			η			Acetone
t _x °C						Carbon tet.
A' to			B ^v to			Benzene
B' °C			A ^v °C			Ether
C' °C			(B ^v) to			n-Heptane
A'* to			(A ^v) °C			Ethanol
B'* °C			c _p liq. °K			Water
Ac to			c _p vap. °K			Water in
Bc °C			c _v vap.			
Cc °C						
Cryos. A° const. B°						
t _e °C	64.45	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:						

NAME		2,3-Hexadiene			STRUCTURAL FORMULA		
					CH ₃ CH=C=CHCH ₂ CH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₀	Molecular Weight 82.140				
	Ref.			Ref.		Ref.	
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.1514	g	°K	
B. P. °C			BP	0.04057	h		
760 mm	68.0	2	t _e	0.03495	f'	to	
100	16.42	5	t _e 30 mm	0.5734	g'	°K	
30	-6.45	5	ΔHm cal/g		h'		
10	-23.85	5			m	to	
1	-52.65	5			n	°K	
Pressure mm 25°C	148.45	5	ΔHv cal/g 25°C	94.47	o		
t _e	918.28	5	30 mm	100.07			
Density g/ml 20°C	0.680	2	BP	86.90	m'	to	
d ₄ ^t 25	0.675	2	t _e (d, e)	85.86	n'	°K	
d ₄ ^t 30	0.670	4	t _e	85.85	o'		
			ΔHv/T _e	20.32			
a	0.7000	4	d -6 to	98.93	Surface tension dynes/cm. 20°C		
b	-0.0397	4	e 74 °C	0.1769	γ	17.20 5	
Ref. Index n _D 20°C	1.395	2	d'			30 16.18 5	
25	1.392	2	e'			40 15.19 5	
30	1.389	4					
"C"	0.7750	4	d _c g/ml		Parachor [P] 20°C		
MR (Obs.)	28.95	4	v _c ml/g			30	
MR (Calc.)	28.974	5	t _c °C			40	
(n _D -d/2)	1.055	5	P _c mm		Sugd.	246.2 5	
Dielectric	1.95	5	PV/RT 25°C	0.9881	Exp. L. l. %/wt. u.		
A -6 to	7.02235	4	30 mm	1.0000	Dispersion		
B 110 °C	1218.02	4	BP	0.9560	Flash Point °C		
C	226.1	5	t _e	0.9507	Fire Point		
A* -6 to	1.37077	5	t _e		M. Spec. Ultra V.		
B* 84 °C	1142.22	5			X-Ray Dif. Infrared		
K			Viscosity centistokes °C		Solubility in +		
c			η		Acetone		
t _k to					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		
A _c to			c _p vap. °K				
B _c t _c °C			c _v vap.				
C _c °C							
Cryos. A° const. B°							
t _e °C	73.95	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:

NAME		cis-2, cis-4-Hexadiene			STRUCTURAL FORMULA	
					CH ₃ CH=CHCH=CHCH ₃	
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140	
F. P. °C				dt/dP °C/mm		f to
F. P. 100%				25°C	0.2325	g °K
B. P. °C				BP	0.04175	h
760 mm	80.	2		t _e	0.03492	f' to
100	26.89	5		30 mm	0.5912	g' °K
30	3.32	5		ΔHm cal/g		h'
10	-14.62	5		ΔHv cal/g		m to
1	-44.34	5		25°C	100.38	n °K
Pressure mm 25°C	91.55	5		30 mm	104.30	o
t _e	953.22	5		BP	90.57	m' to
Density g/ml 20°C	0.720	2		t _e	89.28	n' °K
t	0.715	2		t _e (d, e)	89.25	o'
d	0.710	4		ΔHv/T _e	20.34	
d				d 3 to	104.90	Surface tension
a	0.7400	4		e 87 °C	0.1791	dynes/cm. 20°C
b	-0.0398	4		d'		30
Ref. Index n _D 20°C	1.450	2		e'		40
25	1.447	2		d _c g/ml		21.65
30	1.444	4		v _c ml/g		20.45
"C"	0.8277	4		t _c °C		19.28
MR (Obs.)	30.658	4		P _c mm		Parachor [P]
MR (Calc.)	30.244	5		PV/RT		20°C
(nD-d/2)	1.090	2		25°C	0.9937	30
Dielectric	2.10	5		30 mm	1.0000	40
A 3 to	7.03864	4		BP	0.9565	Sugd.
B 128 °C	1263.15	4		t _e	0.9502	246.2
C	223.8	5		t _c		5
A* 3 to	1.37195	5		ΔHc kcal/m		Exp. L. l. %/wt.
B* 97 °C	1184.88	5		ΔHf		u.
K				ΔFf		Dispersion
c				Viscosity centistokes		225.
t _k to				η °C		Flash Point °C
t _x °C				B ^v to		Fire Point
A' to				A ^v °C		M Spec.
B' °C				(B ^v) to		Ultra V.
C' °C				(A ^v) °C		X-Ray Dif.
A* to				c _p liq. °K		Infrared
B* °C				c _p vap. °K		Solubility in +
Ac to				c _v vap. °K		Acetone
Bc t _c °C						Carbon tet.
Cc t _c °C						Benzene
Cryos. A° const. B°						Ether
t _e °C	87.36	5				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:						

NAME		cis-2, trans-4-Hexadiene			STRUCTURAL FORMULA		
					CH ₃ CH=CHCH=CHCH ₃		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₀	Molecular Weight 82.140				
		Ref.		Ref.	Ref.		
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.2325	g	°K	
B. P. °C			BP	0.04175	h		
760 mm	80.	2	t _e	0.03498	f'	to	
100	26.89	5	t _e 30 mm	0.5912	g'	°K	
30	3.32	5			h'		
10	-14.62	5			m	to	
1	-44.34	5			n	°K	
					o		
Pressure mm 25°C	91.55	5	ΔHm cal/g		m'	to	
t _e	950.95	5	ΔHv cal/g		n'	°K	
			25°C	100.31	o		
Density g/ml 20°C	0.720	2	30 mm	104.30			
25	0.715	2	BP	90.38			
d ₄ 30	0.710	4	t _e	89.10			
			t _e (d, e)	89.06			
			ΔHv/T _e	20.30			
a	0.7400	4	d	3	to		
b	-0.0398	4	e	87	°C		
			d'		to		
Ref. Index n _D 20°C	1.450	2	e'		°C		
25	1.447	2					
30	1.444	4	d _c g/ml				
"C"	0.8277	4	v _c ml/g				
MR (Obs.)	30.658	4	t _c °C				
MR (Calc.)	30.244	5	P _c mm				
(nD-d/2)	1.090	2	PV/RT				
Dielectric	2.10	5	25°C	0.9930			
A 3 to	7.03864	4	30 mm	1.0000			
B 127 °C	1263.15	4	BP	0.9545			
C	223.8	5	t _e	0.9481			
A* 3 to	1.37555	5	t _e				
B* 97 °C	1185.70	5	t _c				
K							
c			ΔHc kcal/m				
t _k to			ΔHf				
t _x °C			ΔFf				
A' to							
B' °C							
C'							
A'* to			B ^v to				
B'* °C			A ^v °C				
Ac to			(B ^v) to				
Bc °C			(A ^v) °C				
Cc t _c °C			c _p liq. °K				
Cryos. A' const. B'			c _p vap. °K				
t _e °C	87.28	5	c _v vap.				
+ grams/100 grams solvent							
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula							
SOURCE: API							
PURIFICATION: API							
LITERATURE REFERENCES:							

NAME		trans-2, trans-4-Hexadiene			STRUCTURAL FORMULA		
					CH ₃ CH=CHCH=CHCH ₃		
Mole % Pur.	Ref.	Molecular Formula	C ₆ H ₁₀	Molecular Weight	82.140		
F.P. °C		Ref.		dt/dP °C/mm		f	to °K
F.P. 100%				25°C	0.2325	g	
B.P. °C				BP	0.04175	h	
760 mm	80.	2		t _e	0.03498	f'	to °K
100	26.89	5		t _e (d, e)	89.06	g'	
30	3.32	5		ΔHv cal/g		h'	
10	-14.62	5		ΔHv cal/g		m	to °K
1	-44.34	5		25°C	100.31	n	
Pressure mm 25°C	91.55	5		30 mm	104.30	o	
t _e	950.95	5		BP	90.38		
Density g/ml 20°C	0.720	2		t _e	89.10	m'	to °K
d ₄ ^t 25	0.715	2		t _e	89.06	n'	
d ₄ ^t 30	0.710	4		ΔHv/T _e	20.30	o'	
a	0.7400	4		d 3 to	104.90	Surface tension dynes/cm. 20°C	
b	-0.0398	4		e 87 °C	0.1816	30	21.65
Ref. Index n _D 20°C	1.450	2		d' to		40	20.45
25	1.447	2		e' °C			19.28
30	1.444	4		d _c g/ml		Parachor [P] 20°C	
"C"	0.8277	4		v _c ml/g		30	
MR (Obs.)	30.658	4		t _c °C		40	
MR (Calc.) (nD-d/2)	30.244	5		P _c mm		Sugd.	246.2
1.090	1.090	2		PV/RT 25°C	0.9930	Exp. L.l.%/wt. u.	
Dielectric	2.10	5		30 mm	1.0000	Dispersion	
A 3 to	7.03864	4		BP	0.9545	225.	
B 127 °C	1263.15	4		t _e	0.9481	Flash Point °C	
C	223.8	5		t _c		Fire Point	
A* 3 to	1.37555	5		ΔHc kcal/m		M Spec. Ultra V.	
B* 97 °C	1185.70	5		ΔHf		X-Ray Dif.	
K				ΔFf		Infrared	
c				Viscosity centistokes η °C		Solubility in +	
t _k to						Acetone	
t _x °C						Carbon tet.	
A' to						Benzene	
B' °C				B ^v to		Ether	
C'				A ^v °C		n-Heptane	
A"* to				(B ^v) to		Ethanol	
B"* °C				(A ^v) °C		Water	
Ac to				c _p liq. °K		Water in	
Bc t _c °C				c _p vap. °K			
Cc °C				c _v vap.			
Cryos. A° const. B°							
t _e °C	87.28	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:							

NAME		3-Methyl-1, 2-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{C}=\underset{\text{CH}_3}{\text{C}}\text{CH}_2\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₀	Molecular Weight 82.140				
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C	0.1625	g	°K	
B. P. °C			BP	0.04077	h		
760 mm	70.	2	t _e	0.0350	f'	to	
100	18.17	5	30 mm	0.5764	g'	°K	
30	-4.82	5	ΔHm cal/g		h'		
10	-22.31	5	ΔHv cal/g		m	to	
1	-51.26	5	25°C	95.38	n	°K	
Pressure mm 25°C	137.1	5	30 mm	100.78	o		
t _e	922.4	5	BP	87.38			
Density g/ml 20°C	0.715	2	t _e	86.30	m'	to	
d ^t 25	0.710	2	t _e (d, e)	86.28	n'	°K	
d ⁴ 30	0.705	4	ΔHv/T _e	20.29	o'		
a	0.7350	4	d -5 to	99.91	Surface tension dynes/cm. 20°C		
b	-0.0398	4	e 76 °C	0.1791	γ	30	21.03
Ref. Index n _D 20°C	1.425	2	d' to			40	19.85
25	1.422	2	e' °C		Parachor [P]		
30	1.419	4	d _c g/ml		20°C		
"C"	0.7898	4	v _c ml/g		30		
MR (Obs.)	29.375	4	t _c °C		40		
MR (Calc.)	28.974	5	P _c mm		Sugd.	246.2	5
(n _D -d/2)	1.068	2	PV/RT		Exp. L. l. %/wt.		
Dielectric	2.03	5	25°C	0.9884	u.		
A -5 to	7.02488	4	30 mm	1.0000	Dispersion		
B 116 °C	1225.40	4	BP	0.9545	Flash Point °C		
C	225.7	5	t _e	0.9490	Fire Point		
A* -5 to	1.37362	5	t _c		M. Spec.		
B* 86 °C	1149.83	5	ΔHc kcal/m		Ultra V.		
K			ΔHf		X-Ray Dif.		
t _c to			ΔFf		Infrared		
t _k °C			Viscosity centistokes		Solubility in ⁺		
t _x °C			η °C		Acetone		
A' to			B ^v to		Carbon tet.		
B' °C			A ^v °C		Benzene		
C' °C			(B ^v) to		Ether		
A* to			(A ^v) °C		n-Heptane		
B* °C			c _p liq. °K		Ethanol		
Ac to			c _p vap. °K		Water		
Bc t _c °C			c _v vap.		Water in		
Cc t _c °C							
Cryos. A° const. B°							
t _e °C	76.12	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:

NAME		4-Methyl-1, 2-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{C}=\text{CHCH} \begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.1625	5	g	°K
B. P. °C			BP	0.04077	4	h	
760 mm	70.	2	t_e	0.03498	5	f'	to
100	18.17	5	30 mm	0.5764	5	g'	°K
30	-4.82	5	ΔH_m cal/g			h'	
10	-22.31	5	ΔH_v cal/g			m	to
1	-51.26	5	25°C	95.40	5	n	°K
Pressure mm 25°C	137.08	5	30 mm	100.78	5	o	
t_e	922.91	5	BP	87.42	5	m'	to
Density g/ml 20°C	0.708	2	t_e	86.35	5	n'	°K
d_{25}^t	0.703	2	t_e (d, e)	86.32	5	o'	
d_4^{30}	0.698	4	$\Delta H_v/T_e$	20.30	5	Surface tension dynes/cm. 20°C	
a	0.7280	4	d -5 to	99.92	5	20.22	5
b	-0.0398	4	e -76 to	0.1785	5	30	19.07
Ref. Index			d' to			40	17.95
n_D^{20}	1.424	2	e' °C			Parachor [P]	
25	1.421	2	d g/ml			20°C	
30	1.418	4	v_c ml/g			30	
"C"	0.7959	4	t_c °C			40	
MR (Obs.)	29.604	4	P c mm			Sugd. 246.2	5
MR (Calc.)	28.974	5	PV/RT			Exp. L.l. %/wt.	
(nD-d/2)	1.070	2	25°C	0.9886	5	u.	
Dielectric	2.03	5	30 mm	1.0000	5	Dispersion	
A -5 to	7.02488	4	BP	0.9550	5	Flash Point °C	
B 115°C	1225.40	4	t_e	0.9495	5	Fire Point	
C	225.7	5	t_c			M Spec.	
A* -5 to	1.37272	5	ΔH_c kcal/m			Ultra V.	
B* 86°C	1149.63	5	ΔH_f			X-Ray Dif.	
K			ΔF_f			Infrared	
t_c			Viscosity centistokes			Solubility in +	
t_x to			η °C			Acetone	
A' to						Carbon tet.	
B' to			B ^v to			Benzene	
C' to			A ^v to			Ether	
A'* to °C			(B ^v) to			n-Heptane	
B'* to °C			(A ^v) to			Ethanol	
Ac to			c _p liq. °K			Water	
Bc to			c _p vap. °K			Water in	
Cc t_c °C			c _v vap.				
Cryos. A° const. B°							
t_e °C	76.14	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:							

NAME		2-Methyl-1, cis-3-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{C}(\text{CH}_3)\text{CH}=\text{CHCH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.		
F.P. °C				dt/dP °C/mm		f	to
F.P. 100%				25°C	0.2012	g	°K
B.P. °C				BP	0.04136	h	
760 mm	76.	2		t_e	0.03497	g'	to
100	23.40	5		30 mm	0.5853	h'	°K
30	0.64	5		ΔH_m cal/g		m	to
10	-17.70	5		ΔH_v cal/g		n	°K
1	-47.11	5		25°C	98.35	o	
Pressure mm 25°C	107.71	5		30 mm	102.88	m'	to
t_e	940.07	5		BP	89.22	n'	°K
Density g/ml 20°C	0.719	2		t_e	88.03	o'	
t 25	0.714	2		t_e (d, e)	87.99	Surface tension dynes/cm. 20°C	
d ₄ 30	0.709	4		$\Delta H_v/T_e$	20.31	30	21.52
a	0.7390	4		d 1 to	102.89	40	20.32
b	-0.0398	4		e 83 °C	0.1799	40	19.16
Ref. Index n _D 20°C	1.446	2		d' to		Parachor [P] 20°C	
25	1.443	2		e' °C		30	
30	1.440	4		d _e g/ml		40	
"C"	0.8219	4		v _c ml/g		Sugd.	246.2
MR (Obs.)	30.465	4		t _c °C		Exp. L. l. %/wt. u.	
MR (Calc.)	30.244	5		P _c mm		225.	2
(n _D -d/2)	1.087	2		PV/RT 25°C	0.9915	Flash Point °C	
Dielectric	2.09	5		30 mm	1.0000	Fire Point	
A 1 to	7.03380	4		BP	0.9550	M. Spec. Ultra V. X-Ray Dif. Infrared	
B 123 °C	1248.39	4		t_e	0.9490	Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
C	224.6	5		t_c			
A* 1 to	1.37445	5		ΔH_c kcal/m			
B* 93 °C	1171.46	5		ΔH_f			
K				ΔF_f			
c				Viscosity centistokes			
t _k to				η °C			
t _x °C				B ^v to			
A' to				A ^v °C			
B' °C				(B ^v) to			
C'				(A ^v) °C			
A* to				c _p liq. °K			
B* °C				c _p vap. °K			
Ac to				c _v vap.			
Bc t _c							
Cc							
Cryos. A°							
consts. B°							
t _e °C	82.84	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:

NAME		2-Methyl-1, trans-3-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{CCH}=\text{CHCH}_3$ CH_3		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
F.P. °C				dt/dP °C/mm		f	to °K
F.P. 100%				25°C	0.2012	g	
B.P. °C				BP	0.04136	h	
760 mm	76.	2		t_e	0.03499	f'	to °K
100	23.40	5		30 mm	0.5853	g'	
30	0.06	5				h'	
10	-17.70	5		$\Delta\text{Hm cal/g}$		m	to °K
1	-47.11	5				n	
Pressure mm 25°C	107.71	5		$\Delta\text{Hv cal/g}$	98.33	o	
t_e	939.51	5		25°C	102.88		
Density g/ml 20°C	0.719	2		30 mm	89.17	m'	to °K
d_4^{25}	0.714	2		BP	87.98	n'	
d_4^{30}	0.709	4		t_e (d, e)	87.94	o'	
a	0.7390	4		$\Delta\text{Hv}/T_e$	20.30	Surface tension dynes/cm. 20°C	
b	-0.0398	4		d 0 to	102.89	30	21.52
Ref. Index n_D^{20}	1.446	2		e 83 °C	0.1805	40	20.32
25	1.443	2		d' to			19.16
30	1.440	4		e' °C			
"C"	0.8219	4		d c g/ml		Parachor [P]	
MR (Obs.)	30.465	4		v c ml/g		20°C	
MR (Calc.)	30.244	5		t_c °C		30	
(nD-d/2)	1.087	2		P c mm		40	
Dielectric	2.09	5		PV/RT		Sugd.	246.2
A 0 to	7.03380	4		25°C	0.9913	Exp. L.l. %/wt.	
B 123°C	1248.39	4		30 mm	1.0000	u.	
C	224.6	5		BP	0.9545	Dispersion	225.
A* 0 to	1.37535	5		t_e	0.9485	Flash Point °C	
B* 93°C	1171.66	5		t_c		Fire Point	
K				$\Delta\text{Hc kcal/m}$		M Spec.	
c				ΔHf		Ultra V.	
t_k to				ΔFf		X-Ray Dif.	
t_x °C				Viscosity centistokes		Infrared	
A' to				η °C		Solubility in +	
B' °C						Acetone	
C' °C				B ^v to		Carbon tet.	
A** to				A ^v °C		Benzene	
B** °C				(B ^v) to		Ether	
Ac to				(A ^v) °C		n-Heptane	
Bc t_c °C				c_p liq. °K		Ethanol	
Cc °C				c_p vap. °K		Water	
Cryos. A°				c_v vap.		Water in	
const. B°							
t_e °C	82.82	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:							

NAME		3-Methyl-1, cis-3-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{CHC}=\text{CHCH}_3$ $\quad \quad \quad $ $\quad \quad \quad \text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula C ₆ H ₁₀	Molecular Weight 82.140				
F. P. °C			dt/dP °C/mm		f	to	
F. P. 100%			25°C		g	°K	
B. P. °C			BP	0.2086	5		
760 mm	77.	2	t _e	0.04145	4		
100	24.27	5	t _e 30 mm	0.03499	5	f'	to
30	0.88	5		0.5868	5	g'	°K
10	-16.93	5	ΔHm cal/g			h'	
1	-46.42	5					
Pressure mm 25°C	103.43	5	ΔHv cal/g			m	to
t _e	942.37	5	25°C	98.83	5	n	°K
			30 mm	103.24	5	o	
Density g/ml 20°C	0.735	2	BP	89.50	5	m'	to
t _e 25	0.730	2	t _e	88.26	5	n'	°K
d ₄ 30	0.725	4	t _e (d, e)	88.25	5	o'	
			ΔHv/T _e	20.30	5		
a	0.7550	4	d 1 to	103.39	5	Surface tension dynes/cm. 20°C	
b	-0.0398	4	e 84 °C	0.1804	5	γ	23.51
			d'			30	22.23
Ref. Index n _D 20°C	1.452	2	e'			40	20.98
25	1.449	2	d _c g/ml			Parachor [P]	
30	1.446	4	v _c ml/g			20°C	
"C"	0.8142	4	t _c °C			30	
MR (Obs.)	30.148	4	P _c mm			40	
MR (Calc.)	30.244	5	PV/RT			Sugd.	246.2
(n _D -d/2)	1.085	2	25°C	0.9917	5	Exp. L. l. %/wt. u.	
Dielectric	2.11	5	30 mm	1.0000	5	Dispersion	
A 1 to	7.03502	4	BP	0.9545	5	Flash Point °C	
B 126 °C	1252.08	4	t _e	0.9484	5	Fire Point	
C	224.4	5	t _c			M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 1 to	1.37541	5	ΔHc kcal/m			Solubility in +	
B* 94 °C	1175.17	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to			η °C			Ether	
t _x °C			B ^v to			n-Heptane	
A' to			A ^v °C			Ethanol	
B' °C			(B ^v) to			Water	
C' °C			(A ^v) °C			Water in	
A** to			c _p liq. °K				
B** °C			c _p vap. °K				
Ac to			c _v vap.				
Bc t _c °C							
Cc °C							
Cryos. A° const. B°							
t _e °C	83.93	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:

NAME		3-Methyl-1, trans-3-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{CHC}=\text{CHCH}_3$ $\quad \quad \quad \text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.		
F. P. °C			dt/dP °C/mm			f	to
F. P. 100%			25°C	0.2086	5	g	°K
B. P. °C			BP	0.04145	4	h	
760 mm	77.	2	t_e	0.03499	5	f'	to
100	24.27	5	30 mm	0.5868	5	g'	°K
30	0.88	5				h'	
10	-16.93	5					
1	-46.42	5					
Pressure mm 25°C	103.43	5	ΔHm cal/g			m	to
t_e	942.37	5	ΔHv cal/g			n	°K
Density g/ml 20°C	0.735	2	25°C	98.83	5	o	
d^t 25	0.730	2	30 mm	103.24	5		
d^t 30	0.725	4	BP	89.50	5	m'	to
a	0.7550	4	t_e (d, e)	88.26	5	n'	°K
b	-0.0398	4	$\Delta\text{Hv}/T_e$	88.25	5	o'	
Ref. Index n_D 20°C	1.452	2	d 1 to	103.39	5	Surface tension dynes/cm. 20°C	
25	1.449	2	e 84 °C	0.1804	5	y	23.51
30	1.446	4	d' to			30	22.23
"C"	0.8142	4	e' °C			40	20.98
MR (Obs.)	30.148	4	d c g/ml			Parachor [P]	
MR (Calc.) (nD-d/2)	30.244	5	v c ml/g			20°C	
	1.085	2	t c °C			30	
Dielectric	2.11	5	P c mm			40	
A 1 to	7.03502	4	PV/RT			Sugd.	246.2
B 126 °C	1252.08	4	25°C	0.9917	5	Exp. L. l. %/wt. u.	
C	224.4	5	30 mm	1.0000	5	Dispersion	
A*	1.37541	5	BP	0.9545	5	225.	
B*	1175.17	5	t_e	0.9484	5	Flash Point °C	
K			t_c			Fire Point	
c			ΔHc kcal/m			M Spec.	
t_k to			ΔHf			Ultra V.	
t_x °C			ΔFf			X-Ray Dif.	
A' to			Viscosity centistokes			Infrared	
B' °C			η °C			Solubility in +	
C' °C			B' to			Acetone	
A** to			A' °C			Carbon tet.	
B** °C			(B'V) to			Benzene	
Ac to			(A'V) °C			Ether	
Bc t_c °C			c_p liq. °K			n-Heptane	
Cc °C			c_p vap. °K			Ethanol	
Cryos. A°			c_v vap.			Water	
const. B°						Water in	
t_e °C	83.93	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:							

NAME		4-Methyl-1, 3-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{CHCH}=\underset{\text{CH}_3}{\text{C}}\text{CH}_3$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
F. P. °C							
F. P. 100%							
B. P. °C							
760 mm	76.3	2		0.2034	5		
100	23.66	5		0.04139	4		
30	0.31	5		0.03499	5		
10	-17.47	5		0.5857	5		
1	-46.91	5					
Pressure mm							
25°C	106.42	5		98.47	5		
t_e	940.37	5		102.99	5		
Density g/ml				89.26	5		
20°C	0.719	2		88.06	5		
t	0.714	2		88.02	5		
d ₄	0.709	4		20.30	5		
a	0.7390	4		103.04	5		
b	-0.0398	4		0.1806	5		
Ref. Index							
n_D							
20°C	1.451	2					
25	1.448	2					
30	1.445	4					
"C"	0.8306	4					
MR (Obs.)	30.760	4					
MR (Calc.)	30.244	5					
($n_D-d/2$)	1.092	2					
Dielectric	2.10	5					
A 0 to	7.03324	4					
B 123 °C	1249.05	4					
C	224.5	5					
A* 0 to	1.37449	5					
B* 93 °C	1172.30	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	83.15	5					

dt/dP °C/mm							
25°C							
BP							
t_e							
30 mm							
ΔH_m cal/g							
ΔH_v cal/g							
25°C							
30 mm							
BP							
t_e							
t_e (d, e)							
$\Delta H_v/T_e$							
d 0 to							
e 83 °C							
d' to							
e' °C							
d_e g/ml							
v_c ml/g							
t_c °C							
P_c mm							
PV/RT							
25°C							
30 mm							
BP							
t_e							
t_c							
ΔH_c kcal/m							
ΔH_f							
ΔF_f							
Viscosity centistokes							
η °C							
B ^v to							
A ^v °C							
(B ^v) to							
(A ^v) °C							
c _p liq. °K							
c _p vap. °K							
c _v vap.							

+ grams/100 grams solvent

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

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

NAME		2-Methyl-1,4-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\underset{\text{1}}{\text{C}}\text{CH}_2\text{CH}=\underset{\text{3}}{\text{CH}_2}$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.		
F.P. °C			dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.1000	5	g	
B.P. °C			BP	0.03940	4	h	
760 mm	56.	2	t_e	0.03496	5	f'	to °K
100	5.95	5	30 mm	0.5557	5	g'	
30	-16.22	5	ΔH_m cal/g			h'	
10	-33.07	5	ΔH_v cal/g			m	to °K
1	-60.96	5	25°C	88.68	5	n	
Pressure mm 25°C	237.83	5	30 mm	95.84	5	o	
t_e	884.46	5	BP	83.34	5	m'	to °K
Density g/ml 20°C	0.694	2	t_e	82.56	5	n'	
d_4^{25}	0.689	2	t_e (d, e)	82.54	5	o'	
d_4^{30}	0.684	4	$\Delta H_v/T_e$	20.31	5	Surface tension dynes/cm. 20°C	
a	0.7141	4	d -16 to °C	93.04	5	30	18.63
b	-0.0396	4	e -61 to °C	0.1731	5	40	17.53
Ref. Index n_D^{20}	1.405	2	d'			40	16.45
25	1.402	2	e'			Parachor [P]	
30	1.399	4	d c g/ml			20°C	
"C"	0.7775	4	v_c ml/g			30	
MR (Obs.)	29.009	4	t_c °C			40	
MR (Calc.)	28.974	5	P_c mm			Sugd.	246.2
(nD-d/2)	1.058	2	PV/RT			Exp. L.l. %/wt. u.	
Dielectric	1.97	5	25°C	0.9816	5	Dispersion	
A -16 to °C	7.00507	4	30 mm	1.0000	5	Flash Point °C	
B 98 °C	1172.94	4	BP	0.9565	5	Fire Point	
C	228.4	5	t_e	0.9523	5	M Spec. Ultra V. X-Ray Dif. Infrared	
A* -16 to °C	1.36730	5	t_c			Solubility in +	
B* 71 °C	1099.20	5	ΔH_c kcal/m			Acetone	
K			ΔH_f			Carbon tet.	
c			ΔF_f			Benzene	
t_k to °C			Viscosity centistokes			Ether	
t_x to °C			η °C			n-Heptane	
A' to °C						Ethanol	
B' to °C			B^v to °C			Water	
C' to °C			A'v to °C			Water in	
A** to °C			(B'v) to °C				
B** to °C			(A'v) to °C				
Ac to °C			c_p liq. °K				
Bc to °C			c_p vap. °K				
Cc to °C			c_v vap.				
Cryos. A° const. B°							
t_e °C	60.61	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:							

NAME		3-Methyl-1, 4-pentadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{CHCH}(\text{CH}_3)\text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
	Ref.						Ref.
F. P. °C				dt/dP °C/mm		f	to
F. P. 100%				25°C	0.0966	g	°K
B. P. °C				BP	0.03930	h	
760 mm	55.	2		t_e	0.03498	f'	to
100	5.08	5		30 mm	0.5541	g'	°K
30	-17.02	5		ΔH_m cal/g		h'	
10	-33.83	5		ΔH_v cal/g		m	to
1	-61.64	5		25°C	88.17	n	°K
Pressure mm 25°C	247.21	5		30 mm	95.51	o	
t_e	881.08	5		BP	83.00		
Density g/ml 20°C	0.695	2		t_e	82.24	m'	to
25	0.690	2		t_e (d, e)	82.23	n'	°K
d_4^{25}	0.685	4		$\Delta H_v/T_e$	20.30	o'	
a	0.7151	4		d -17 to	92.55	Surface tension dynes/cm. 20°C	
b	-0.0396	4		e 59 °C	0.1736	5	18.73
Ref. Index n_D 20°C	1.405	2		d'		5	17.63
25	1.402	2		e'		5	16.54
30	1.399	4		d_c g/ml		Parachor [P] 20°C	
"C"	0.7764	4		v_c ml/g		30	
MR (Obs.)	28.967	4		t_c °C		40	
MR (Calc.)	28.974	5		P_c mm		Sugd.	246.2
(nD-d/2)	1.058	2		PV/RT		Exp. L. l. %/wt. u.	
Dielectric	1.97	5		25°C	0.9806	5	Dispersion
A -17 to	7.00219	4		30 mm	1.0000	5	Flash Point °C
B 97 °C	1168.41	4		BP	0.9560	5	Fire Point
C	228.5	5		t_e	0.9519	5	M. Spec. Ultra V. X-Ray Dif. Infrared
A* -17 to	1.36668	5		t_c		Solubility in + Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
B* 69 °C	1095.11	5		ΔH_c kcal/m			
K				ΔH_f			
t_k to °C				ΔF_f			
t_x to °C				Viscosity centistokes η °C			
A' to °C				B^v to °C			
B' to °C				A^v to °C			
C'				(B^v) to °C			
A** to °C				(A^v) °C			
B** to °C				c_p liq. °K			
A c to °C				c_p vap. °K			
B c to °C				c_v vap.			
C c to °C							
Cryos. A° const. B°							
t_e °C	59.49	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:

NAME		2-Methyl-2, 3-pentadiene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3\text{C} = \text{C} = \text{CHCH}_3 \\ \\ \text{CH}_3 \end{array}$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.		
F.P. °C			dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	0.1744	5	h	
760 mm	72.	2	BP	0.04097	4		
100	19.91	5	t _e	0.03498	5	f'	to
30	-3.19	5	30 mm	0.5793	5	g'	°K
10	-20.77	5	ΔHm cal/g			h'	
1	-49.87	5	ΔHv cal/g			m	to
Pressure mm 25°C	126.53	5	25°C	96.39	5	n	°K
t _e	928.63	5	30 mm	101.48	5	o	
Density g/ml 20°C	0.711	2	BP	88.01	5	m'	to
t	0.706	2	t _e	86.90	5	n'	°K
d ₄ 30	0.701	4	t _e (d, e)	86.87	5	o'	
			ΔHv/T _e	20.30	5		
a	0.7310	4	d	-3 to	100.91	5	Surface tension
b	-0.0398	4	e	78 °C	0.1792	5	dynes/cm. 20°C
Ref. Index			d'	to			30
n _D 20°C	1.425	2	e'	°C			40
25	1.422	2					20.57
30	1.419	4	d _c g/ml				19.41
"C"	0.7943	4	v _c ml/g				18.28
MR (Obs.)	29.540	4	t _c °C				
MR (Calc.)	28.974	5	P _c mm				
(nD-d/2)	1.070	2	PV/RT				
Dielectric	2.03	5	25°C	0.9896	5	Exp. L. l. %/wt.	
A	-3 to	7.02740	30 mm	1.0000	5	u.	
B	117°C	1232.78	BP	0.9550	5	Dispersion	
C		225.3	t _e	0.9494	5	Flash Point °C	
A*	-3 to	1.37287	t _c			Fire Point	
B*	88°C	1156.64	ΔHc kcal/m				
K			ΔHf				
c			ΔFf				
t _k	to		Viscosity				
t _x	°C		centistokes				
A'	to		η				
B'	°C						
C'			B ^v	to			
A**	to		A ^v	°C			
B**	°C		(B ^v)	to			
Ac	to		(A ^v)	°C			
Bc	t _c °C		c _p liq.	*K			
Gc			c _p vap.	*K			
Cryos. A°			c _v vap.				
consts. B°							
t _e °C	78.37	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:

NAME		2-Ethyl-1, 3-butadiene			STRUCTURAL FORMULA		
					$\text{CH}_2=\text{C} \begin{array}{c} \\ \text{C}_2\text{H}_5 \end{array} \text{CH}=\text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
F. P. °C				dt/dP °C/mm		f	to
F. P. 100%				25°C	0.1941	g	°K
B. P. °C				BP	0.04126	h	
760 mm	75.	2		t_e	0.03499	f'	to
100	22.53	5		30 mm	0.5837	g'	°K
30	-0.74	5				h'	
10	-18.46	5		$\Delta\text{Hm cal/g}$		m	to
1	-47.79	5				n	°K
Pressure mm 25°C	112.14	5		$\Delta\text{Hv cal/g}$		o	
t_e	936.65	5		25°C	97.84		
Density g/ml 20°C	0.717	2		30 mm	102.55		
t 25	0.712	2		BP	88.88	m'	to
d_4 30	0.707	4		t_e	87.70	n'	°K
				t_e (d, e)	87.67	o'	
a	0.7370	4		$\Delta\text{Hv}/T_e$	20.30		
b	-0.0398	4		d 0 to	102.41		
Ref. Index				e 82 °C	0.1805		
n_D 20°C	1.445	2		d'			Surface tension dynes/cm. 20°C
25	1.442	2		e'			30
30	1.439	4		d_c g/ml			40
"C"	0.8225	4		v_c ml/g			21.28
MR (Obs.)	30.490	4		t_c °C			20.09
MR (Calc.)	30.244	5		P_c mm			18.93
(nD-d/2)	1.086	2		PV/RT			
Dielectric	2.09	5		25°C	0.9908		
A 0 to	7.03112	4		30 mm	1.0000		
B 121 °C	1243.85	4		BP	0.9545		
C	224.7	5		t_e	0.9486		
A* 0 to	1.37396	5		t_c			
B* 92 °C	1167.37	5		$\Delta\text{Hc kcal/m}$			
K				ΔHf			
t_k to				ΔFf			
t_x °C				Viscosity centistokes			
A' to				η °C			
B' °C							
C'				B ^v to			
A'* to				A ^v °C			
B'* °C				(B ^v) to			
A _c to				(A ^v) °C			
B _c °C				c_p liq. °K			
C _c °C				c_p vap. °K			
Cryos. A°				c_v vap.			
const. B°							
t_e °C	81.70	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:							

NAME		2, 3-Dimethyl-1, 3-butadiene			STRUCTURAL FORMULA		
					$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_2=\text{C} \\ \\ \text{CH}_3 \end{array} = \text{CH}_2$		
Mole % Pur.	Ref.	Molecular Formula	C_6H_{10}	Molecular Weight	82.140		
		Ref.			Ref.	Ref.	
F.P. °C	-76.005	2	dt/dP °C/mm			f	to °K
F.P. 100%			25°C	0.1557	5	g	
B.P. °C	68.78	2	BP	0.04064	4	h	
760 mm	17.11	5	t_e	0.03494	5	f'	to °K
100	-5.79	5	30 mm	0.5745	5	g'	
30	-23.23	5	ΔH_m cal/g			h'	
10	-52.08	5	ΔH_v cal/g			m	to °K
1			25°C	94.89	5	n	
Pressure mm 25°C	143.84	5	30 mm	100.38	5	o	
t_e	920.51	5	BP	87.18	5		
Density g/ml 20°C	0.7267	2	t_e	86.14	5	m'	to °K
d_4^{25}	0.7222	2	t_e (d, e)	86.11	5	n'	
25	0.7177	4	$\Delta H_v/T_e$	20.33	5	o'	
30			d -6 to °C	99.35	5	Surface tension dynes/cm. 20°C	
a	0.7447	4	e 75 to °C	0.1770	5	30	22.44
b	-0.0387	4	d'			40	21.32
Ref. Index n_D 20°C	1.4394	2	e'				20.21
25	1.4362	2	d c g/ml			Parachor [P] 20°C	
30	1.4330	4	v c ml/g			30	
"C"	0.8019	4	t c °C			40	
MR (Obs.)	29.754	4	P c mm			Sugd.	246.2
MR (Calc.) (nD-d/2)	30.244	5	PV/RT 25°C	0.9885	5	Exp. L. l. %/wt. u.	
Dielectric	2.07	5	30 mm	1.0000	5	Dispersion	
A -6 to °C	7.02388	4	BP	0.9560	5	225.	
B 16 °C	1220.88	4	t_e	0.9507	5	Flash Point °C	
C	225.9	4	t_c			Fire Point	
A* -6 to °C	1.37143	5	ΔH_c kcal/m			M Spec. Ultra V. X-Ray Dif. Infrared	
B* 85 °C	1144.96	5	ΔH_f			Solubility in +	
K			ΔF_f			Acetone	
c			Viscosity centistokes °C			Carbon tet.	
t_k to °C			η			Benzene	
t_x to °C			B ^v to °C			Ether	
A' to °C			A ^v to °C			n-Heptane	
B' to °C			(B ^v) to °C			Ethanol	
C' to °C			(A ^v) to °C			Water	
A'* to °C			c _p liq. °K			Water in	
B'* to °C			c _p vap. °K				
Ac to °C			c _v vap.				
Bc to °C							
Cc to °C							
Cryos. A° const. B°							
t_e °C	74.82	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. 1

NAME	Ethyne				STRUCTURAL FORMULA
	Acetylene				
Mole % Pur.	Ref.	Molecular Formula C ₂ H ₂	Molecular Weight	26.036	
CH=CH					
		Ref.			Ref.
F. P. °C	-80.8 [‡]	2	dt/dP °C/mm		f to
F. P. 100%			25°C		g °K
B. P. °C			BP	0.018	2
760 mm	-84.0 [#]	2	t _e	0.02582	5
100	-108.3	2	30 mm	0.3036	5
30	-120.1	2			
10	-129.5	2			
1	-153.3	5			
Pressure mm 25°C			ΔHm cal/g		
t _e	494.3	5	ΔHv cal/g(a)		
Density g/ml 20°C			25°C		
d ^t 25			30 mm	196.37	5
d ₄ 30			BP	193.46	5
			t _e	195.04	5
			t _e (d, e)		
			ΔHv/T _e		
a			d to		
b			e °C		
Ref. Index			d' to		
n _D 20°C			e' °C		
25			d _c g/ml	0.231	2
30			v _c ml/g	4.329	2
"C"			t _c °C	36.3	2
MR (Obs.)			P _c mm	46816.	2
MR (Calc.)	9.434	5	PV/RT		
n _D -d/2			25°C		
Dielectric			30 mm	1.0000	5
A -81 to	7.0949	2	BP	0.9700	5
B -60 °C	709.1	2	t _e	0.9778	5
C -	253.2	2	t _c	0.273	5
A* -81 to	1.60062	5	ΔHc kcal/m	300.10	2
B* -60 °C	676.6	5	ΔHf	54.194	2
K			ΔFf	50.000	2
t _k to			Viscosity		
t _x °C			centistokes		
A' to			η °C		
B' °C			B ^v to		
C' °C			A ^v °C		
A'* to			(B ^v)		
B'* °C			(A ^v)		
Ac _l to			c _l liq. 300°K	10.532	2
Bc _l to			400	11.973	2
Cc _l t _c °C			c _v vap. 300°K	0.40452	2
Cryos. A°			400	0.45986	2
const. B°			c _v vap.		
t _e °C	-89.6	5			

† Saturation press (triple pt.)		‡ Sublimation point		+ grams/100 grams solvent	
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE:					
PURIFICATION:					
LITERATURE REFERENCES:					
(a) Heat of sublimation					

Publication Date: January 1, 1961 | doi: 10.1021/ba-1959-0022.ch001

No. 2

NAME		Propyne		STRUCTURAL FORMULA	
		Methylacetylene		CH ₃ C≡CH	
Mole % Pur.	Ref.	Molecular Formula C ₃ H ₄	Molecular Weight	40.062	
F.P. °C	-102.7	2	dt/dP °C/mm		
F.P. 100%			25°C		
B.P. °C			BP	0.0301	2
760 mm	-23.22	2	t _e	0.0334	5
100	-61.1	2	30 mm	0.413	5
30	-78.2	2	ΔHm cal/g		
10	-90.2	2	ΔHv cal/g		
1	-110.6	5	25°C		
Pressure mm 25°C			30 mm	152.2	5
t _e	666.5	5	BP	131.0	5
Density g/ml 20°C			t _e	131.9	5
d ₄ ^t 25			t _e (d, e)	132.15	5
d ₄ ^t 30			ΔHv/T _e	21.39	5
a			d -78 to	122.05	5
b			e -30 °C	0.3856	5
Ref. Index n _D			d' to		
20°C			e' °C		
25			d _c g/ml	0.229	5
30			v _c ml/g	4.367	5
"C"			t _c °C	121.6	2
MR (Obs.)			P _c mm	38000.	5
MR (Calc.) (nD-d/2)	14.052	5	PV/RT 25°C		
Dielectric			30 mm	1.0000	5
A -78 to	6.77915	2	BP	0.9700	5
B 24 °C	801.91	2	t _e	0.9699	5
C	228.93	2	t _c	0.270	5
A* -78 to	0.89250	5	ΔHc kcal/m	442.07	2
B* -16 °C	738.2	5	ΔHf	44.319	2
K			ΔFf	46.313	2
c			Viscosity centistokes		
t _k to			η °C		
t _x °C			B ^v to		
A' °C			A ^v °C		
B' °C			(B ^v)		
C' °C			(A ^v)		
A* to			c _p liq. °K		
B* °C			c _p vap. 300°K	0.36319	2
Ac to			400	0.43258	2
Bc t _c °C			c _v vap.		
Cc t _c °C					
Cryos. A°					
const. B°					
t _e °C	-26.2	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:	

NAME	1-Butyne				STRUCTURAL FORMULA					
	Ethylacetylene				C ₂ H ₅ C≡CH					
Mole % Pur.	Ref.	Molecular Formula	C ₄ H ₆	Molecular Weight	54.088				Ref.	
F.P. °C	-125.720	2		dt/dP °C/mm		f		to		
F.P. 100%				25°C	0.0208	g		°K		
B.P. °C				BP	0.0336	h				
760 mm	8.09	2		t _e	0.0337	f'		to		
100	-34.56	2		30 mm	0.4724	g'		°K		
30	-53.42	2		ΔHm cal/g		h'				
10	-67.75	2		ΔHv cal/g		m		to		
1	-91.42	5		25°C	105.61	n		°K		
Pressure mm 25°C				30 mm	125.13	o				
t _e	758.4	5		BP	109.82					
Density g/ml 20°C	0.65 [‡]	2		t _e	109.82	m'		to		
d ₄ ^t 25	0.65 [‡]	2		t _e (d, e)		n'		°K		
d ₄ ^t 30	0.65	4		ΔHv/T _e	21.12	o'				
a	0.6511	5		d -60 to °C	111.83	Surface tension dynes/cm. 20°C				
b	0.03129	5		e 30 to °C	0.2489	5		30	16.40	5
Ref. Index n _D 25				d' to °C		5		40	16.25	5
30				e' to °C					16.03	5
"C"				d _c g/ml		Parachor [P] 20°C				
MR (Obs.)				v _c ml/g		30				
MR (Calc.) (n _D -d/2)				t _c °C		40				
Dielectric				P _c mm		Sugd.				
A -67 to °C	6.97497	2		PV/RT		Exp. L. l. %/wt. u.				
B 63 °C	986.46	2		25°C		Dispersion				
C °C	232.85	2		30 mm		Flash Point °C				
A* -60 to °C	1.20441	5		BP		Fire Point				
B* 18 °C	920.64	5		t _e		M. Spec. Ultra V.				
K				t _c		X-Ray Dif. Infrared				
c				Viscosity centistokes		Solubility in ⁺				
t _k to °C				η °C		Acetone				
t _x °C						Carbon tet.				
A' to °C						Benzene				
B' °C						Ether				
C' °C						n-Heptane				
A'* to °C				B ^v to °C		Ethanol				
B'* to °C				A ^v to °C		Water				
A _c to °C				(B ^v)		Water in				
B _c to °C				(A ^v)						
C _c to °C				c _p liq. °K						
Cryos. A° const. B°				c _p vap. °K						
t _e °C				c _v vap.						
T _R = 0.75 T _c [‡] at saturation pressure ⁺ grams/100 grams solvent										
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula										
SOURCE:										
PURIFICATION:										
LITERATURE REFERENCES:										

NAME		2-Butyne		STRUCTURAL FORMULA	
		Dimethylacetylene		CH ₃ C≡C CH ₃	
Mole % Pur.	Ref.	Molecular Formula C ₄ H ₆	Molecular Weight 54.088		
F. P. °C	-32.260	2		Ref.	
F. P. 100%					
B. P. °C					
760 mm	26.97	2	dt/dP °C/mm	0.0379	5
100	-18.7	2	25°C	0.0358	5
30	-38.98	2	BP	0.0341	5
10	-54.46	2	t _e	0.5097	5
1	-80.0	5	30 mm		
Pressure mm 25°C	706.6	5	ΔHm cal/g		
t _e	808.6	5	ΔHv cal/g		
Density g/ml 20°C	0.6910	2	25°C	117.43	5
d ₄ ^t 25	0.6856	2	30 mm	131.8	5
d ₄ ^t 30	0.6801	4	BP	117.03	5
			t _e	116.5	5
			t _e (d, e)	116.65	5
			ΔHv/T _e	20.87	5
a	0.7130	4	d -40 to	123.07	5
b	-0.00101	4	e -35 °C	0.224	5
Ref. Index n _D 20°C	1.3921	2	d' to		
25	1.3893	2	e' °C		
30	1.3865	4	d _c g/ml		
"C"	0.7574	4	v _c ml/g		
MR (Obs.)	18.64	2	t _c °C	212.	5
MR (Calc.)	18.670	5	P _c mm	38478.	5
(nD-d/2)	1.0466	2	PV/RT		
Dielectric			25°C	0.9653	5
A -32 to	7.07871	2	30 mm	1.0000	5
B 91°C	1104.72	2	BP	0.9650	5
C	236.19	2	t _e	0.9628	5
A* -32 to	1.28120	5	ΔHc kcal/m	584.57	2
B* 39°C	1032.5	5	ΔHf	34.97	2
K			ΔFf	44.32	2
c			Viscosity centistokes		
t _k to			η °C		
t _x °C					
A' to			B ^v to		
B' °C			A ^v °C		
C' °C			(B ^v)		
A'* to			(A ^v)		
B'* °C			c _p liq. °C		
Ac 91 to	7.34794	5	c _p vap. 300°K	0.34573	2
Bc t _c °C	1354.8	5	400	0.41821	2
Cc °C	277.8	5	c _v vap.		
Cryos. A° const. B°					
t _e °C	28.65	5			
T _R = 0.75 T _c		≠ solid			+ grams/100 grams solvent
REFERENCES: 1-Dow 2-API 3-Lit. 4-Calc. from det. data 5-Calc. by formula					
SOURCE: API					
PURIFICATION: API					
LITERATURE REFERENCES:					

NAME		1-Pentyne			STRUCTURAL FORMULA					
					CH≡C(CH ₂) ₂ CH ₃					
Mole % Pur.	Ref.	Molecular Formula	C ₅ H ₈	Molecular Weight	68.114					
		Ref.			Ref.				Ref.	
F. P. °C	-105.7	2	dt/dP °C/mm			f	to			
F. P. 100%			25°C	0.0586	5	g	°K			
B. P. °C			BP	0.0374	5	h	-----			
760 mm	40.18	2	t _e	0.0342	5	f'	to			
100	-7.	2	30 mm	0.5251	5	g'	°K			
30	-28.	2	ΔHm cal/g			h'				
10	-44.	2	ΔHv cal/g			m	300 to	0.0650	4	
1	-70.	5	25°C	100.63	5	n	600 °K	0.0012	4	
Pressure mm 25°C	431.4	4	30 mm	111.13	5	o		-0.0648	4	
t _e	851.4	5	BP	97.28	5	m'	700 to	0.1410	4	
Density g/ml 20°C	0.6901	2	t _e	96.62	5	n'	1000 °K	0.0394	4	
d ₄ ^t 25	0.6849	2	t _e (d, e)	96.63	5	o'		-0.0632	4	
d ₄ ^t 30			ΔHv/T _e	20.78	5	Surface tension dynes/cm. 20°C				
a			d -50 to	105.42	5	γ	30	19.34	5	
b			d' 50 °C	0.2024	5		40	18.13	5	
Ref. Index n _D 20°C	1.3852	2	e' to °C			Parachor [P] 20°C				
25	1.3826	2	d v g/ml				30			
30			v _c ml/g				40			
"C"			t _c °C				Sugd.	207.4	5	
MR (Obs.)	23.14	2	P _c mm			Exp. L. l. %/wt. u.				
MR (Calc.) (nD-d/2)	1.0402	2	PV/RT 25°C	0.9810	5	Dispersion 119.				2
Dielectric			30 mm	1.0000	5	Flash Point °C				
A -50 to	6.97263	2	BP	0.9693	5	Fire Point				
B 70°C	1095.42	2	t _e	0.9666	5	M. Spec. Ultra V.				
C	227.53	2	t _c			X-Ray Dif. Infrared				
A* -50 to	1.25625	5	ΔHc kcal/m	735.95	2	Solubility in ⁺				
B* 50°C	1022.54	5	ΔHf	34.50	2	Acetone				
K			ΔFf	50.16	2	Carbon tet.				
c			Viscosity centistokes			Benzene				
t _k to °C			η °C			Ether				
t _x °C			B ^v to °C			n-Heptane				
A' to °C			A ^v °C			Ethanol				
B' °C			(B ^v) °C			Water				
A'*	to °C		(A ^v)			Water in				
B'*	to °C		c _p liq. °K							
Ac to °C			c _p vap. 300K	0.37114	2					
Bc t _c °C			400	0.45409	2					
Cc			c _v vap.							
Cryos. A° const. B°										
t _e °C	43.45	5								

+ grams/100 grams solvent

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

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

NAME		2-Pentyne		STRUCTURAL FORMULA			
				$C_2H_5C\equiv CCH_3$			
Mole % Pur.	Ref.	Molecular Formula	C_5H_8	Molecular Weight	68.114		
F.P. °C	-109.3	2	dt/dP °C/mm			f	to
F.P. 100%			25°C	0.1003	5	g	°K
B.P. °C	56.07	2	BP	0.0392	5	h	---
760 mm	6.20	2	t_e	0.0343	5	f'	to
100	-16.0	2	30 mm	0.556	5	g'	°K
30	-32.8	2	ΔH_m cal/g			h'	
10	-61.	5	ΔH_v cal/g			m	300 to
1			25°C	108.5	5	n	600 °K
Pressure mm 25°C	235.8	5	30 mm	115.58	5	o	0.0691
t_e	898.4	5	BP	102.6	5		0.0010
Density g/ml 20°C	0.7107	2	t_e	101.66	5		-0.0630
d_t 25	0.7055	2	t_e (d, e)	101.7	5	m'	700 to
d_4 30	0.7003	4	$\Delta H_v/T_e$	20.71	5	n'	1000 °K
a	0.7316	4	d -19 to	112.7	5	o'	0.1628
b	-0.00101	4	e -65 °C	0.1802	5		0.0081
Ref. Index n_D 20°C	1.4039	2	d'				-0.0622
25	1.4009	2	e'			Surface tension dynes/cm. 20°C	
30	1.3979	4				y	30
"C"	0.7573	4	d _c g/ml				40
MR (Obs.)	23.43	2	v _c ml/g				21.84
MR (Calc.)	23.288	5	t _c °C	241.	5		20.54
(nD-d/2)	1.0485	2	P _c mm	28675.	5		19.27
Dielectric	1.97	5	PV/RT 25°C	0.9901	5	Parachor [P] 20°C	
A -19 to	7.05189	2	30 mm	1.0000	5		30
B 113°C	1193.05	2	BP	0.9700	5		40
C	229.96	2	t_e	0.9663	5		Sugd. 207.4
A* -19 to	1.30669	5	t_c			Exp. L.l. %/wt. u.	
B* 71°C	1113.17	5	ΔH_c kcal/m	732.25	2	Dispersion	
K			ΔH_f	30.80	2	Flash Point °C	
c			ΔF_f	46.41	2	Fire Point	
t_k to			Viscosity centistokes °C			M Spec. Ultra V.	
t_x °C			η			X-Ray Dif.	
A' to						Infrared	
B' °C			B ^v to			Solubility in +	
C'			A ^v °C			Acetone	
A* to °C			(B ^v)			Carbon tet.	
B* to °C			(A ^v)			Benzene	
Ac 113 to	7.22935	5				Ether	
Bc t _c -	1424.6	5				n-Heptane	
Cc t _c -	272.6	5				Ethanol	
Cryos. A° const. B°			c_p liq. °K			Water	
t_e °C	61.14	5	c_p vap. 300°K	0.34780	2	Water in	
			400	0.42869	2		
			c_v vap.				
$T_R = 0.75 T_c$				+ 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:							

NAME		3-Methyl-1-butyne			STRUCTURAL FORMULA			
					$\text{CH}_3(\text{CH}_2)_2\text{C}\equiv\text{CH}$			
Mole % Pur.	Ref.	Molecular Formula	C_5H_8	Molecular Weight	68.114			
		Ref.			Ref.			
F.P. °C	-89.7	2	dt/dP °C/mm			f	to	
F.P. 100%			25°C	0.0376	5	g	°K	
B.P. °C			BP	0.0362	5	h		
760 mm	26.35	2	t _e	0.0348	5	f'	to	
100	-19.4	4	t _e (d, e)			g'	°K	
30	-39.5	4	ΔHm cal/g			h'		
10	-55.	5	ΔHv cal/g			m	300 to	0.0293
1			25°C	91.0	5	n	600 °K	0.0013
Pressure mm 25°C	723.4	4	30 mm	106.8	5	o		-0.064
t _e	799.8	5	BP	90.63	5	m'	700 to	0.1145
Density g/ml 20°C	0.666	2	t _e	90.26	5	n'	1000 °K	0.0010
d ₄ ^t 25	0.660	2	t _e (d, e)	90.29	5	o'		-0.037
d ₄ ^t 30	0.654	4	ΔHv/T _e	20.43	5	Surface tension dynes/cm. 20°C		
a	0.691	4	d	-40 to	97.10	5	γ	16.67
b	-0.001	4	e	28 °C	0.2455	5	30	15.41
Ref. Index n _D 20°C	1.3723	2	d'				40	14.17
25	1.3695	2	e'			Parachor [P] 20°C		
30	1.3667	4	d _c g/ml			20		
"C"	0.7482	4	v _c ml/g			30		
MR (Obs.)	23.261	2	t _c °C	188.	5	40		
MR (Calc.)	23.288	5	P _c mm	28529.	5	Sugd.	207.4	5
(nD-d/2)	1.039	2	PV/RT 25°C	0.9578	5	Exp. L.l. %/wt. u.		
Dielectric	1.88	5	30 mm	1.0000	5	Dispersion		
A -40 to	6.88971	5	BP	0.9566	5	Flash Point °C		
B -73 °C	1017.50	5	t _e	0.9549	5	Fire Point		
C 227.46		5	t _c			M. Spec. Ultra V.		
A* -40 to	1.21594	5	ΔHc kcal/m	734.05	2	X-Ray Dif.		
B* 38 °C	952.8	5	ΔHf	32.60	2	Infrared		
K			ΔFf	49.12	2	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' °C			A ^v °C			Ethanol		
A'* to			(B ^v)			Water		
B'* °C			(A ^v)			Water in		
Ac 73 to	7.34037	5	c _p liq. °K					
Bc t _c °C	1329.4	5	c _p vap. 300°K	0.36894	2			
Cc °C	272.6	5	400	0.45659	2			
Cryos. A°			c _v vap.					
consts. B°								
t _e °C	27.76	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:								

NAME		1-Hexyne			STRUCTURAL FORMULA			
Mole % Pur.		Ref.	Molecular Formula C ₆ H ₁₀	Molecular Weight 82.140	C ₄ H ₉ C≡CH			
		Ref.			Ref.			
F.P. °C	-131.9	2	dt/dP °C/mm		f		to	
F.P. 100%			25°C	0.1670	g		°K	
B.P. °C			BP	0.042	h	+	---	
760 mm	71.33	2	t _e	0.0360	f'		to	
100	18.2	4			g'		°K	
30	-5.2	4	ΔHm cal/g		h'			
10	-22.9	5						
1	-52.2	5	ΔHv cal/g		m	300	to	0.0576
Pressure mm 25°C	136.05	5	25°C	93.6	n	600	°K	0.0012
t _e	925.6	5	30 mm	98.94	o			-0.0648
Density g/ml 20°C	0.7155	2	BP	85.40				
d _t 25	0.7106	2	t _e	84.3	m'	700	to	0.1451
d ₄ 30	0.7057	4	t _e (d, e)	84.27	n'	1000	°K	0.096
			ΔHv/T _e	19.73	o'			-0.0632
a	0.7351	4	d	-8 to				
b	-0.0396	4	e	78 °C				
Ref. Index n _D 20°C	1.3989	2	d'	to °C				
25	1.3960	2	e'					
30	1.3931	4	d _c g/ml					
"C"	0.7435	4	v _c ml/g					
MR (Obs.)	27.76	2	t _c °C	248.				
MR (Calc.)	27.906	5	P _c mm	22734.				
(nD-d/2)	1.0412	2	PV/RT 25°C	0.9913				
Dielectric	1.96	5	30 mm	1.0000				
A -8 to	6.91212	5	BP	0.9550				
B 118 °C	1194.6	5	t _e	0.9479				
C	225.	5	t _c					
A* -8 to	1.26142	5	ΔHc kcal/m	882.85				
B* 88 °C	1119.4	5	ΔHf	29.55				
K			ΔFf	52.17				
c			Viscosity centistokes					
t _k to			η °C					
t _x °C								
A' to			B ^v to					
B' °C			A ^v °C					
C'			(B ^v)					
A'* to			(A ^v)					
B'* °C			c _p liq. °K					
Ac 118 to	7.16827	5	c _p vap. 300°K	0.37460				
Bc t _c °C	1453.8	5	400	0.46104				
Cc °C	268.5	5	c _v vap.					
Cryos. A° const. B°								
t _e °C	77.76	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:								

NAME		1-Heptyne			STRUCTURAL FORMULA				
					$C_5H_{11}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	C_7H_{12}	Molecular Weight	96.166				
	Ref.							Ref.	
F.P. °C	-80.9	2		dt/dP °C/mm			f		
F.P. 100%				25°C	0.4081	5	g	to	
B.P. °C				BP	0.0450	2	h	°K	
760 mm	99.74	2		t_e	0.03836	5	g'	to	
100	39.63	4		30 mm	0.6491	5	h'	°K	
30	13.56	4		ΔH_m cal/g			m	300 to	0.0526
10	-6.0	5					n	600 °K	0.0012
1	-38.0	5		ΔH_v cal/g	85.69	5	o		-0.0648
Pressure mm 25°C	52.51	5		25°C	87.26	5			
t_e	1017.9	5		30 mm	75.40	5			
Density g/ml 20°C	0.7328	2		BP	73.85	5	m'	700 to	0.1346
d_4^{25}	0.7283	2		t_e	73.88	5	n'	1000 °K	0.0010
25	0.7238	4		t_e (d, e)			o'		-0.0634
30	0.7238	4		$\Delta H_v/T_e$	18.50	5			
a	0.7508	4		d	14 to	89.13	5	Surface tension dynes/cm. 20°C	
b	-0.0389	4		e	111 °C	0.1377	5	30	22.34
Ref. Index n_D 20°C	1.4087	2		d'	to			40	21.25
25	1.4061	2		e'	°C				20.19
30	1.4033	4		v_c g/ml				Parachor [P] 20°C	
"C"	0.7427	4		v_c ml/g				30	
MR (Obs.)	32.42	2		t_c °C	280.	5		40	
MR (Calc.)	32.524	5		P_c mm	19163.	5		Sugd.	285.4
(nD-d/z)	1.0423	2		PV/RT				Exp. L. l. %/wt. u.	
Dielectric	1.98	5		25°C	0.9996	5		Dispersion	113.
A 14 to	6.68593	5		30 mm	1.0000	5		Flash Point °C	
B 142 °C	1216.6	5		BP	0.9622	5		Fire Point	
C	220.	5		t_e	0.9529	5		M. Spec. Ultra V.	
A* 14 to	1.05646	5		t_c				X-Ray Dif. Infrared	
B* 121 °C	1132.5	5		Viscosity centistokes				Solubility in +	
K				η				Acetone	
t_k to								Carbon tet.	
t_x °C								Benzene	
A' to								Ether	
B' °C								n-Heptane	
C' °C								Ethanol	
A** to								Water	
B** °C								Water in	
Ac 142 to	7.10459	5		B^v to					
Bc t_c °C	1538.4	5		A^v °C					
Cc t_c °C	265.0	5		(B^v) to					
Cryos. A° const. B°				(A^v) °C					
t_e °C	110.76	5		c_p liq. °K					
				c_p vap. 300°K	0.37716	2			
				c_p vap. 400	0.46597	2			
				c_v vap.					
$T_R = 0.75 T_c$									
+ 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:									

NAME		1-Octyne			STRUCTURAL FORMULA		
					$C_6H_{13}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	C_8H_{14}	Molecular Weight	110.192		
		Ref.			Ref.		
F. P. °C	-79.3	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			25°C	1.3009	5	h	
760 mm	126.2	2	BP	0.0471	2	h	
100	66.39	5	t_e	0.0358	5	g'	to
30	39.86	5	30 mm	0.6651	5	g'	°K
10	19.68	5				h'	
1	-13.73	5					
Pressure mm 25°C	13.60	5	ΔH_m cal/g			m	300 to
t_e	1077.7	5	25°C	90.74	5	n	600 °K
Density g/ml 20°C	0.7461	2	30 mm	88.54	5	o	0.0487 4
d ₄ ²⁵	0.7419	2	BP	75.99	5		0.0012 4
d ₄ ³⁰	0.7377	4	t_e	74.18	5	m'	700 to
			t_e (d,e)	74.11	5	n'	1000 °K
			$\Delta H_v/T_e$	19.82	5	o'	0.1326 4
							0.0010 4
a	0.7629	4	d 25 to	94.33	5	Surface tension	
b	0.000836	4	e 150 °C	0.1453	5	dynes/cm. 20°C	
Ref. Index			d'			30	23.27 5
n _D ^{20°C}	1.4159	2	e'			40	22.23 5
25	1.4134	2					21.23 5
30	1.4109	4	d			Parachor [P]	
"C"	0.7146	5	c			20°C	
MR (Obs.)	37.05	2	v			30	
MR (Calc.)	37.142	5	c			40	
(nD-d/2)	1.0428	2	t_c			Sugd.	324.4 5
Dielectric			P			Exp. L. l. %/wt.	
A 25 to	7.02447	4	PV/RT			u.	
B 170 °C	1413.8	4	25°C	1.0016	5	Dispersion	
C	215.0	5	30 mm	1.0000	5	111. 2	
A*	1.44610	5	BP	0.9500	5	Flash Point °C	
B*	1329.7	5	t_e	0.9394	5	Fire Point	
K			t_c			M Spec.	
c			ΔH_c kcal/m	1176.70	2	Ultra V.	
t_k ___ to			ΔH_f	19.70	2	X-Ray Dif.	
t_x ___ °C			ΔF_f	56.19	2	Infrared	
A' ___ to			Viscosity centistokes			Solubility in +	
B' ___ °C			η			Acetone	
C' ___ °C						Carbon tet.	
A'* to			B ^v ___ to			Benzene	
B'* °C			A ^v ___ °C			Ether	
Ac ___ to			(B ^v)			n-Heptane	
Bc ___ °C			(A ^v)			Ethanol	
Cc ___ °C			c _p liq. °K			Water	
Cryos. A°			c _p vap. 300°K	0.3790	2	Water in	
const. B°			400	0.4696	2		
t_e °C	139.16	5	c _v vap.				

+ grams/100 grams solvent

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

SOURCE:

PURIFICATION:

LITERATURE REFERENCES:

NAME		1-Nonyne			STRUCTURAL FORMULA				
					$C_7H_{15}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	C_9H_{16}	Molecular Weight	124.218				
		Ref.			Ref.				Ref.
F. P. °C			dt/dP °C/mm			f	to		
F. P. 100%	-50.	2	25°C			g	°K		
B. P. °C			2.727		5	h	---		
760 mm	150.8	2	BP		5	f'	to		
100	84.23	5	t _e		5	g'	°K		
30	55.19	5	30 mm		5	h'			
10	33.28	5	ΔHm cal/g						
1	2.64	5							
Pressure mm 25°C	6.26	5	ΔHv cal/g			m	300 to	0.0459	4
t _e	1148.0	5	25°C		5	n	600 °K	0.0013	4
		5	30 mm		5	o		-0.0649	4
Density g/ml 20°C	0.7568	2	BP		5				
t	0.7527	2	67.35		5	m'	700 to	0.1312	4
d ₄	0.7486	4	65.28		5	n'	1000 °K	0.0010	4
			t _e (d, e)		5	o'		-0.0635	4
			64.52		5				
			ΔHv/T _e		5				
a	0.7732	5	d 50 to		5	Surface tension dynes/cm. 20°C			
b	-0.0382	5	e 160 °C		5	30			24.02
			e'			40			23.00
									22.00
Ref. Index n _D 20°C	1.4217	2	d _c g/ml			Parachor [F]			
25	1.4193	2	v _c ml/g			20°C			
30	1.4169	4	t _c °C		5	30			
"C"			P _c mm		5	40			
MR (Obs.)	41.64	2	14300.		5	Sugd.			363.4
MR (Calc.)	41.760	5							
(n _D -d/2)	1.0430	2	PV/RT			Exp. L. l. %/wt. u.			
			25°C		5	Dispersion			110.
			30 mm		5				
			BP		5	Flash Point °C			
			t _e		5	Fire Point			
			t _c		5				
			ΔHc kcal/m			M. Spec. Ultra V.			
			ΔHf			X-Ray Dif.			
			ΔFf			Infrared			
A* 51 to	1.22540	5	Viscosity centistokes			Solubility in +			
B* 180 °C	1316.75	5	η °C			Acetone			
K						Carbon tet.			
t _k to						Benzene			
t _x °C						Ether			
A' to						n-Heptane			
B' °C						Ethanol			
C' °C						Water			
A'* to						Water in			
B'* °C									
A _c to									
B _c t _c °C									
C _c °C									
Cryos. A° const. B°			c _p liq. °K						
t _e °C	168.2	5	c _p vap. 300°K		2				
			400		2				
			c _v vap.						
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:									

NAME		1-Decyne			STRUCTURAL FORMULA		
					$C_8H_{17}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	$C_{10}H_{18}$	Molecular Weight	138.244		
		Ref.			Ref.	Ref.	
F.P. °C	-44.	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			25°C	10.1246	5	h	
760 mm	174.	2	BP	0.0514	5	f'	to
100	108.48	5	t _e	0.0358	5	g'	°K
30	79.28	5	30 mm	0.7333	5	h'	
10	57.00	5	ΔHm cal/g			m	300 to
1	20.00	5	ΔHv cal/g			n	600 °K
Pressure mm 25°C	1.42	5	25°C	88.69	5	o	0.0424
t _e	1198.8	5	30 mm	81.14	5		0.0013
Density g/ml 20°C	0.7655	2	BP	68.78	5		-0.0649
d ₄ ^t 25	0.7616	2	t _e	66.49	5	m'	700 to
d ₄ ^t 30	0.7577	4	t _e (d, e)	66.38	5	n'	1000 °K
a	0.7811	4	ΔHv/T _e	19.63	5	o'	0.1345
b	-0.0378	4	d 78 to	91.48	5		0.0010
Ref. Index n _D 20°C	1.4265	2	e 194 °C	0.1304	5		-0.0635
25	1.4242	2	d'			Surface tension dynes/cm. 20°C	
30	1.4219	4	e'			30	24.65
"C"	0.7402	4				40	23.66
MR (Obs.)	46.30	2	d _c g/ml				22.70
MR (Calc.)	46.378	5	t _c ml/g	354.	5	Parachor [P] 20°C	
(nD-d/2)	1.0437	2	t _c °C	17454.	5	30	
Dielectric			P _c mm			40	
A 78 to	7.10870	5	PV/RT			Sugd.	402.4
B 246 °C	1601.6	5	25°C	1.0000	5	Exp. L. l. %/wt.	
C	206.0	5	30 mm	1.0000	5	u.	
A* 78 to	1.60046	5	BP	0.9400	5	Dispersion	108.
B* 204 °C	1519.05	5	t _e	0.9250	5	Flash Point °C	
K			t _c			Fire Point	
t _k			ΔHc kcal/m	1470.54	2	M Spec.	
t _x °C			ΔHf			Ultra V.	
A' to			ΔFf			X-Ray Dif.	
B' °C			Viscosity centistokes			Infrared	
C' °C			η °C			Solubility in +	
A** to			B ^v			Acetone	
B** °C			A ^v			Carbon tet.	
Ac to			(B ^v)			Benzene	
Bc t _c °C			(A ^v)			Ether	
Cc t _c °C			c _p liq. °K			n-Heptane	
Cryos. A°			c _p vap. 300°K	0.38157	2	Ethanol	
const. B°			400	0.47481	2	Water	
t _e °C	192.7	5	c _v vap.			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:							

NAME		1-Undecyne			STRUCTURAL FORMULA			
					C ₉ H ₁₉ C≡CH			
Mole % Pur.	Ref.	Molecular Formula	C ₁₁ H ₂₀	Molecular Weight	157.270			
F.P. °C	-25.	2	dt/dP °C/mm			f	to	Ref.
F.P. 100%			0.1 mm	110.84	5	g	°K	
B.P. °C	195.	2	BP	0.0534	5	h	-----	
760 mm	126.84	4	t _e	0.0361	5	f'	to	
100	96.43	4	30 mm	0.7642	5	g'	°K	
30	73.20	5	ΔHm cal/g			h'		
10	34.61	5	ΔHv cal/g			m	300 to	0.0405
1	5.51	5	0.1 mm	88.55	5	n	600 °K	0.0013
0.1			30 mm	75.22	5	o		-0.0649
Press. mm	1248.	5	BP	63.31	5	m'	700 to	0.1329
t _e			t _e	60.92	5	n'	1000 °K	0.0010
Density g/ml 20°C	0.7728	2	t _e (d, e)	60.74	5	o'		-0.0635
d ₄ ^t 25	0.7690	2	ΔHv/T _e	19.57	5	Surface tension dynes/cm. 20°C		
d ₄ ^t 30	0.7652	4	d 97 to	86.88	5	30		
a	0.7880	4	e 217 to	0.1209	5	40		
b	-0.0376	4	d' °C			22.13		
Ref. Index n _D 20°C	1.4306	2	e' °C			21.27		
25	1.4284	2	d _c g/ml			20.44		
30	1.4262	4	v _c ml/g			Parachor [P] 20°C		
"C"	0.7398	4	t _c °C	373.	5	30		
MR (Obs.)	50.97	2	P _c mm	16891.	5	40		
MR (Calc.)	50.996	5	PV/RT			Sugd. 441.4		
(nD-d/2)	1.0442	2	0.1 mm	1.0000	5	Exp. L.l. %/wt. u.		
Dielectric	2.05	5	30 mm	1.0000	5	Dispersion		
A 80 to	7.13064	4	BP	0.9339	5	107.		
B 267 °C	1687.2	4	t _e	0.9169	5	Flash Point °C		
C	202.	5	t _c			Fire Point		
A* 80 to	1.67084	5	ΔHc kcal/m	1617.48	2	M. Spec. Ultra V.		
B* 267 °C	1599.5	5	ΔHf	4.92	2	X-Ray Dif. Infrared		
K			ΔFf	62.21	2	Solubility in +		
t _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' °C			(B ^v)			Ethanol		
A** to			(A ^v)			Water		
B** °C			c _p liq. °K			Water in		
Ac 267 to	8.22204	5	c _p vap. 300°K	0.38248	2			
Bc t _c °C	2858.81	5	c _p vap. 400	0.47665	2			
Gc t _c °C	342.89	5	t _e °C	216.2	5			
Cryos. A° const. B°			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:								

NAME		1-Dodecyne			STRUCTURAL FORMULA				
					$C_{10}H_{21}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	$C_{12}H_{22}$	Molecular Weight	166.296				
		Ref.			Ref.	Ref.			
F.P. °C	-19.	2	dt/dP			f	to		
F.P. 100%			°C/mm			g	°K		
B.P. °C			0.1 mm	115.26	5	h	---		
760 mm	215.	2	BP	0.0550	5	f'	---		
100	144.63	4	t_e	0.0357	5	g'	to		
30	113.15	4	30 mm	0.7913	5	h'	°K		
10	89.09	5	ΔH_m cal/g			m	300 to	0.0391	
1	49.05	5	ΔH_v cal/g			n	600 °K	0.0013	
0.1	18.8	5	0.1 mm	81.75	5	o		-0.0650	
Press. mm			30 mm	75.06	5	m'	700 to	0.1278	
t_e	1313.0	5	BP	63.49	5	n'	1000°K	0.0011	
Density			t_e	60.89	5	o'		-0.0636	
g/ml 20°C	0.7788	2	t_e (d,e)	60.74	5				
d_4^{25}	0.7751	2	$\Delta H_v/T_e$	19.76	5				
d_4^{30}	0.7714	4	d 100 to	87.91	5	Surface tension			
a	0.7936	4	e 250 °C	0.1136	5	dynes/cm. 20°C			
b	-0.0374	4	d'			30		25.62	
Ref. Index			e'			40		24.66	
n_D^{20}			d c g/ml					23.73	
25	1.4340	2	v c ml/g			Parachor [P]			
30	1.4318	2	t_c °C	391.	5	20°C			
"C"	0.7396	4	P c mm	15719.	5	30			
MR (Obs.)	55.61	2	PV/RT			40			
MR (Calc.)	55.614	5	0.1 mm	0.9251	5	Sugd. 480.4			
(nD-d/2)	1.0446	2	30 mm	1.0000	5	Exp. L.l.%/wt.			
Dielectric	2.06	5	BP	0.9391	5	u.			
A 113 to	7.16929	4	t_e	0.9211	5	Dispersion			
B 288 °C	1771.1	4	t_c			107.			
C	198.	5	ΔH_c kcal/m	1764.40	2	Flash Point °C			
A* 100 to	1.70703	5	ΔH_f	-0.01	2	Fire Point			
B* 288 °C	1677.4	5	ΔF_f	64.22	2	M Spec.			
K			Viscosity			Ultra V.			
t_x --- to			centistokes			X-Ray Dif.			
t_x °C			η			Infrared			
A' to						Solubility in +			
B' °C			B ^v to			Acetone			
C' °C			A ^v °C			Carbon tet.			
A'* to			(B ^v)			Benzene			
B'* °C			(A ^v)			Ether			
			c_p liq. °K			n-Heptane			
Ac 288 to	8.42471	5	c_p vap. 300°K	0.38329	2	Ethanol			
Bc t_c °C	3185.77	5	400	0.47818	2	Water			
Cc °C	362.54	5	c_v vap.			Water in			
Cryos. A°									
const. B°									
t_e °C	239.2	5							
TR = 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. 15

NAME		1-Tridecyne		STRUCTURAL FORMULA			
				$C_{11}H_{23}C\equiv CH$			
Mole % Pur.	Ref.	Molecular Formula $C_{13}H_{24}$	Molecular Weight 180.322				
		Ref.			Ref.		
F. P. °C	-5.	2	dt/dP °C/mm		f	to	
F. P. 100%			0.1 mm	119.74	g	°K	
B. P. °C			BP	0.0573	h	-----	
760 mm	234.	2	t _e	0.0364	f'	to	
100	160.72	4			g'	°K	
30	127.97	4	ΔHm cal/g	0.8232	h'		
10	102.95	5			m	300 to	0.0376
1	61.31	5	ΔHv cal/g		n	600 °K	0.0013
0.1	29.89	5	0.1 mm	84.53	o		-0.0650
Press. mm			30 mm	71.78			
t _e	1350.7	5	BP	60.04	m'	700 to	0.1306
Density g/ml 20°C			t _e	57.33	n'	1000 °K	0.0011
d ₄ ²⁵	0.7842	2	t _e (d, e)	57.10	o'		-0.0636
d ₄ ³⁰	0.7806	2	ΔHv/T _e	21.5			
	0.7770	4					
a	0.7986	4	d 120 to	85.87			
b	-0.0372	4	e 260 °C	0.1104		Surface tension dynes/cm. 20°C	26.03
Ref. Index n _D 20°C			d'			30	25.09
25	1.4371	2	e'			40	24.17
30	1.4349	2					
	1.4327	4	d _c g/ml			Parachor [P] 20°C	
"C"	0.7394	4	v _c ml/g	408.	5	30	
MR (Obs.)	60.25	2	t _c °C			40	
MR (Calc.)	60.232	5	P _c mm	14663.	5	Sugd.	519.4
(nD-d/z)	1.0449	2					
Dielectric	2.06	5	PV/RT			Exp. L. l. %/wt. u.	
A 120 to	7.15674	4	0.1 mm	1.0000	5	Dispersion	106.
B 308 °C	1834.4	4	30 mm	1.0000	5	Flash Point °C	
C	195.	5	BP	0.9299	5	Fire Point	
A* 120 to	1.73019	5	t _e	0.9095	5	M. Spec. Ultra V.	
B* 270 °C	1742.5	5				X-Ray Dif. Infrared	
K			Viscosity centistokes			Solubility in +	
t _k to			η °C			Acetone	
t _x °C						Carbon tet.	
A' to			B ^v to			Benzene	
B' °C			A ^v °C			Ether	
C' °C			(B ^v)			n-Heptane	
A'* to			(A ^v)			Ethanol	
B'* °C			c _p liq. °K			Water	
Ac 308 to	8.66116	5				Water in	
Bc t _c °C	3575.90	5	c _p vap. 300°K	0.38392	2		
Cc t _c °C	387.79	5					
Cryos. A° const. B°			c _p vap. 400	0.47948	2		
t _e °C	260.6	5	c _v vap.				
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:							

NAME		1-Tetradecyne				STRUCTURAL FORMULA				
						$C_{12}H_{25}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	$C_{14}H_{26}$	Molecular Weight	194.348					
F.P. °C		0.	2	dt/dP °C/mm				f to		Ref.
F.P. 100%				0.1 mm		123.53	5	g °K		
B.P. °C				BP		0.0582	5	h		
760 mm		252.	2	t _e		0.0358	5	f' - - -		
100		177.42	4	30 mm		0.8425	5	g' °K		
30		143.95	4	ΔHm cal/g				h'		
10		118.31	5	ΔHv cal/g				m 300 to		0.0368
1		75.54	5	0.1 mm		82.84	5	n 600 °K		0.0013
0.1		43.16	5	30 mm		70.33	5	o		-0.050
Press. mm		1401.3		BP		58.89	5	m' 700 to		0.1296
t _e				t _e		56.05	5	n' 1000 °K		0.0011
Density g/ml 20°C		0.7888		t _e (d,e)		55.83	5	o'		-0.0636
t ₂₅		0.7852		ΔHv/T _e		19.66	5	Surface tension dynes/cm. 20°C		26.38
d ₄ 30		0.7816		d 145 to		85.52	5	y 30		25.43
a		0.8032		e 281 °C		0.1059	5	40		24.51
b		-0.0372		d' to				Parachor [P] 20°C		
Ref. Index n _D 20°C		1.4396		e' °C				30		
25		1.4375		d _c g/ml		422.	5	40		
30		1.4354		v _c ml/g				Sugd.		558.4
"C"		0.7391		t _c °C				Exp. L.l. %/wt. u.		
MR (Obs.)		64.89		P _c mm		13515.	5	Dispersion		105.
MR (Calc.)		64.850		PV/RT				Flash Point °C		
(n _D -d/2)		1.0452		0.1 mm		1.0000	5	Fire Point		
Dielectric		2.07		30 mm		1.0000	5	M Spec. Ultra V.		
A 145 to		7.23227		BP		0.9306	5	X-Ray Dif.		
B 326 °C		1927.7		t _e		0.9092	5	Infrared		
C		191.		t _c				Solubility in + Acetone		
A* 145 to		1.82367		ΔHc kcal/m		2058.24	2	Carbon tet.		
B* 291 °C		1833.2		ΔHf		-9.86	2	Benzene		
K				ΔFf		68.24	2	Ether		
t _k to				Viscosity centistokes η °C				n-Heptane		
t _x °C				B ^v to				Ethanol		
A' to				A ^v °C				Water		
B' °C				(B ^v)				Water in		
C' °C				(A ^v)						
A** to				c _p liq. °K						
B** °C				c _p vap. 300°K		0.38452	2			
Ac 326 to		8.88957		400		0.48058	2			
Bc t _c °C		3977.36		c _v vap.						
Cc t _c °C		413.26								
Crys. A° const. B°										
t _e °C		280.8								
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:										

NAME		1-Pentadecyne				STRUCTURAL FORMULA				
						$C_{13}H_{27}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	$C_{15}H_{28}$	Molecular Weight	208.374					
		Ref.			Ref.			Ref.		
F.P. °C	10.	2	dt/dP °C/mm			f	to			
F.P. 100%			0.1 mm		127.20	g	°K			
B.P. °C			BP		0.0603	h	-----			
760 mm	268.	2	t _e		0.0366	g'	to			
100	190.84	4	30 mm		0.8700	h'	°K			
30	156.26	4	ΔHm cal/g							
10	129.79	5	ΔHv cal/g			m	300 to	0.0357	4	
1	85.69	5	0.1 mm		79.33	n	600 °K	0.0013	4	
0.1	52.33	5	30 mm		67.33	o	-0.050		4	
Press. mm	1427.3	5	BP		55.69					
t _e			t _e		52.77	m'	700 to	0.1294	4	
Density g/ml 20°C	0.7928	2	t _e (d, e)		52.48	n'	1000 °K	0.0011	4	
d ₄ ²⁵	0.7893	2	ΔHv/T _e		19.22	o'	-0.036		4	
d ₄ ³⁰	0.7858	4								
a	0.8068	4	d	150 to	83.61	Surface tension dynes/cm. 20°C				
b	-0.0370	4	e	305 °C	0.1042	30 26.69 5				
Ref. Index			d'	to		40 25.76 5				
n _D 20°C	1.4419	2	e'	°C		24.85 5				
25	1.4398	2								
30	1.4377	4	d _c	g/ml		Parachor [P] 20°C				
"C"	0.7390	4	v _c	ml/g		30				
MR (Obs.)	69.53	2	t _c	°C		40				
MR (Calc.)	69.468	5	P _c	mm		Sugd. 597.4 5				
(nD-d/2)	1.0455	2	PV/RT			Exp. L.l. %/wt. u.				
Dielectric	2.08	5	0.1 mm		1.0000	Dispersion 105. 2				
A	140 to	4	30 mm		1.0000	Flash Point °C				
B	349°C	4	BP		0.9208	Fire Point				
C	1972.07	4	t _e		0.8969	M. Spec. Ultra V.				
	188.	5	t _c			X-Ray Dif. Infrared				
A*	150 to	5	ΔHc kcal/m		2205.17	Solubility in +				
B*	310°C	5	ΔHf		-14.78	Acetone				
K	1881.34	5	ΔFf		70.25	Carbon tet.				
c			Viscosity centistokes			Benzene				
t _k	to		η °C			Ether				
t _x	°C					n-Heptane				
A'	to		B ^v to			Ethanol				
B'	°C		A ^v °C			Water				
C'	°C		(B ^v)			Water in				
A'*	to		(A ^v)							
B'*	°C		c _p liq. °K							
Ac	to		c _p vap. 300°K		0.38498					
Bc	°C		400		0.48154					
Cc	t _c °C		c _v vap.							
Cryos. A°										
const. B°										
t _e °C	298.8	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:										

NAME		1-Hexadecyne			STRUCTURAL FORMULA		
					C ₁₄ H ₂₉ C≡CH		
Mole % Pur.	Ref.	Molecular Formula	C ₁₆ H ₃₀	Molecular Weight	222.400		
F.P. °C	15.	Ref.	2	dt/dP °C/mm		f to	
F.P. 100%				0.1 mm	130.28	g °K	
B.P. °C				BP	0.0583	h	
760 mm	284.	2		t _e	0.0344	f' to	
100	208.55	4		30 mm	0.8670	g' °K	
30	174.24	4		ΔHm cal/g		h'	
10	147.8	5		ΔHv cal/g		m 300 to	0.0349
1	103.3	5		0.1 mm	68.73	n 600 °K	0.0013
0.1	69.2	5		30 mm	57.04	o	-0.0650
Press. mm	1465.5	5		BP	53.99		
t _e				t _e (d, e)	53.7	m' 700 to	0.1290
Density g/ml 20°C	0.7965	2		ΔHv/T _e	21.7	n' 1000 °K	0.0011
d ₄ ^t 25	0.7930	2		d 172 to	87.30	o'	-0.0636
d ₄ ^t 30	0.7895	4		e 317 °C	0.1066	Surface tension	
a	0.8105	4		d'		dynes/cm. 20°C	26.99
b	-0.0370	4		e'		30	26.05
Ref. Index						40	25.14
n _D 25	1.4440	2		d _c g/ml		Parachor [P]	
25	1.4419	2		v _c ml/g		20°C	
30	1.4398	4		t _c °C		30	
"C"	0.7388	4		P _c mm		40	
MR (Obs.)	74.17	2		PV/RT		Sugd.	636.4
MR (Calc.)	74.086	5		0.1 mm	1.0000	Exp. L.l. %/wt.	
(nD-d/2)	1.0457	2		30 mm	1.0000	u.	
Dielectric	2.08	5		BP	0.9197	Dispersion	104.
A 172 to	7.47511	4		t _e	0.8955	Flash Point °C	
B 367°C	2154.7	4		t _c		Fire Point	
C	185.	5		ΔHc kcal/m	2352.09	M Spec.	
A* 172 to	2.12483	5		ΔHf	-19.71	Ultra V.	
B* 327°C	2064.3	5		ΔFf	72.26	X-Ray Dif.	
K				Viscosity		Infrared	
c				centistokes		Solubility in +	
t _k to				η °C		Acetone	
t _k °C				B ^v to		Carbon tet.	
A' to				A ^v °C		Benzene	
B' °C				(B ^v)		Ether	
C' °C				(A ^v)		n-Heptane	
A** to				c _p liq. °K		Ethanol	
B** °C				c _p vap. 300°K	0.38539	Water	
Ac to				c _p vap. 400	0.48237	Water in	
Bc t _c °C				c _v vap.			
Cc t _c °C							
Cryos. A°							
const. B°							
t _e °C	316.2	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:

NAME		1-Heptadecyne			STRUCTURAL FORMULA				
					C ₁₅ H ₃₁ C≡CH				
Mole % Pur.		Ref.	Molecular Formula C ₁₇ H ₃₂	Molecular Weight 236.426					
		Ref.			Ref.				Ref.
F.P. °C	22.	2	dt/dP °C/mm			f	to		
F.P. 100%			0.1 mm	133.58	5	g	°K		
B.P. °C	299.	2	BP	0.0597	5	h	-----		
760 mm	221.80	4	t _e	0.0345	5	f'	to		
100	186.68	4	t _e (d, e)	0.8879	5	g'	°K		
30	159.6	5	ΔHm cal/g			h'			
10	114.0	5	ΔHv cal/g			m	300 to	0.0342	4
1	79.1	5	0.1 mm	66.70	5	n	600 °K	0.0013	4
0.1		5	30 mm	55.18	5	o		-0.0650	4
Press. mm	1502.1	5	BP	52.06	5	m'	700 to	0.1278	4
t _e			t _e	51.5	5	n'	1000 °K	0.0011	4
Density g/ml 20°C	0.7996 [‡]	2	t _e (d, e)	21.5	5	o'		-0.0637	4
d ^t 25	0.7961	2	ΔHv/T _e			Surface tension dynes/cm. 20°C			
d ⁴ 30	0.7926	4				γ	30	27.22	5
a	0.8136	4	d 184 to	85.85	5		40	26.28	5
b	-0.0370	4	e 334 °C	0.1026	5			25.37	5
Ref. Index n _D 20°C	1.4457 [‡]	2	d' to			Parachor [P]			
25	1.4437	2	e' °C			20°C			
30	1.4417	4	d _c g/ml			30			
"C"	0.7386	4	v _c ml/g			40			
MR (Obs.)	78.802 [‡]	2	t _c °C			Sugd.	675.4		5
MR (Calc.) (nD-d/2)	78.704	5	P _c mm			Exp. L. l. %/wt. u.			
Dielectric	2.09	5	PV/RT			Dispersion	104.		2
A 184 to	7.48829	4	0.1 mm	1.0000	5	Flash Point °C			
B 384 °C	2216.2	4	30 mm	1.0000	5	Fire Point			
C	182.	5	BP	0.9176	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
A* 184 to	2.21619	5	t _e	0.8921	5	Solubility in ⁺			
B* 344 °C	2125.3	5	t _c			Acetone			
K			ΔHc kcal/m	2499.01	2	Carbon tet.			
c			ΔHf	-24.64	2	Benzene			
t _k to			ΔFf	74.27	2	Ether			
t _x °C			Viscosity centistokes			n-Heptane			
A' to			η °C			Ethanol			
B' °C						Water			
C' °C			B ^v to			Water in			
A** to °C			A ^v °C						
B** to °C			(B ^v)						
A ^c to			(A ^v)						
B ^c t _c °C			c _p liq. °K						
C ^c t _c °C			c _p vap 300°K	0.38579	2				
Cryos. A° const. B°			c _p vap 400	0.48311	2				
t _e °C	333.7	5	c _v vap.						

[‡] 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:

NAME		1-Octadecyne			STRUCTURAL FORMULA				
					$C_{16}H_{33}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	$C_{18}H_{34}$	Molecular Weight	250.452				
F.P. °C	27.								
F.P. 100%									
B.P. °C									
760 mm	313.								
100	234.16								
30	198.25								
10	170.5								
1	123.8								
0.1	88.1								
Press. mm									
t_e	1540.6								
Density g/ml 20°C									
d_4^{25}	0.8025 [‡]								
d_4^{30}	0.7990 [‡]								
d_4^{30}	0.7955 [‡]								
a	0.8165								
b	-0.0370								
Ref. Index $n_D^{20°C}$									
25	1.4474 [‡]								
30	1.4453 [‡]								
30	1.4432 [‡]								
"C"	0.7386								
MR (Obs.)	83.451 [‡]								
MR (Calc.)	83.322								
(nD-d/2)	1.0461 [‡]								
Dielectric	2.09								
A 196 to	7.50787								
B 400 °C	2281.1								
C	180.								
A* 196 to	2.19183								
B* 360 °C	2187.9								
K									
t_c									
t_x									
A' to									
B' °C									
C'									
A'* to									
B'* °C									
Ac to									
Bc °C									
Cc °C									
Cryos. A°									
consts. B°									
t_e °C	348.0								
‡ 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:									

NAME		1-Nonadecyne			STRUCTURAL FORMULA		
					C ₁₇ H ₃₅ C≡CH		
Mole % Pur.	Ref.	Molecular Formula C ₁₉ H ₃₆	Molecular Weight 264.478				
	Ref.						Ref.
F.P. °C	33.	2	dt/dP °C/mm		f	to	
F.P. 100%			0.1 mm	139.89	g	°K	
B.P. °C			BP	0.0621	h	-----	
760 mm	327.	2	t _e	0.0344	f'	to	
100	246.54	4	t _e (d, e)	0.9272	g'	°K	
30	209.87	4	ΔHm cal/g		h'		
10	181.6	4	ΔHv cal/g		m	300 to	0.0329
1	133.9	5	0.1 mm	63.00	n	600 °K	0.0013
0.1	97.4	5	30 mm	52.12	o		-0.0650
Press. mm	1580.0	5	BP	48.92	n'	700 to	0.1267
t _e			t _e	48.68	o'	1000 °K	0.0011
Density g/ml 20°C	0.8050 [‡]	2	t _e	21.2			-0.0637
d ₄ ^t 25	0.8016 [‡]	2	ΔHv/T _e		Surface tension dynes/cm. 20°C		
d ₄ ^t 30	0.7982 [‡]	4			γ	30	27.65
a	0.8186	4	d 208 to	82.47		40	26.73
b	-0.0368	4	e 366 °C	0.0928			25.83
Ref. Index			d' to		Parachor [P]		
n _D 20°C	1.4488 [‡]	2	e' °C			20°C	
25	1.4467 [‡]	2				30	
30	1.4446 [‡]	4				40	
"C"	0.7384	4				Sugd.	753.4
MR (Obs.)	88.088 [‡]	2	d _c g/ml		Exp. L.l. %/wt.		
MR (Calc.)	87.940	5	v _c ml/g		u.		
(nD-d/2)	1.0463 [‡]	2	t _c °C		Dispersion		103. [‡]
Dielectric	2.10		P _c mm		Flash Point °C		
A 208 to	7.51711	4	PV/RT		Fire Point		
B 416 °C	2336.7	4	0.1 mm	1.0000	M. Spec.		
C	177.	5	30 mm	1.0000	Ultra V.		
A* 208 to	2.21395	5	BP	0.9184	X-Ray Dif.		
B* 376 °C	2241.3	5	t _e	0.8912	Infrared		
K			t _c		Solubility in ⁺		
c			ΔHc kcal/m	2792.86	Acetone		
t _k to			ΔHf	-34.49	Carbon tet.		
t _x °C			ΔFf	78.29	Benzene		
A' to			Viscosity centistokes		Ether		
B' °C			η		n-Heptane		
C' °C					Ethanol		
A'* to			B ^v to		Water		
B'* °C			A ^v °C		Water in		
A ^c to			(B ^v)				
B ^c °C			(A ^v)				
C ^c °C			c _p liq. °K				
Cryos. A°			c _p vap. 300°K	0.38642			
const. B°			400	0.48435			
t _e °C	365.2	5	c _v vap.				
‡ 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:							

NAME	1-Eicosyne				STRUCTURAL FORMULA				
					$C_{18}H_{37}C\equiv CH$				
Mole % Pur.	Ref.	Molecular Formula	$C_{20}H_{38}$	Molecular Weight	278.504				
		Ref.			Ref.				
F.P. °C	36.	2	dt/dP °C/mm			f		to	
F.P. 100%			0.1 mm		142.65	g		°K	
B.P. °C			BP		0.0633	h		---	
760 mm	340.	2	t _e		0.0347	f'		to	
100	258.03	4	30 mm		0.9540	g'		°K	
30	220.67	4	ΔHm cal/g			h'			
10	191.8	5	ΔHv cal/g			m		300 to	0.0323
1	143.2	5	0.1 mm		60.40	n		600 °K	0.0013
0.1	106.0	5	30 mm		50.36	o			-0.0650
Press. mm	1601.5	5	BP		47.09				
Density g/ml 20°C			t _e		46.82	m'		700 to	0.1264
d ₄ ^t 25	0.8073 [‡]	2	t _e (d, e)		21.4	n'		1000 °K	0.0011
d ₄ ^t 30	0.8005 [‡]	2	ΔHv/T _e			o'			-0.0637
a	0.8209	4	d 219 to		81.68	Surface tension			
b	-0.0368	4	e 381 °C		0.0921	dynes/cm. 20°C			27.84
Ref. Index			d' °C			30			26.91
n _D 25	1.4501 [‡]	2	e' °C			40			26.01
25	1.4481 [‡]	2	d _c g/ml			Parachor [P]			
30	1.4461 [‡]	2	v _c ml/g			20°C			
"C"	0.7383	4	t _c °C			30			
MR (Obs.)	92.728 [‡]	2	P _c mm			40			
MR (Calc.)	92.558	5	PV/RT			Sugd.			792.4
(n _D -d/2)	1.0465 [‡]	2	0.1 mm		1.0000	Exp. L.l. %/wt.			
Dielectric	2.10	5	30 mm		1.0000	u.			
A 219 to	7.52336	4	BP		0.9122	Dispersion			103. [‡]
B 431 °C	2386.3	4	t _e		0.8833	Flash Point °C			
C	174.	5	t _c			Fire Point			
A* 219 to	2.24673	5	ΔHc kcal/m		2939.78	M Spec.			
B* 391 °C	2294.3	5	ΔHf		-39.41	Ultra V.			
K			ΔFf		81.00	X-Ray Dif.			
c			Viscosity			Infrared			
t _k to			centistokes			Solubility in +			
t _x °C			η			Acetone			
A' to			(B ^v) to °C			Carbon tet.			
B' °C			(A ^v)			Benzene			
C' °C			c _p liq. °K			Ether			
A** to			c _p vap. 300°K		0.38677	n-Heptane			
B** °C			c _p vap. 400		0.48488	Ethanol			
Ac to			c _v vap.			Water			
Bc t _c °C						Water in			
Cc t _c °C									
Cryos. A°									
const. B°									
t _e °C	379.8	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:									

NAME		1-Heneicosyne			STRUCTURAL FORMULA		
					C ₁₉ H ₃₉ C≡CH		
Mole % Pur.	Ref.	Molecular Formula C ₂₁ H ₄₀	Molecular Weight 292.530				
	Ref.			Ref.		Ref.	
F.P. °C	41.	2	dt/dP °C/mm		f	to	
F.P. 100%			0.1 mm	145.39	g	°K	
B.P. °C			BP	0.0643	h	-----	
760 mm	352.	2	t _e	0.0354	f'	to	
100	268.63	4			g'	°K	
30	230.60	4	ΔHm cal/g		h'		
10	201.2	5	ΔHv cal/g		m	to	
1	151.7	5	0.1 mm	58.90	n	°K	
0.1	113.8	5	30 mm	48.06	o		
Press. mm	1594.2	5	BP	44.72	m'	to	
t _e			t _e (d, e)	44.32	n'	°K	
Density g/ml 20°C	0.8094 [‡]	2	t _e	20.9	o'		
d ₄ ²⁵	0.8060 [‡]	2	ΔHv/T _e		Surface tension dynes/cm. 20°C		
d ₄ ³⁰	0.8026 [‡]	4	d 229 to	81.85	5	30	28.00
a	0.8230	4	e 394 °C	0.0960	5	40	27.07
b	-0.0368	4	d' to				26.17
Ref. Index n _D 20°C	1.4513 [‡]	2	e' °C			Parachor [P] 20°C	
25	1.4493 [‡]	2	d _c g/ml			30	
30	1.4473 [‡]	4	v _c ml/g			40	
"C"	0.7383	4	t _c °C			Sugd.	831.4
MR (Obs.)	97.33 [‡]	2	P _c mm			Exp. L. l. %/wt. u.	
MR (Calc.)	97.17 _b	2	PV/RT			Dispersion	
(nD-d/2)	1.0466 [‡]	5	0.1 mm	1.0000	5	103. [‡]	
Dielectric	2.11	5	30 mm	1.0000	5	Flash Point °C	
A 229 to	7.53602	4	BP	0.8948	5	Fire Point	
B 444 °C	2439.3	4	t _e	0.8628	5	M. Spec. Ultra V. X-Ray Dif. Infrared	
C	172.	5	t _c			Solubility in ⁺ Acetone Carbon tet. Benzene Ether n-Heptane Ethanol Water Water in	
A* 229 to	2.30870	5	ΔHc kcal/m				
B* 404 °C	2360.3	5	ΔHf				
K			ΔFf				
t _k to			Viscosity centistokes				
t _x °C			η				
A' to			B ^v to				
B' °C			A ^v °C				
C' °C			(B ^v)				
A** to			(A ^v)				
B** °C			c _p liq. °K				
Ac to			c _p vap. °K				
Bc °C			c _v vap.				
Cc °C							
Cryos. A° const. B°							
t _e °C	393.3	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:							

NAME		1-Docosyne			STRUCTURAL FORMULA		
					$C_{20}H_{41}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	$C_{22}H_{42}$	Molecular Weight	306.556		
		Ref.			Ref.		
F.P. °C	45.	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			0.1 mm	147.86	5	h	
760 mm	363.	2	BP	0.0653	5	h	
100	278.35	4	t_e	0.0354	5	f'	to
30	239.72	4	30 mm	0.9774	5	g'	°K
10	209.9	5				h'	
1	159.5	5					
0.1	121.0	5					
Press. mm			ΔH_m cal/g			m	to
t_e	1621.8	5	ΔH_v cal/g			n	°K
Density			0.1 mm			o	
g/ml 20°C			30 mm	58.13	5		
25	0.8114 [‡]	2	BP	46.74	5	m'	to
d_4^{25}	0.8080 [‡]	2	t_e	43.38	5	n'	°K
30	0.8046 [‡]	4	t_e (d, e)	43.0	5	o'	
			$\Delta H_v/T_e$	20.9	5		
a	0.8250	4	d	238 to	5	Surface tension	
b	-0.0368	4	e	407 °C	5	dynes/cm. 20°C	28.17
			e'			30	27.24
			e'			40	26.33
Ref. Index			d	g/ml		Parachor [P]	
n_D^{20}	1.4524 [‡]	2	v	ml/g		20°C	
25	1.4504 [‡]	2	c	°C		30	
30	1.4484 [‡]	4	t_c			40	
"C"	0.7381	4	P	mm		Sugd.	870.4
MR (Obs.)	101.97 [‡]	2	PV/RT			Exp. L. l. %/wt.	
MR (Calc.)	101.794	5	0.1 mm	1.0000	5	u.	
(nD-d/2)	1.0468 [‡]	2	30 mm	1.0000	5	Dispersion	103. [‡]
			BP	0.8943	5	Flash Point °C	
Dielectric	2.11	5	t_e	0.8615	5	Fire Point	
A	238 to		t_c			M Spec.	
B	457 °C	4				Ultra V.	
C	2486.4	4				X-Ray Dif.	
	170.	5				Infrared	
A*	238 to		ΔH_c kcal/m			Solubility in ⁺	
B*	417 °C	5	ΔH_f			Acetone	
K	2406.6	5	ΔF_f			Carbon tet.	
c			Viscosity			Benzene	
t_k			centistokes			Ether	
t_x			η			n-Heptane	
A'						Ethanol	
B'						Water	
C'						Water in	
A*			B ^v				
B*			A ^v				
Ac			(B ^v)				
Bc			(A ^v)				
Cc			c_p liq.	°K			
Cryos. A°			c_p vap.	°K			
const. B°			c_v vap.				
t_e °C	405.7	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:							

NAME		1-Tricosyne			STRUCTURAL FORMULA		
					C ₂₁ H ₄₃ C≡CH		
Mole % Pur.	Ref.	Molecular Formula	C ₂₃ H ₄₄	Molecular Weight	320.582		
F.P. °C	49.						
F.P. 100%							
B.P. °C							
760 mm	374.			150.33	5		
100	288.06			0.0663	5		
30	248.83			0.0355	5		
10	218.5			0.9928	5		
1	167.3						
0.1	128.1						
Press. mm	1648.9						
t _e							
Density g/ml 20°C	0.8131 [‡]						
d ₄ ^t 25	0.8100 [‡]						
d ₄ ^t 30	0.8069 [‡]						
a	0.8255			78.84	5		
b	-0.0362			0.0890	5		
Ref. Index n _D 20°C	1.4534 [‡]						
25	1.4514 [‡]						
30	1.4494 [‡]						
"C"	0.7381						
MR (Obs.)	106.62 [‡]						
MR (Calc.) (nD-d/2)	106.412						
Dielectric	2.11						
A 248 to	7.55521						
B 469°C	2533.5						
C							
A* 248 to	2.35591						
B* 429°C	2453.2						
K							
c							
t _k to							
t _x °C							
A' to							
B' °C							
C' °C							
A** to							
B** °C							
Ac to							
Bc t _c °C							
Cc							
Cryos. A°							
const. B°							
t _e °C	418.1						
dt/dP °C/mm							
0.1 mm							
BP							
t _e							
30 mm							
ΔHm cal/g							
ΔHv cal/g							
0.1 mm							
30 mm							
BP							
t _e							
t _e (d, e)							
ΔHv/T _e							
d 248 to							
e 419 °C							
d' to							
e' °C							
d _c g/ml							
v _c ml/g							
t _c °C							
P _c mm							
PV/RT							
0.1 mm							
30 mm							
BP							
t _e							
t _c							
ΔHc kcal/m							
ΔHf							
ΔFf							
Viscosity centistokes							
η °C							
B ^v to							
A ^v °C							
(B ^v)							
(A ^v)							
c _p liq. °K							
c _p vap. °K							
c _v vap.							
‡ 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:							

NAME		1-Tetracosyne			STRUCTURAL FORMULA		
					C ₂₂ H ₄₅ C≡CH		
Mole % Pur.	Ref.	Molecular Formula	C ₂₄ H ₄₆	Molecular Weight	334.608		
F.P. °C	52.	2					
F.P. 100%							
B.P. °C							
760 mm	385.	2		152.80	5	f	to °K
100	297.78	4		0.0672	5	g	to °K
30	257.94	4		0.0355	5	h	to °K
10	227.1	5		1.0082	5	h'	to °K
1	175.2	5					
0.1	135.3	5					
Press. mm	1677.	5					
t _e							
Density g/ml 20°C							
d ₄ ^t 25	0.8148 [‡]	2					
d ₄ ^t 30	0.8114 [‡]	2					
	0.8080 [‡]	4					
a	0.8284	4					
b	-0.0368	4					
Ref. Index n _D 20°C							
25	1.4544 [‡]	2					
30	1.4523 [‡]	2					
	1.4502 [‡]	4					
"C"	0.7381	4					
MR (Obs.)	111.26 [‡]	2					
MR (Calc.) (nD-d/2)	111.030	5					
	1.0470 [‡]	2					
Dielectric	2.11	5					
A 257 to	7.56438	4					
B 482 °C	2580.7	4					
C	166.	5					
A* 257 to	2.37736	5					
B* 442 °C	2499.5	5					
K							
c							
t _x to							
t _x °C							
A' to							
B' °C							
C' °C							
A'* to							
B'* °C							
Ac to							
Bc °C							
Cc °C							
Cryos. A°							
const. B°							
t _e °C	430.4	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:							
PURIFICATION:							
LITERATURE REFERENCES:							

NAME		1-Pentacosyne		STRUCTURAL FORMULA			
				C ₂₃ H ₄₇ C≡CH			
Mole % Pur.	Ref.	Molecular Formula C ₂₅ H ₄₈	Molecular Weight 348.634				
				Ref.			Ref.
F. P. °C	55.	2	dt/dP °C/mm		f	to	
F. P. 100%			0.1 mm	155.00	g	°K	
B. P. °C			BP	0.0681	h	---	
760 mm	395.	2	t _e	0.0355	f'	to	
100	306.62	4	t _e (d, e)	1.0221	g'	°K	
30	266.24	4	ΔHm cal/g		h'		
10	235.0	5	ΔHv cal/g		m	to	
1	182.3	5	0.1 mm	54.06	n	°K	
0.1	141.9	5	30 mm	43.32	o		
Press. mm	1701.6	5	BP	39.89	m'	to	
t _e			t _e	39.56	n'	°K	
Density g/ml 20°C	0.8163 [‡]	2	t _e	20.8	o'		
d ₄ ²⁵	0.8129 [‡]	2	ΔHv/T _e		Surface tension dynes/cm. 20°C		
d ₄ ³⁰	0.8095 [‡]	4			γ	28.57	5
a	0.8299	4	d 265 to	76.26		30	27.63
b	-0.0368	4	e 443 °C	0.0834		40	26.71
Ref. Index n _D 20°C	1.4552 [‡]	2	d' to		Parachor [P] 20°C		
25	1.4532 [‡]	2	e' to				
30	1.4512 [‡]	4	d _v g/ml				
"C"	0.7380	4	v _c ml/g				
MR (Obs.)	115.89 [‡]	2	t _c °C				
MR (Calc.)	115.648	5	P _c mm				
(nD-d/2)	1.0471 [‡]	2	PV/RT				
Dielectric	2.12	5	0.1 mm	1.0000			
A 265 to	7.57091	4	30 mm	1.0000			
B 493 °C	2621.8	4	BP	0.8927			
C	164.	5	t _e	0.8575			
A* 265 to	2.39684	5	t _c				
B* 453 °C	2540.2	5	ΔHc kcal/m				
K			ΔHf				
t _k to			ΔFf				
t _x °C			Viscosity centistokes				
A' to			η °C				
B' °C			B ^v to				
C' °C			A ^v °C				
A'* to °C			(B ^v)				
B'* to °C			(A ^v)				
A _c to °C			c _p liq. °K				
B _c to °C			c _p vap. °K				
C _c to °C			c _v vap.				
Cryos. A° const. B°							
t _e °C	441.7	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:							

NAME		1-Hexacosyne			STRUCTURAL FORMULA		
					C ₂₄ H ₄₉ C≡CH		
Mole % Pur.	Ref.	Molecular Formula	C ₂₆ H ₅₀	Molecular Weight	362.660		
F. P. °C	57.	2	dt/dP			f	to
F. P. 100%			°C/mm			g	°K
B. P. °C			0.1 mm	157.19	5	h	---
760 mm	405.	2	BP	0.0690	5	f'	---
100	315.45	4	t _e	0.0356	5	g'	to
30	274.53	4	30 mm	1.0359	5	h'	°K
10	242.9	5	ΔHm cal/g			m	to
1	189.4	5	ΔHv cal/g			n	°K
0.1	148.5	5	0.1 mm			o	
Press. mm	1727.	5	30 mm	52.86	5	m'	to
t _e			BP	42.32	5	n'	°K
Density			t _e	38.87	5	o'	
g/ml 20°C	0.8177 [‡]	2	t _e (d, e)	38.55	5		
d ₄ ²⁵	0.8143 [‡]	2	ΔHv/T _e	20.8	5		
d ₄ ³⁰	0.8109 [‡]	4	d 274 to	75.04	5	Surface tension	
a	0.8313	4	e 454 °C	0.0808	5	dynes/cm. 20°C	28.68
b	-0.0368	4	d'			30	27.74
Ref. Index			e'			40	26.82
n _D 20°C	1.4560 [‡]	2	d c g/ml			Parachor [P]	
25	1.4540 [‡]	2	v c ml/g			20°C	
30	1.4520 [‡]	4	t c °C			30	
"C"	0.7379	4	P c mm			40	
MR (Obs.)	120.53 [‡]	2	PV/RT			Sugd.	1026.4
MR (Calc.)	120.266	5	0.1 mm	1.0000	5	Exp. L. l. %/wt.	
(nD-d/2)	1.0472 [‡]	2	30 mm	1.0000	5	u.	
Dielectric	2.12	5	BP	0.8924	5	Dispersion	102. [‡]
A 274 to	7.57727	4	t _e	0.8565	5	Flash Point °C	
B 504°C	2662.9	4	t _c			Fire Point	
C	162.	5	ΔHc kcal/m			M Spec.	
A* 274 to	2.41490	5	ΔHf			Ultra V.	
B* 464°C	2580.6	5	ΔFf			X-Ray Dif.	
K			Viscosity			Infrared	
c			centistokes			Solubility in +	
t _k			γ °C			Acetone	
t _x						Carbon tet.	
A'			B ^v			Benzene	
B'			A ^v			Ether	
C'			(B ^v)			n-Heptane	
A'*	to		(A ^v)			Ethanol	
B'*	°C		c _p liq. °K			Water	
Ac	to		c _p vap. °K			Water in	
Bc	to		c _v vap.				
Cc	t _c °C						
Cryos. A°							
const. B°							
t _e °C	452.9	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:							

NAME		1-Heptacosyne			STRUCTURAL FORMULA		
					C ₂₅ H ₅₁ C≡CH		
Mole % Pur.	Ref.	Molecular Formula	C ₂₇ H ₅₂	Molecular Weight	376.686		
	Ref.						Ref.
F.P. °C	60.			dt/dP °C/mm		f	to
F.P. 100%				0.1 mm	159.39	g	°K
B.P. °C				BP	0.0699	h	
760 mm	415.			t _e	0.0356	f'	to
100	324.29			30 mm	1.0498	g'	°K
30	282.82			ΔHm cal/g		h'	
10	250.7			ΔHv cal/g		m	to
1	196.6			0.1 mm	51.75	n	°K
0.1	155.0			30 mm	41.38	o	
Press. mm				BP	41.38		
t _e	1751.8			t _e	37.91	m'	to
Density				t _e (d, e)	37.64	n'	°K
g/ml 20°C	0.8190 [‡]			ΔHv/T _e	20.6	o'	
d ₄ ^t 25	0.8156 [‡]			d 282 to	73.94	Surface tension	
d ₄ ^t 30	0.8122 [‡]			e 465 °C	0.0784	dynes/cm. 20°C	
a	0.8326			d' to		30	28.79
b	-0.0368			e' to		40	27.85
Ref. Index				d _c g/ml		5	
n _D 20°C	1.4568 [‡]			v _c ml/g		5	
25	1.4548 [‡]			t _c °C		5	
30	1.4528 [‡]			P _c mm		5	
"C"	0.7380			PV/RT		5	
MR (Obs.)	125.17 [‡]			0.1 mm	1.0000	5	
MR (Calc.)	124.884			30 mm	1.0000	5	
(nD-d/z)	1.0473 [‡]			BP	0.8919	5	
Dielectric	2.12			t _e	0.8553	5	
A 282 to	7.58347			t _c		5	
B 515 °C	2704.0			ΔHc kcal/m		5	
C	160.			ΔHf		5	
A* 282 to	2.43266			ΔFf		5	
B* 475 °C	2621.3			Viscosity		5	
K				centistokes		5	
t _k to				η		5	
t _x °C						5	
A' to				B ^v to		5	
B' °C				A ^v °C		5	
C' °C				(B ^v)		5	
A'* to				(A ^v)		5	
B'* °C				c _p liq. °K		5	
Ac to				c _p vap. °K		5	
Bc t _c °C				c _v vap.		5	
Cc t _c °C						5	
Cryos. A°						5	
consta. B°						5	
t _e °C	464.2					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:							

NAME		1-Octacosyne			STRUCTURAL FORMULA		
					$C_{26}H_{53}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	$C_{28}H_{54}$	Molecular Weight	390,712		
		Ref.					Ref.
F.P. °C	62.	2	dt/dP		f		to
F.P. 100%			°C/mm		g		°K
B.P. °C			0.1 mm	161.32	h		
760 mm	424.	2	BP	0.0707	f'	+	---
100	332.25	4	t _e	0.0356	g'		to
30	290.3	4	30 mm	1.0621	h'		°K
10	257.8	5	ΔHm cal/g		m		to
1	203.0	5	ΔHv cal/g		n		°K
0.1	161.0	5	0.1 mm		o		
Press. mm			30 mm	50.65	m'		to
t _e	1773.5	5	BP	40.44	n'		°K
Density			t _e	36.94	o'		
g/ml 20°C	0.8202 [‡]	2	t _e (d, e)	36.64	Surface tension		
d ₄ ^t 25	0.8168 [‡]	2	ΔHv/T _e	20.7	dynes/cm. 20°C		
d ₄ ^t 30	0.8134 [‡]	4	d 290 to	72.82	30		
a	0.8338	4	e 476 to	0.0764	40		
b	-0.0368	4	e' to		28.89		
Ref. Index			e' °C		27.94		
n _D 25	1.4575 [‡]	2	d _c g/ml		27.02		
25	1.4555 [‡]	2	v _c ml/g		5		
30	1.4535 [‡]	4	t _c °C		5		
"C"	0.7380	4	P _c mm		5		
MR (Obs.)	129.82 [‡]	2	PV/RT		Parachor [P]		
MR (Calc.)	129.502	5	0.1 mm	1.0000	20°C		
(n _D -d/2)	1.0474 [‡]	2	30 mm	1.0000	30		
Dielectric	2.12	5	BP	0.8912	40		
A 290 to	7.58724	4	t _e	0.8539	Sugd. 1104.4		
B 526 °C	2739.1	4	t _c		Exp. L.l. %/wt.		
C	158.	5	ΔHc kcal/m		u.		
A* 290 to	2.44856	5	ΔHf		Dispersion		
B* 486 °C	2656.3	5	ΔFf		102. [‡]		
K			Viscosity		Flash Point °C		
c			centistokes		Fire Point		
t _k to			η		M Spec.		
t _x °C					Ultra V.		
A' to					X-Ray Dif.		
B' °C					Infrared		
C' °C					Solubility in +		
A** to			B ^v to		Acetone		
B** °C			A ^v °C		Carbon tet.		
Ac to			(B ^v)		Benzene		
Bc t _c °C			(A ^v)		Ether		
Cc °C			c _p liq. °K		n-Heptane		
Cryos. A°			c _p vap. °K		Ethanol		
const. B°			c _v vap.		Water		
t _e °C	474.3	5			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:							

NAME		1-Nonacosyne			STRUCTURAL FORMULA			
					C ₂₇ H ₅₅ CH=CH			
Mole % Pur.	Ref.	Molecular Formula	C ₂₉ H ₅₆	Molecular Weight	404.738			
		Ref.			Ref.			
F. P. °C	65.	2	dt/dP °C/mm			f	to	
F. P. 100%			0.1 mm	163.23	5	g	°K	
B. P. °C			BP	0.0714	5	h	---	
760 mm	432.	2	t _e	0.0357	5	f'	to	
100	339.31	4				g'	°K	
30	296.90	4	ΔHm cal/g			h'		
10	264.1	5				m	to	
1	208.7	5	ΔHv cal/g			n	°K	
0.1	166.1	5	0.1 mm			o		
Press. mm	1793.8	5	30 mm	49.51	5			
t _e			BP	39.52	5	m'	to	
Density			t _e	36.05	5	n'	°K	
g/ml 20°C	0.8213 [#]	2	t _e (d, e)	35.78	5	o'		
t	0.8180 [#]	2	ΔHv/T _e	20.5	5	Surface tension dynes/cm. 20°C		
d ₄	0.8147 [#]	4				γ	30	28.98
a	0.8345	4	d 297 to °C	71.45	5		40	28.06
b	-0.0366	4	e 485 to °C	0.0739	5			27.16
Ref. Index			e'			Parachor [P]		
n _D 20°C	1.4581 [#]	2	d _c g/ml			20°C		
25	1.4561 [#]	2	v _c ml/g			30		
30	1.4541 [#]	4	t _c °C			40		
"C"	0.7379	4	P _c mm			Sugd. 1143.4		
MR (Obs.)	134.45 [#]	2	PV/RT			Exp. L. l. %/wt.		
MR (Calc.)	134.120	5	0.1 mm	1.0000	5	u.		
(nD-d/2)	1.0475 [#]	2	30 mm	1.0000	5	Dispersion		
Dielectric	2.13	5	BP	0.8910	5	102. [#]		
A 297 to °C	7.59699	4	t _e	0.8531	5	Flash Point °C		
B 535 °C	2777.8	4	t _c			Fire Point		
C	157.	5	ΔHc kcal/m			M. Spec.		
A* 297 to °C	2.46916	5	ΔHf			Ultra V.		
B* 495 °C	2694.2	5	ΔFf			X-Ray Dif.		
K			Viscosity centistokes			Infrared		
t _k to °C			η			Solubility in ⁺		
t _w to °C						Acetone		
A' to °C			B ^v to °C			Carbon tet.		
B' to °C			A ^v to °C			Benzene		
C' to °C			(B ^v)			Ether		
A** to °C			(A ^v)			n-Heptane		
B** to °C			c _p liq. °K			Ethanol		
C** to °C			c _p vap. °K			Water		
A _c to °C			c _v vap.			Water in		
B _c to °C								
C _c to °C								
Cryos. A°								
const. B°								
t _e °C	483.3							
# 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:								

NAME		1-Triacontyne		STRUCTURAL FORMULA	
				C ₂₈ H ₅₇ C≡CH	
Mole % Pur.	Ref.	Molecular Formula	C ₃₀ H ₅₈	Molecular Weight	418.764
F.P. °C	67.	Ref.	2	dt/dP °C/mm	
F.P. 100%				0.1 mm	165.2
B.P. °C				BP	0.0722
760 mm	441.		2	t _e	0.0357
100	347.27		4	30 mm	1.086
30	304.38		4		
10	271.2		5	ΔHm cal/g	
1	215.1		5		
0.1	172.1		5	ΔHv cal/g	
Press. mm				0.1 mm	48.55
t _e	1816.2		5	30 mm	38.71
Density g/ml 20°C				BP	35.19
d ₄ ^t 25	0.8224 [‡]		2	t _e (d, e)	34.99
d ₄ ^t 30	0.8190 [‡]		2	ΔHv/T _e	20.6
	0.8156 [‡]		4		
a	0.8360		4	d 304 to	70.49
b	-0.0368		4	e 495 °C	0.0721
				d' to	
Ref. Index n _D 20°C	1.4587 [‡]		2	e' °C	
25	1.4567 [‡]		2		
30	1.4547 [‡]		4	d _c g/ml	
"C"	0.7378		4	v _c ml/g	
MR (Obs.)	139.08 [‡]		2	t _c °C	
MR (Calc.)	138.738		5	P _c mm	
(nD-d/2)	1.0475 [‡]		2	PV/RT	
Dielectric	2.13		5	0.1 mm	1.0000
A 304 to	7.60053		4	30 mm	1.0000
3 545 °C	2813.0		4	BP	0.8906
C	155.		5	t _e	0.8521
A* 304 to	2.48323		5	t _c	
B* 505 °C	2729.0		5	ΔHc kcal/m	
K				ΔHf	
				ΔFf	
c				Viscosity centistokes	
t _k to				η °C	
t _x °C					
A' to				B ^v to	
B' °C				A ^v °C	
C' °C				(B ^v)	
A* to				(A ^v)	
B* °C				c _p liq. °K	
Ac to				c _p vap. °K	
Bc t _c °C				c _v vap.	
Cc					
Cryos. A°					
const. B°					
t ₀ °C	493.4		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:					

NAME		1-Hentriacontyne			STRUCTURAL FORMULA		
					C ₂₉ H ₅₉ C≡CH		
Mole % Pur.	Ref.	Molecular Formula C ₃₁ H ₆₀	Molecular Weight 432.790				
	Ref.			Ref.		Ref.	
F.P. °C	69.	2	dt/dP °C/mm		f	to	
F.P. 100%			0.1 mm	167.06	g	°K	
B.P. °C			BP	0.0729	h	-----	
760 mm	449.	2	t _e	0.0357	f'	to	
100	354.32	4	t _e (d, e)	1.0976	g'	°K	
30	310.98	4	ΔHm cal/g		h'		
10	277.4	5	ΔHv cal/g		m	to	
1	220.7	5	0.1 mm	47.55	n	°K	
0.1	177.2	5	30 mm	37.90	o		
Press. mm	1836.8	5	BP	34.39			
t _e			t _e	34.20	m'	to	
Density g/ml 20°C	0.8234 [‡]	2	t _e	20.6	n'	°K	
d ₄ ²⁵	0.8206 [‡]	2	ΔHv/T _e		o'		
d ₄ ³⁰	0.8166 [‡]	4	d 311 to	69.30	Surface tension dynes/cm. 20°C		
a	0.8370	4	e 504 °C	0.0699	γ	29.16	
b	-0.0368	4	d' to			28.21	
Ref. Index n _D 20°C	1.4593 [‡]	2	e' °C			27.28	
25	1.4573 [‡]	2	d _v g/ml		Parachor [P] 20°C		
30	1.4553 [‡]	4	v _c ml/g			30	
"C"	0.7378	4	t _c °C			40	
MR (Obs.)	143.71 [‡]	2	P _c mm			Sugd. 1221.4	
MR (Calc.) (nD-d/2)	143.356 [‡]	5	PV/RT		Exp. L. l. %/wt. u.		
Dielectric	2.13	5	0.1 mm	1.0000		Dispersion 101. [‡]	
A 311 to	7.60994	4	30 mm	1.0000	Flash Point °C		
B 554°C	2851.7	4	BP	0.8905	Fire Point		
C	154.	5	t _e	0.8515	M. Spec. Ultra V. X-Ray Dif. Infrared		
A* 311 to	2.50239	5	t _e		Solubility in ⁺		
B* 514°C	2766.9	5	ΔHc kcal/m		Acetone		
K			ΔHf		Carbon tet.		
c			ΔFf		Benzene		
t _k to			Viscosity centistokes		Ether		
t _x °C			η °C		n-Heptane		
A' to			B ^v to		Ethanol		
B' °C			A ^v °C		Water		
C' °C			(B ^v)		Water in		
A* to °C			(A ^v)				
B* to °C			c _p liq. °K				
Ac to °C			c _p vap. °K				
Bc t _c °C			c _v vap.				
Cc °C							
Cryos. A° const. B°							
t _e °C	502.4	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:							

NAME		1-Dotriacontyne		STRUCTURAL FORMULA	
				C ₃₀ H ₆₁ C≡CH	
Mole % Pur.	Ref.	Molecular Formula C ₃₂ H ₆₂	Molecular Weight 446.816		
F. P. °C	71.	2			
F. P. 100%					
B. P. °C					
760 mm	457.	2	dt/dP °C/mm	168.72	5
100	361.40	4	0.1 mm BP	0.0736	5
30	317.64	4	t _e	0.0357	5
10	283.7	5	30 mm	1.1084	5
1	226.5	5			
0.1	182.5	5			
Press. mm t _e	1858.9	5	ΔHm cal/g		
Density g/ml 20°C			ΔHv cal/g		
d ₄ ^t 25	0.8243 [‡]	2	0.1 mm	46.66	5
d ₄ ^t 30	0.8210 [‡]	2	30 mm BP	37.18	5
	0.8177 [‡]	4	t _e	33.67	5
			t _e (d, e)	33.47	5
			ΔHv/T _e	20.6	5
a	0.8375	4	d 318 to	68.25	5
b	-0.0366	4	e 513 °C	0.0680	5
Ref. Index n _D 20°C			d'		
25	1.4598 [‡]	2	e'		
30	1.4578 [‡]	2	d _c g/ml		
	1.4558 [‡]	4	v _c ml/g		
"C"	0.7378	4	t _c °C		
MR (Obs.)	148.37 [‡]	2	P _c mm		
MR (Calc.) (nD-d/2)	147.974	5	PV/RT		
	1.0477 [‡]	2	0.1 mm	1.0000	5
			30 mm BP	1.0000	5
Dielectric	2.13	5	t _e	0.8910	5
A 318 to	7.61111	4	t _c	0.8515	5
B 563 °C	2880.8	4			
C	152.	5	ΔHc kcal/m		
A* 318 to	2.51198	5	ΔHf		
B* 523 °C	2794.9	5	ΔFf		
K			Viscosity centistokes		
c			η °C		
t _x					
t _x					
A'			B ^v		
B'			A ^v		
C'			(B ^v)		
A'* to			(A ^v)		
B'* °C			c _p liq. °K		
Ac			c _p vap. °K		
Bc			c _v vap.		
Cc					
Cryos. A° const. B°					
t _e °C	511.4	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:					

NAME	1-Tritriacontyne				STRUCTURAL FORMULA			
					$C_{31}H_{63}C\equiv CH$			
Mole % Pur.	Ref.	Molecular Formula $C_{33}H_{64}$	Molecular Weight 460.842					
	Ref.			Ref.			Ref.	
F. P. °C	73.	2	dt/dP °C/mm		f	to		
F. P. 100%			0.1 mm	170.36	g	°K		
B. P. °C			BP	0.0742	h	---		
760 mm	464.	2	t _e	0.0358	g'	to		
100	367.58	4	t _e (d, e)	1.1184	g'	°K		
30	323.42	4	ΔHm cal/g		h'			
10	289.2	5	ΔHv cal/g		m	to		
1	231.4	5	0.1 mm	45.71	n	°K		
0.1	187.1	5	30 mm	36.35	o			
Press. mm	1873.0	5	BP	32.82	m'	to		
t _e			t _e	32.66	n'	°K		
Density g/ml 20°C	0.8252 [#]	2	t _c	20.5	o'			
d ₄ ²⁵	0.8218 [#]	2	ΔHv/T _e		Surface tension dynes/cm. 20°C			
d ₄ ³⁰	0.8184 [#]	4			γ	30	29.31	
a	0.8388	4	d 324 to	67.25		40	28.35	
b	-0.0368	4	e 521 °C	0.0666			27.42	
Ref. Index n _D 20°C	1.4603 [#]	2	d' to		Parachor [P]			
25	1.4583 [#]	2	e' to			20°C		
30	1.4563 [#]	4	d _c g/ml			30		
"C"	0.7377	4	v _c ml/g			40		
MR (Obs.)	153.01 [#]	2	t _c °C			Sugd.	1299.4	
MR (Calc.)	152.592	5	P _c mm		Exp. L. l. %/wt. u.			
(n _D -d/2)	1.0477 [#]	2	PV/RT			Dispersion	101. [#]	
Dielectric	2.13	5	0.1 mm	1.0000		Flash Point °C		
A 324 to	7.61812	4	30 mm	1.0000		Fire Point		
B 571 °C	2913.4	4	BP	0.8895		M. Spec. Ultra V. X-Ray Dif. Infrared		
C	151.	5	t _e	0.8494		Solubility in ⁺		
A* 324 to	2.53156	5	t _c			Acetone		
B* 531 °C	2828.3	5	ΔHc kcal/m			Carbon tet.		
K			ΔHf			Benzene		
t _k to			ΔFf			Ether		
t _x °C			Viscosity centistokes			n-Heptane		
A' to			η °C			Ethanol		
B' °C			B ^v to			Water		
C' °C			A ^v °C			Water in		
A'* to °C			(B ^v)					
B'* to °C			(A ^v)					
Cc to °C			c _p liq. °K					
Bc to °C			c _p vap. °K					
Cc to °C			c _v vap.					
Cryos. A° const. B°								
t _e °C	519.3	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:								

NAME		1-Tetratriacontyne		STRUCTURAL FORMULA	
Mole % Pur.		Ref.	Molecular Formula C ₃₄ H ₆₆	Molecular Weight 474.868	C ₃₂ H ₆₅ CrCH
F.P. °C	74.	2	dt/dP °C/mm		f to
F.P. 100%			0.1 mm	172.02	g °K
B.P. °C	472.	2	BP	0.0749	h + - - -
760 mm	374.66	4	t _e	0.0358	f' to
100	330.08	4	t _e (d, e)	1.1292	g' °K
30	295.6	5	ΔHm cal/g		h'
10	237.2	5	ΔHv cal/g		m to
1	192.4	5	0.1 mm	44.93	n °K
0.1			30 mm	35.70	o
Press. mm	1893.8	5	BP	32.17	m' to
t _e			t _e	32.02	n' °K
Density g/ml 20°C	0.8260 [‡]	2	t _e (d, e)	18.81	o'
g/ml 25	0.8227 [‡]	2	ΔHv/T _e		Surface tension
d ₄ ^t 30	0.8194 [‡]	4	d 330 to °C	66.38	dynes/cm. 20°C
a	0.8392	4	e 530 to °C	0.0650	30
b	-0.0366	4	d' to °C		40
Ref. Index n _D 20°C	1.4608 [‡]	2	e' to °C		29.37
25	1.4588 [‡]	2	d _c g/ml		28.45
30	1.4568 [‡]	4	v _c ml/g		27.54
"C"	0.7377	4	t _c °C		Parachor [P]
MR (Obs.)	157.66 [‡]	2	P _c mm		20°C
MR (Calc.) (nD-d/2)	157.210	5	PV/RT		30
Dielectric	2.13	5	0.1 mm	1.0000	40
A 330 to	7.61919	4	30 mm	1.0000	Sugd., 1338.4
B 580°C	2942.5	4	BP	0.8895	Exp. L. l. %/wt.
C	149.	5	t _e	0.8489	u.
A* 330 to	2.54137	5	t _c		Dispersion
B* 540°C	2856.8	5	ΔHc kcal/m		101. [‡]
K			ΔHf		Flash Point °C
c			ΔFf		Fire Point
t _k to			Viscosity centistokes		M Spec.
t _x °C			η °C		Ultra V.
A' to					X-Ray Dif.
B' °C					Infrared
C' °C					Solubility in +
A'* to			B ^v to		Acetone
B'* °C			A ^v °C		Carbon tet.
Ac to			(B ^v)		Benzene
Bc t _c °C			(A ^v)		Ether
Cc °C			c _p liq. °K		n-Heptane
Cryos. A°			c _p vap. °K		Ethanol
consts. B°			c _v vap.		Water
t _e °C	528.3	5			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:					

NAME		1-Pentatriacontyne			STRUCTURAL FORMULA		
					C ₃₃ H ₆₇ C≡CH		
Mole % Pur.	Ref.	Molecular Formula C ₃₅ H ₆₈	Molecular Weight 488.894				
	Ref.			Ref.			Ref.
F.P. °C	76.	2	dt/dP °C/mm		f	to	
F.P. 100%			0.1 mm	177.23	g	°K	
B.P. °C			BP	0.0755	h	---	
760 mm	479.	2	t _e	0.0358	f'	to	
100	380.84	4	30 mm	1.1392	g'	°K	
30	335.87	4			h'		
10	301.0	5	ΔHm cal/g		m	to	
1	242.1	5	0.1 mm		n	°K	
0.1	196.9	5	30 mm		o		
Press. mm	1911.2	5	BP	44.09	5		
t _e			BP	35.02	5		
Density g/ml 20°C			t _e	31.48	5		
t ₂₅	0.8268 [‡]	2	t _e (d, e)	31.34	5	m'	to
t ₃₀	0.8235 [‡]	2	ΔHv/T _e	18.77	5	n'	°K
d ₄	0.8202 [‡]	4			5	o'	
a	0.8400	4	d 336 to	65.37	5	Surface tension dynes/cm. 20°C	
b	-0.0366	4	e 537 °C	0.0634	5	γ	29.44
Ref. Index n _D 20°C			d' to			30	28.51
25	1.4612 [‡]	2	e' °C			40	27.61
30	1.4593 [‡]	2	d _c g/ml			Parachor [P]	
	1.4574 [‡]	4	v _c ml/g			20°C	
"C"	0.7376	4	t _c °C			30	
MR (Obs.)	162.28 [‡]	2	P _c mm			40	
MR (Calc.)	161.828	5	PV/RT			Sugd.	1377.4
(nD-d/2)	1.0479 [‡]	2	0.1 mm	1.0000	5	Exp. L.l. %/wt. u.	
Dielectric	2.13	5	30 mm	1.0000	5	Dispersion	101. [‡]
A 336 to	7.62600	4	BP	0.8892	5	Flash Point °C	
B 587 °C	2975.2	4	t _e	0.8481	5	Fire Point	
C	148.	5				M. Spec. Ultra V. X-Ray Dif. Infrared	
A* 336 to	2.55750	5	ΔHc kcal/m			Solubility in ⁺	
B* 547 °C	2889.0	5	ΔHf			Acetone	
K			ΔFf			Carbon tet.	
c			Viscosity centistokes			Benzene	
t _k to			η °C			Ether	
t _x °C						n-Heptane	
A' to			B ^v to			Ethanol	
B' °C			A ^v °C			Water	
C' °C			(B ^v)			Water in	
A* to			(A ^v)				
B* °C			c _p liq. °K				
Ac to			c _p vap. °K				
Bc t _c °C			c _v vap.				
Cc °C							
Cryos. A° const. B°							
t _e °C	536.2	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:

NAME		1-Hexatriacontyne			STRUCTURAL FORMULA		
					$C_{34}H_{69}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	$C_{36}H_{70}$	Molecular Weight			
F. P. °C	77.	2					
F. P. 100%							
B. P. °C							
760 mm	486.	2		175.29	5	f	to
100	387.53	4		0.07565	5	g	°K
30	342.34	4		0.03519	5	h	
10	307.2	5		1.1453	5	f'	to
1	247.4	5				g'	°K
Pressure mm 200.97°C	0.1000	5				h'	
t_e	1954.3	5				m	to
Density g/ml 20°C	0.8275 [‡]	2				n	°K
d_4^{25}	0.8242 [‡]	2				o	
d_4^{30}	0.8209 [‡]	4				o'	to
a	0.8407	4				m'	°K
b	-0.0366	4				n'	
Ref. Index n_D^{20}	1.4617 [‡]	2				o'	
25	1.4597 [‡]	2				Surface tension dynes/cm. 20°C	
30	1.4577 [‡]	4				30	29.50
"C"	0.7378	4				40	28.57
MR (Obs.)	166.92 [‡]	2					27.66
MR (Calc.)	166.446	5				Parachor [P]	
(nD-d/2)	1.0479 [‡]	2				20°C	
Dielectric	2.14	5				30	
A 342 to	7.66232	4				40	
B 595 °C	3026.69	4				Sugd.	1416.4
C	147.	5				Exp. L. l. %/wt. u.	
A* 342 to	2.58413	5				Dispersion	
B* 555 °C	2931.19	5				101. †	
K						Flash Point °C	
c						Fire Point	
t_x — to						M Spec.	
t_x — °C						Ultra V.	
A' — to						X-Ray Dif.	
B' — °C						Infrared	
C' — °C						Solubility in +	
A** to						Acetone	
B** °C						Carbon tet.	
Ac — to						Benzene	
Bc — °C						Ether	
Cc — °C						n-Heptane	
Cryos. A°						Ethanol	
consta. B°						Water	
t_e °C	545.40	5				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:							

NAME	1-Heptatriacontyne				STRUCTURAL FORMULA				
					C ₃₅ H ₇₁ C≡CH				
Mole % Pur.	Ref.	Molecular Formula C ₃₇ H ₇₂	Molecular Weight 516.946						
		Ref.			Ref.				Ref.
F. P. °C	79.	2	dt/dP °C/mm			f	to		
F. P. 100%			0.1 mm	176.68	5	g	°K		
B. P. °C			BP	0.0767	5	h	---		
760 mm	493.	2	t _e	0.0359	5	f'	to		
100	393.21	4	t _e (d, e)	30.13		g'	°K		
30	347.49	4	ΔHm cal/g			h'			
10	312.1	5	ΔHv cal/g			m	to		
1	252.2	5	0.1 mm	42.58	5	n	°K		
0.1	206.2	5	30 mm	33.76	5	o			
Press. mm t _e	1946.4	5	BP	33.76	5	m'	to		
Density g/ml 20°C	0.8282 [‡]	2	t _e	30.21	5	n'	°K		
d _t 25	0.8249 [‡]	2	t _e	30.13	5	o'			
d ₄ 30	0.8216 [‡]	4	ΔHv/T _e	18.90	5	Surface tension dynes/cm. 20°C			
a	0.8414	4	d 348 to	63.64	5	γ	30	29.56	5
b	-0.0366	4	e 553 °C	0.0606	5		40	28.63	5
Ref. Index n _D 20°C	1.4621 [‡]	2	d' to			Parachor [P] 20°C			
25	1.4601 [‡]	2	e' °C				30	101. [‡]	2
30	1.4581 [‡]	4					40		
"C"	0.7377	4	d g/ml			Sugd.	1455.4		5
MR (Obs.)	171.56 [‡]	2	v _c ml/g			Exp. L. l. %/wt. u.			
MR (Calc.) (nD-d/2)	171.034	5	t _c °C	1.0000	5	Dispersion			
	1.0480 [‡]	2	P _c mm	1.0000	5	Flash Point °C			
Dielectric	2.14	5	PV/RT 0.1 mm	0.8888	5	Fire Point			
A 348 to	7.63157	4	BP	0.8468	5	M. Spec. Ultra V. X-Ray Dif. Infrared			
B 603 °C	3031.0	4	t _c			Solubility in ⁺			
C 145.	145.	5	t _c			Acetone			
A* 348 to	2.58066	5	ΔHc kcal/m			Carbon tet.			
B* 563 °C	2944.0	5	ΔHf			Benzene			
K			ΔFf			Ether			
t _k to			Viscosity centistokes			n-Heptane			
t _x °C			η °C			Ethanol			
A' to			B ^v to			Water			
B' °C			A ^v °C			Water in			
C' °C			(B ^v)						
A ^{1*} to			(A ^v)						
B ^{1*} °C			c _p liq. °K						
C ^{1*} °C			c _p vap. °K						
Ac to			c _v vap.						
Bc t _c °C									
Cc t _c °C									
Cryos. A° const. B°									
t _e °C	553.0	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:									

NAME		1-Octatriacontyne			STRUCTURAL FORMULA		
					$C_{36}H_{73}C\equiv CH$		
Mole % Pur.	Ref.	Molecular Formula	$C_{38}H_{74}$	Molecular Weight	530.972		
F.P. °C	80.	2	dt/dP			f	to
F.P. 100%			°C/mm			g	°K
B.P. °C			0.1 mm	178.05	5	h	
760 mm	499.	2	BP	0.0773	5	h'	
100	398.51	4	t _e	0.0359	5		to
30	352.45	4	30 mm	1.1669	5		°K
10	316.8	5	ΔHm cal/g			m	to
1	256.4	5	ΔHv cal/g			n	°K
0.1	210.1	5	0.1 mm			o	
Press. mm	1962.3	5	30 mm	41.81	5	m'	to
t _e			BP	33.14	5	n'	°K
Density			t _e	29.59	5	o'	
g/ml 20°C	0.8289 [‡]	2	t _e (d, e)	29.52	5	Surface tension	
d ₄ ^t 25	0.8256 [‡]	2	ΔHv/T _e	18.86	5	dynes/cm. 20°C	
d ₄ ^t 30	0.8223 [‡]	4	d 353 to	62.67	5	30	
a	0.8421	4	e 560 °C	0.0592	5	40	
b	-0.0366	4	d' to			29.62	
Ref. Index			e' °C			28.69	
n _D 20°C	1.4625 [‡]	2	d _c g/ml			27.78	
25	1.4605 [‡]	2	v _c ml/g			Parachor [P]	
30	1.4585 [‡]	4	t _c °C			20°C	
"C"	0.7377	4	P _c mm			30	
MR (Obs.)	176.21 [‡]	2	PV/RT			40	
MR (Calc.)	175.652	5	0.1 mm	1.0000	5	Sugd. 1494.4	
(nD-d/2)	1.0480 [‡]	2	30 mm	1.0000	5	Exp. L. l. %/wt.	
Dielectric	2.14	5	BP	0.8889	5	u.	
A 353 to	7.63610	4	t _e	0.8466	5	Dispersion	
B 610 °C	3057.7	4	t _c			101. [‡]	
C	144.	5	ΔHc kcal/m			Flash Point °C	
A* 353 to	2.59333	5	ΔHf			Fire Point	
B* 570 °C	2970.0	5	ΔFf			M Spec.	
K			Viscosity			Ultra V.	
c			centistokes			X-Ray Dif.	
t _x to			η			Infrared	
t _x °C						Solubility in +	
A' to			B ^v to			Acetone	
B' °C			A ^v °C			Carbon tet.	
C' °C			(B ^v)			Benzene	
A'' to			(A ^v)			Ether	
B'' °C			c _p liq. °K			n-Heptane	
Cc to			c _p vap. °K			Ethanol	
Bc t _c °C			c _v vap.			Water	
Cc t _c °C						Water in	
Cryos. A°							
const. B°							
t _e °C	560.0	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:							

NAME		1-Nonatriacontyne				STRUCTURAL FORMULA			
						$C_{37}H_{75}C\equiv CH$			
Mole % Pur.	Ref.	Molecular Formula $C_{39}H_{76}$	Molecular Weight 544.998	Ref.					
F.P. °C	82.	2			f		to		
F.P. 100%					g		°K		
B.P. °C					h				
760 mm	505.	2	dt/dP °C/mm	179.41	5				
100	403.81	4	0.1 mm BP	0.0778	5				
30	357.42	4	t_e	0.0359	5	f'		to	
10	321.5	5	30 mm	1.1754	5	g'		°K	
1	260.7	5				h'			
0.1	214.0	5	ΔH_m cal/g			m		to	
Press. mm t_e	1975.5	5	ΔH_v cal/g			n		°K	
Density g/ml 20°C			0.1 mm			o			
d_4^{25}	0.8295 [‡]	2	30 mm BP	41.09	5				
d_4^{30}	0.8262 [‡]	2	t_e (d, e)	32.53	5	m'		to	
	0.8229 [‡]	4	$\Delta H_v/T_e$	28.97	5	n'		°K	
				28.95	5	o'			
a	0.8427	4	d 358 to	61.83	5	Surface tension dynes/cm. 20°C			
b	-0.0366	4	e 567 °C	0.0580	5	γ			29.67
Ref. Index n_D 20°C			d' to						28.74
25	1.4628 [‡]	2	e' °C						27.83
30	1.4608 [‡]	2				Parachor [P]			
	1.4588 [‡]	4	d_c g/ml						
"C"	0.7376	4	v_c ml/g						
MR (Obs.)	180.85 [‡]	2	t_c °C						
MR (Calc.)	180.270	5	P_c mm						
(nD-d/2)	1.0481 [‡]	2	PV/RT						
Dielectric	2.14	5	0.1 mm	1.0000	5	Exp. L.l. %/wt. u.			
A 358 to	7.64056	4	30 mm	1.0000	5	Dispersion			101. [‡]
B 616 °C	3084.3	4	BP	0.8881	5	Flash Point °C			
C	143.	5	t_e	0.8453	5	Fire Point			
A* 358 to	2.60759	5	t_c			M. Spec. Ultra V. X-Ray Dif. Infrared			
B* 576 °C	2996.9	5	ΔH_c kcal/m			Solubility in ⁺			
K			ΔH_f			Acetone			
t_k to			ΔF_f			Carbon tet.			
t_x °C			Viscosity centistokes			Benzene			
A' to			η °C			Ether			
B' to						n-Heptane			
C' to			B^v to			Ethanol			
A'* to °C			A^v °C			Water			
B'* to °C			(B ^v)			Water in			
A _c to			(A ^v)						
B _c t_c °C			c_p liq. °K						
C _c °C			c_p vap. °K						
Cryos. A° const. B°			c_v vap.						
t_e °C	566.9	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:									

NAME		1-Tetracontyne			STRUCTURAL FORMULA		
Mole % Pur.		Ref.	Molecular Formula $C_{40}H_{78}$	Molecular Weight 559.024	$C_{38}H_{77}C\equiv CH$		
		Ref.			Ref.		
F.P. °C	83.	2	dt/dP °C/mm			f	to
F.P. 100%			0.1 mm	181.05	5	g	°K
B.P. °C	512.	2	BP	0.0784	5	h	---
760 mm	409.99	4	t _e	0.0359	5	f'	to
100	363.21	4	30 mm	1.1854	5	g'	°K
30	327.0	5	ΔHm cal/g			h'	
10	265.6	5	ΔHv cal/g			m	to
1	218.5	5	0.1 mm	40.45	5	n	°K
0.1			30 mm	32.01	5	o	
Press. mm	1993.7	5	BP	28.45	5	m'	to
t _e			t _e	28.45	5	n'	°K
Density g/ml 20°C	0.8301 [‡]	2	t _e (d, e)	28.45	5	o'	
d ₄ ^t 25	0.8268 [‡]	2	ΔHv/T _e	18.75	5		
d ₄ ^t 30	0.8235 [‡]	4	d 364 to	61.05	5	Surface tension dynes/cm. 20°C	
a	0.8433	4	e 575 °C	0.0567	5	30	29.72
b	-0.0366	4	d' to			40	28.79
Ref. Index n _D 20°C	1.4632 [‡]	2	e' to °C				27.87
25	1.4612 [‡]	2	d _c g/ml			Parachor [P]	
30	1.4592 [‡]	4	v _c ml/g			20°C	
"C"	0.7377	4	t _c °C			30	
MR (Obs.)	185.51 [‡]	2	P _c mm			40	
MR (Calc.)	184.888	5	PV/RT			Sugd.	1572.4
(n _D -d/2)	1.0481 [‡]	2	0.1 mm	1.0000	5	Exp. L.l. %/wt. u.	
Dielectric	2.14	5	30 mm	1.0000	5	Dispersion	
A 364 to	7.64695	4	BP	0.8881	5	101. [‡]	
B 625 °C	3117.1	4	t _e	0.8449	5	Flash Point °C	
C	142.	5	t _c			Fire Point	
A* 364 to	2.62122	5	ΔHc kcal/m			M Spec.	
B* 585 °C	3028.9	5	ΔHf			Ultra V.	
K			ΔFf			X-Ray Dif.	
c			Viscosity centistokes °C			Infrared	
t _x to			η			Solubility in +	
t _x °C						Acetone	
A' to			B ^v to			Carbon tet.	
B' °C			A ^v °C			Benzene	
C' °C			(B ^v)			Ether	
A** to			(A ^v)			n-Heptane	
B** °C			c _p liq. °K			Ethanol	
Ac to			c _p vap. °K			Water	
Bc t _c °C			c _v vap.			Water in	
Cc °C							
Cryos. A°							
const. B°							
t _e °C	575.0	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:							

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2,3,4,4-Tetramethylhexane	151	2,3,4-Trimethylhexane	74
2,3,4,5-Tetramethylhexane	152	2,3,5-Trimethylhexane	75
3,3,4,4-Tetramethylhexane	153	2,4,4-Trimethylhexane	76
2,2,3,3-Tetramethylpentane	82	3,3,4-Trimethylhexane	77
2,2,3,4-Tetramethylpentane	83	2,2,3-Trimethylpentane	46
2,2,4,4-Tetramethylpentane	84	2,2,4-Trimethylpentane	47
2,3,3,4-Tetramethylpentane	85	2,3,3-Trimethylpentane	48
<i>n</i> -Tetratriacontane	184	2,3,4-Trimethylpentane	49
1-Tetratriacontene	399	2,3,3-Trimethyl-1-pentene	360
1-Tetratriacontyne	480	2,3,4-Trimethyl-1-pentene	361
<i>n</i> -Triacontane	180	2,4,4-Trimethyl-1-pentene	362
1-Triacontene	395	3,3,4-Trimethyl-1-pentene	363
1-Triacontyne	476	3,4,4-Trimethyl-1-pentene	364
1,1,2-Tribromoethane	209	2,3,4-Trimethyl-2-pentene	368
1,2,3-Tribromopropane	215	2,4,4-Trimethyl-2-pentene	369
1,1,2-Trichloroethane	203	3,4,4-Trimethyl- <i>cis</i> -2-pentene	370
1,1,2-Trichloroethylene	410	3,4,4-Trimethyl- <i>trans</i> -2-pentene	371
Trichloromethane	196	<i>n</i> -Tritriacontane	183
<i>n</i> -Tricosane	173	1-Tritriacontene	398
1-Tricosene	388	1-Tritriacontyne	479
1-Tricosyne	469		
<i>n</i> -Tridecane	163	U	
1-Tridecene	378	<i>n</i> -Undecane	161
1-Tridecyne	459	1-Undecene	376
Triethylmethane	27	1-Undecyne	457
2,2,3-Trimethylbutane	32		
2,3,3-Trimethyl-1-butene	281	V	
Trimethylene chlorobromide	212	Vinyl bromide	406
Trimethylene dibromide	213	Vinyl chloride	407
2,2,3-Trimethylheptane	115		
2,2,4-Trimethylheptane	116		
2,2,5-Trimethylheptane	117		
2,2,6-Trimethylheptane	118		