

ture, in proportions by volume, of about 12 ethylene glycol monobutyl ether, 48 Me amyl ketone, 20 mineral lubricating oil, 8 water, 8 morpholine oleate and 4% morpholine.

LIQUID CLEANING COMPOSITION. G. M. Skinner (National Carbon Co., Inc.). *U. S. 2,403,619*. A cleaning

composition for removing sludge from internal combustion engines comprises a homogeneous liquid mixture in proportion by volume of about 32 ethylene glycol monoethyl ether acetate, 18 ethylene glycol monobutyl ether, 18 mineral lubricating oil, 4 water, 19 morpholine oleate, and 9% oleic acid.

Abstracts

Drying Oils

Edited by
HOWARD M. TEETER

TREATED OILS. H. R. Touchin. *Paint Manuf.* 26, 186-9, 228 (1946). A review of methods for improving linseed and other oils.

DEHYDRATED CASTOR OIL. R. Mansell. *Paint Oil Chem. Rev.* 109, No. 10, 9-10 (1946). A summary of the preparation, properties and uses of dehydrated castor oil.

SYNTHETIC DRYING OILS. A. E. Williams. *Paint Manuf.* 26, 193-6 (1946). A review of the production of synthetic glycerides, pentaerythritol esters, and related materials.

PAINT, VARNISH, AND LACQUER INDUSTRY IN GERMANY, Part III. H. O. Farr, Jr. (Joint Intelligence Objectives Agency). *Paint Oil Chem. Rev.* 109, No. 13, 46, 48 (1946). Part IV. *ibid.* 109, No. 14, 40, 42, 44 (1946).

THE WETTING OF SURFACES BY ESTERS OF UNSATURATED FATTY ACIDS. N. F. Miller (New Jersey Zinc Co. of Pa.). *J. Phys. Chem.* 50, 300-18 (1946). The wetting properties of a series of pure esters of common unsaturated fatty acids toward polished 48-S-5 armor plate were measured. The type and degree of unsaturation have no effect on the wetting properties of methyl esters. Wetting of steel by three linoleate esters decreases in the order methyl > glycol > glyceryl. Atmospheric oxidation of methyl linoleate ultimately decreases the wetting power of this ester for unrusted steel. These esters show an inverse relationship in their wetting power for steel (organophilic) and their affinity for a water surface (hydrophilic). It was shown that unrusted 48-S-5 steel is organophilic, whereas as rusting begins the surface rapidly becomes hydrophilic. A theoretical discussion is given of the significance of different contact angles. With regard to the adhesion of paint films on steel it appears that contact-angle values measure a more fundamental wetting property than work-of-adhesion values, since contact angles apparently determine the ability of a paint to displace adsorbed air or moisture films from steel.

SELECTIVE ADSORPTION OF FAT ACIDS. A. Santos-Ruiz and M. Saniz Muñoz (Inst. Cajal. Sec. Bioquim., Madrid). *Mon. farm.* 52, 83-8 (1946). By subjecting the fat acids from linseed and other oils to selective adsorption, it was found that Brockman's alumina can be used as a separating agent. The saturated acids accumulate in the upper part of the column. Magnesium oxide as such or mixed with alumina or phenol red was ineffective. (*Chem. Abs.* 40, 4233.)

STYRENE COPOLYMERS IN SURFACE COATINGS. D. H. Hewitt and F. Armitage (L. Berger and Sons, Ltd.). *J. Oil Colour Chem. Assoc.* 29, 109-28 (1946). The copolymerization of styrene with dehydrated castor, linseed, oiticica, tung, and other bodied and conjugated oils was investigated and the conditions which lead to homogeneous products were determined. It is postulated that styrene polymerization with non-conjugated fatty acid radicals is a chain transfer process which proceeds more readily than the corresponding chain transfer with a relatively inert solvent such as xylol. A range of chain lengths is produced. Polymerization with conjugated fatty acid radicals involves propagation of the styrene chain across the conjugated system as in the styrene-butadiene reaction. In polyreactive systems the chains are short and the products homogeneous. Where both types of radical are present, the degree of conjugation in conjunction with the complexity (viscosity) will determine which process predominates and hence the compatibility of the species.

PATENTS

CONJUGATED OILS. A. Turk and P. D. Boone. *U. S. 2,405,380*. Non-conjugated fatty polyene compounds are heated at 200° with a solid magnesium silicate to produce conjugation of 15% calculated on the basis of refractive index.

DRYING OIL. F. J. Stark and G. H. Slack. *U. S. 2,399,697*. A new and improved drying oil is obtained by chlorinating soybean oil with silicon tetrachloride and then treating with benzoyl peroxide.

OMISSION

Howard M. Teeter of the Northern Regional Research Laboratory, Peoria, Ill., reports that in the July 1946 paper on "Reactions of Conjugated Fat Acids. I. Addition of Crotonic Acid Derivatives," by himself, C. R. Scholfield, and J. C. Cowan (23, 216-219, 1946), the Roman numeral IV should be inserted after the word "structure" on page 217, fifth line.

CORRECTION

Rozier D. Oilar of Indianapolis, Ind., calls attention to a possible error in a July 1946 paper: "The Role of Fat in Human Nutrition" by H. J. Deuel, Jr., University of Southern California, Los Angeles, Calif. In the 26th line, right hand column, page 209, he suggests that "50° F." should be 50° Centigrade.