

ISO

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 339

DEFINITION OF TERMS
APPEARING IN ISO RECOMMENDATIONS
FOR OILS AND PIGMENTS

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BRIEF HISTORY

The ISO Recommendation R 339, *Definitions of Terms Appearing in ISO Recommendations for Oils and Pigments*, was drawn up by Technical Committee ISO/TC 35, *Raw Materials for Paints, Varnishes and Similar Products*, the Secretariat of which is held by the Stichting Nederlands Normalisatie-instituut (NNI).

Work on this question by the Technical Committee began in 1950 and led, in 1959, to the adoption of a Draft ISO Recommendation.

In July 1960, this Draft ISO Recommendation (No. 387) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Argentina	Germany	Republic of
Austria	Greece	South Africa
Bulgaria	India	Romania
Canada	Iran	Spain
Chile	Ireland	Sweden
Colombia	Israel	Turkey
Czechoslovakia	Japan	United Kingdom
Denmark	New Zealand	U.S.S.R.
Egypt	Portugal	Yugoslavia

Three Member Bodies opposed the approval of the Draft:

Belgium, France, Italy.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in September 1963, to accept it as an ISO RECOMMENDATION.

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DEFINITIONS OF TERMS APPEARING IN ISO RECOMMENDATIONS FOR OILS AND PIGMENTS

1. OILS

- 1.1 *Acid value.* Number of milligrammes of potassium hydroxide (KOH) required to neutralize the free acidity in one gramme of oil. Free organic acidity is also expressed by the equivalent number of milligrammes of oleic, palmitic, etc. acids.
- 1.2 *Ash.* Mineral residue of the oil remaining after incineration under specified conditions of test.
- 1.3 *Drying time.* Time which elapses between the application of a wet film of oil and the attainment of a specified dry state under specified conditions of test.
- 1.4 *Flash point.* Minimum temperature of a liquid at which the vapours given off are sufficient to form a flammable mixture with air, under specified conditions of test.
- 1.5 *Foots.* Settled layer which collects at the bottom of the container, when the oil is allowed to stand, under specified conditions of test.
- 1.6 *Polybromide value.* Mass, in grammes, of polybromides, obtained when 100 g of oil are examined under specified conditions of test.
- 1.7 *Iodine value.* Mass of halogen, expressed as grammes of iodine, which reacts with 100 g of oil under specified conditions of test.
- 1.8 *Refractive index* of an oil, for a given wavelength. Ratio of the sine of the angle of incidence to the sine of the angle of refraction when a ray of light of this wavelength passes from air into the oil. Unless otherwise specified, the refractive index is given for a wavelength equal to the mean of those of the D-lines of sodium (wavelength 589.3 m μ).

The notation n^t at t° always denotes the index relating to the D-line where t is the temperature in degrees C at which the determination is made (either 20 or 40 °C). If the determination is made in relation to wavelength λ , the notation is n_λ^t .

- 1.9** *Saponification value.* Number of milligrammes of potassium hydroxide (KOH) required for the saponification of the saponifiable matter contained in one gramme of material, determined under specified conditions.
- 1.10** *Unsaponifiable matter.* Unsaponifiable matter natural to fats (sterols, hydrocarbons), as well as the organic matter non-volatile at 100 °C (mineral oils), foreign to fatty matter and present in the oil, which, after saponification by potassium hydroxide (KOH) and extraction by a specified solvent, remain non-volatile under specified conditions of test.
- 1.11** *Resistance to shear* (of a liquid) - Resistance set up within the liquid to any shearing force applied to it.
- In the case of Newtonian liquids it is known as the absolute viscosity. In the case of other liquids, it is possible, under certain conditions only, to measure a limiting viscosity.
- The viscosity of a Newtonian liquid is its internal resistance to flow, expressed as the constant given by the relation of the applied shearing force to the rate of shear.
- The kinematic viscosity of a Newtonian liquid is the relation given by the absolute viscosity to the density of the liquid.
- The absolute viscosity is expressed in poises.*
- The kinematic viscosity is expressed in stokes.**
- The viscosity of drying oils is determined at 20 °C or 25 °C and expressed in poises; the temperature of determination should be stated.
- 1.12** *Volatile matter.* That fraction of the material which evaporates under specified conditions of test.

2. PIGMENTS

- 2.1** *Chalking.* Formation of a loosely held powder on the outer surface of a paint film, caused by a change in the surface of the film.
- 2.2** *Hiding power.* Ability of a paint to obliterate the colour of a surface to which it is applied under specified conditions of application.
- 2.3** *Matter soluble in water.* That part of a substance which is extractable by distilled water under specified conditions of concentration, temperature and time.
- 2.4** *Acidity or alkalinity.* Degree of specified acidity or alkalinity as determined by titration under specified conditions of test to the change point of a specified indicator. It is usually expressed as the equivalent in grammes of sulphuric acid (H_2SO_4) or sodium carbonate (Na_2CO_3), as appropriate, per 100 g of material.

* See ISO Recommendation R 31, Part III, *Quantities and Units of Mechanics*, No. 3-19.b.

** See ISO Recommendation R 31, Part III, *Quantities and Units of Mechanics*, No. 3-20.b.