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GBT 6750-2007

Paints and varnishes - Determination of density - Pyknometer method

色漆和清漆 密度的测定 比重瓶法

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ICS 87.040

G 50

National Standard of the People's Republic of China

GB/T 6750-2007/ISO 2811-1:1997

Replace GB/T 6750-1986

Paints and varnishes - Determination of density - Pyknometer method

(ISO 2811-1:1997 Paints and varnishes - Determination of density - Part 1: Pyknometer method, IDT)

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Standardization Administration of the People's Republic of China

Foreword

This standard is equivalent to ISO 2811-1:1997 "Paints and varnishes - Determination of density - Part 1: Pyknometer method" (English edition).

This standard replaces GB/T 6750-1986 "Paints and varnishes - Determination of density".

The main technical differences between this standard and the previous edition (GB/T 6750-1986) are as follows:

——the previous edition was equivalent to ISO 2811:1974;

——this standard specifies the reference test temperature, and the method of calculation for density at non-reference test temperature has been added;

——the volume of metal pyknometer has been clearly defined, and the volume of glass pyknometer has been modified from 20 mL ~ 100 mL to 10 mL ~ 100 mL;

——the requirement for balance accuracy has been modified;

——the provision on using dust-proof container has been added;

——the provision on number of determination and sample under test has been added;

——the procedures for calibration of pyknometer have been modified.

Annex A in this standard is normative and Annex B is informative.

This standard was proposed by the China Petroleum and Chemical Industry Federation.

This standard is under the jurisdiction of the National Technical Committee 5 on Coating Materials and Paints Standardization (SAC/TC 5).

The drafting unit of this standard is as follows: CNCCC Changzhou Paint and Coatings Industry Research Institute Co., Ltd.

The main drafters of this standard are as follows: Wu Zhiping and Shen Sujiang.

This standard was first published in 1986, and this is the first revision.

This standard is interpreted by the National Technical Committee 5 on Coating Materials and Paints Standardization (SAC/TC 5).

Paints and varnishes - Determination of density - Pyknometer method

1 Scope

This standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products.

This standard specifies the method for determination of the density of paints, varnishes and related products using a pyknometer.

This method is applicable to materials of low or medium viscosity at the temperature of test. The Hubbard pyknometer can be used for highly viscous materials.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments (excluding the corrigendum) to or revisions of any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 3186-2006 Paints, varnishes and raw materials for paints and varnishes - Sampling (ISO 15528:2000, IDT)

GB/T 6682-1992 Water for analytical laboratory use - Specification and test methods (NEQ ISO 3696:1987)

GB/T 20777-2006 Paints and varnishes - Examination and preparation of samples for testing (ISO 1513:1992, IDT)

3 Terms and Definitions

For the purposes of this standard, the following terms and definitions apply.

3.1 Density, ρ

Mass divided by the volume of a portion of a material, expressed in g/mL.

4 Principle

A pyknometer is filled with the product under test. The density is calculated from the mass of the product in the pyknometer and the known volume of the pyknometer.

5 Temperature

The effect of temperature on density is highly significant with respect to filling properties, and varies with the type of product.

The temperature (23±0.5) ℃ is specified in this standard. However, it is also allowed to carry out test at some other agreed temperature.