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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 23985-2009

**Paints and varnishes -- Determination of volatile organic
compound (VOC) content -- Difference method**

色漆和清漆 挥发性有机化合物(VOC)含量的测定 差值法

(English Translation)

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Foreword

This Standard is identical to the international standard ISO 11890-1:2007

"Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 1. Difference method" (English edition).

This Standard is identical to the translation of ISO 11890-1:2007.

For ease of use, the editorial changes to this Standard are as follows.

- Replace "this International Standard" with "this Standard";
- Delete the Foreword to the international standard;
- For other international standards referenced in ISO 11890-1:2007, for those which are identically adopted as Chinese standards, replace corresponding international standards with the Chinese standards; for those which are not identically adopted as Chinese standards, REFERENCE directly the international standards;

- Delete "Part 1" in the name of the international standard;
- At present, in China, the water content in paints is mostly determined by gas-chromatographic method, so in 7.5, ADD the contents of Note 3.

Annex A of this Standard is a normative annex.

This Standard was proposed by China Petroleum and Chemical Industry Association.

This Standard shall be under the jurisdiction of National Technical Committee 5 on Paints & Pigments of Standardization Administration of China.

Drafting organizations of this Standard. CNOOC Changzhou Paint and Coatings Industry Research Institute, Suzhou Sunmun Technology Co., Ltd.

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Paints and varnishes - Determination of volatile organic compound (VOC) content - Difference method

1 Scope

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

2 Normative references

The following documents contain provisions which, through reference in this Standard, constitute provisions of this Standard. For the dated references, their subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest editions of these documents are applicable. For undated reference documents, the latest editions apply to this Standard.

3 Terms and definitions

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

Mass of the volatile organic compounds present in a coating material, as

determined under specified conditions.

State of a product when it is mixed in accordance with the manufacturer's instructions in the correct proportions and thinned, if required, using the correct thinners so that it is ready for application by the approved method.

4 Principle

After preparation of the sample, the non-volatile matter content is determined in accordance with GB/T 1725, and the water content is determined using a titration technique employing Karl Fischer reagent in accordance with GB/T 6283.T

5 Required supplementary information

For any particular application, the test method specified in this Standard shall be completed by supplementary information.

6 Sampling

Take a representative sample of the product to be tested (or of each product in the case of a multi-coat system) as specified in GB/T 3186.

7 Test procedure

For single-component products, weigh test portions of the appropriate size (see Table 1 in GB/T 1725-2007) into dishes as specified in GB/T 1725. Proceed in accordance with GB/T 1725.

8 Calculation

Calculate the VOC content by the method specified in the referring specification. If no particular method is specified, calculate the VOC content by method 1.

9 Expression of results

If the two results (duplicates) differ by more than the value indicated in 10.2, repeat the procedure.

10 Precision

The repeatability limit r is the value below which the absolute difference between two single test results, each the mean of duplicates, obtained on identical material by one operator in one laboratory within a short interval of time using the standardized test method, may be expected to lie.

11 Test report

The test report shall contain at least the following information.

Annex A

(Normative)

Required supplementary information

The items of supplementary information listed in this annex shall be supplied as appropriate to enable the method to be carried out.

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