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मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 101-2-2 (1986): Methods of sampling and test for paints, varnishes and related products, Part 2: Test on liquid paints (chemical examination), Section 2: Volatile matter [CHD 20: Paints, Varnishes and Related Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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**AMENDMENT NO. 1 MAY 2002
TO
IS 101 (Part 2/Sec 2) : 1986 METHODS OF SAMPLING
AND TEST FOR PAINTS, VARNISHES AND RELATED
PRODUCTS**

PART 2 TEST ON LIQUID PAINTS (CHEMICAL EXAMINATION)

Section 2 Volatile Matter

(Third Revision)

(Page 1, clause 6) — Substitute the following after clause 6:

'6.1 Non-volatile matter and pigment content,
percent by mass = $100 - V$

(Page 1, clause 6.1) — Substitute '6.2' for '6.1'

(Page 2, clause 6.1.1 and 6.1.2) — Substitute '6.2.1' for '6.1.1' and '6.2.2'
for '6.1.2'

(CHD 20)

4080 BIS/08—1

*Indian Standard***METHODS OF SAMPLING AND TEST FOR
PAINTS, VARNISHES AND RELATED PRODUCTS****PART 2 TEST ON LIQUID PAINTS (CHEMICAL EXAMINATION)****Section 2 Volatile Matter***(Third Revision)*

1. Scope — Prescribes the method for determination of volatile and non-volatile matter in paints, varnishes and related products.

2. Terminology — For the purpose of this standard definitions given in IS : 1303-1983 'Glossary of terms relating to paints (revised)' shall apply.

3. Apparatus

3.1 Flat-Bottomed Dish — Of glass, tinplate or aluminium, 75 mm in diameter.

3.2 Thin Glass Rod — Approximately 100 mm in length.

3.3 Air Oven — Capable of maintaining a temperature of $105 \pm 2^\circ\text{C}$.

4. Sampling — Representative sample of the product to be tested shall be taken as given in IS : 101 (Part 1/Sec 1)-1986 'Methods of sampling and test for paints, varnishes and related products : Part 1 Tests on liquid paints (general and physical), Section 1 Sampling'.

5. Procedure — Dry the glass, tinplate or aluminium dish and the glass rod in the oven at $105 \pm 2^\circ\text{C}$ and allow to cool to room temperature in a desiccator. Weigh, to the nearest milligram, the dish containing glass rod and then weigh the dish to the same accuracy approximately 2 ± 0.2 g of the product under test making sure that it is evenly distributed over the surface of the dish. If the product contains a highly volatile solvent or in case of reference test, weigh by difference from a stoppered weighing bottle in to the dish, then heat the dish gently on a hot water-bath until most of the solvent has evaporated. Place the dish with rod and sample under test in the air-oven previously adjusted at $105 \pm 2^\circ\text{C}$ and leave it for 3 hours. Remove the dish from the oven after a short period of heating. Stir the material with the glass rod to break up any surface skin and replace the dish and rod in the oven. At the end of 3 hours, transfer the dish and rod to a desiccator, allow to cool to room temperature and weigh to the nearest milligram. Perform at least two determinations on the same prepared sample.

6. Calculation — Calculate the content of volatile matter V as a percentage by mass of the product tested by the following formula :

$$V = \frac{100 (m_1 - m_2)}{m_1}$$

Where

m_1 = the mass, in mg of the test portion before heating;

m_2 = the mass in mg of the test portion after heating; and

V = volatile matter, percent by mass.

6.1 Report the result as the arithmetic mean (to the nearest 0.1) of two determinations complying with the requirements of 5.

Adopted 27 January, 1986

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IS : 101 (Part 2/Sec 2) - 1986

6.1.1 Repeatability — The difference between successive results obtained by the same operator within a short interval with the same apparatus under constant operating conditions on identical test material shall, at 95 percent confidence level, not exceed 1 percent.

6.1.2 Reproducibility — The difference between single and independent results obtained by different operators in different laboratories on identical test material shall, at the 95 percent confidence level not exceed 2 percent.

EXPLANATORY NOTE

This Indian Standard is one of the series dealing with sampling and testing of paints, varnishes and related products. In the preparation of this standard considerable assistance has been derived from ISO 1515-1973 'Paints and varnishes — Determination of volatile and non-volatile matter', issued by the International Organization for Standardization (ISO). This standard supersedes 26 of IS : 101-1964 'Methods of test for ready mixed paints and enamels (*second revision*)'.