Doc: CHD 20 (28838) WC
IS 101 (Part 1/Sec 7): 20XX
ISO 2811-1: 2023
September 2025

BUREAU OF INDIAN STANDARDS

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Draft Indian Standard

Methods of Sampling and Test for Paints, Varnishes and Related Products

Part 1 Test on Liquid Paints (General and Physical)

Section 7 Mass per 10 litres — Determination of Density — Pycnometer Method

[Fifth Revision of IS 101 (Part 1/Sec 7)]

भारतीय मानक मसौदा

रंग रोगन, वार्निश और संबंधित उत्पादों के लिए नमुने और परीक्षण

भाग 1 तरल रंग रोगन पर परीक्षण (सामान्य और भौतिक)

अनुभाग 7 प्रति 10 लीटर पदार्थ की मात्रा — पाइकनोमीटर विधि द्वारा — घनत्व का निर्धारण

[IS 101 (Part 1/Sec 7) का पांचवा पुनरीक्षण]

(ICS 87.040)

Paint, Varnishes and Related Products Sectional Committee, CHD 20	**Last Date for Comments: 30th November 2025**

Paint, Varnishes and Related Products Sectional Committee, CHD 20

NATIONAL FOREWORD

(Formal clause will be added later)

IS 101 "Methods of Test for Ready Mixed Paints and Enamel", initially, was published as a unified standard in 1950 and it underwent revisions in 1961 and 1964 to update testing procedures. The third revision in 1986, due to the large size of IS 101, the committee decided to restructure it. Recognizing the need for clarity and organization, the standard was divided into multiple parts based on test types. These parts included tests on liquid paints (general and physical), chemical examination, film formation, optical assessments, and mechanical tests on paint film formation. Each part was further subdivided into sections, addressing specific tests within those categories. Further, it was decided that whenever

a new test method introduced, it would be integrated into the relevant part of IS 101 where it is most appropriate, ensuring that the standard remained comprehensive.

This standard was first published in 1950 and subsequently revised in 1961, 1964, 1987, and 2020. During the third revision, it was published as **IS 101 (Part 1/Sec 7) 'Methods of Sampling and Test for Paints, Varnishes and Related Products — Part 2: Tests on Liquid Paints (General and Physical) — Section 7: Mass per 10 Litres — Determination of Density — Pycnometer Method'**, superseding clause 25 of IS 101:1964 *'Methods of Test for Ready Mixed Paints and Enamels (Second Revision)'*. This revision took considerable assistance from ISO 2811:1974 *'Paints and Varnishes — Determination of Density'*.

In the fourth revision, the standard was harmonized with international practice by adopting ISO 2811-1:2016.

This fifth revision has been undertaken to align with the latest version, ISO 2811-1:2023. The major changes introduced are as follows:

- A requirement to de-aerate the sample prior to determination has been added in Clause 8.2, in order to achieve reproducible results for density.
- The text has been editorially revised, and the normative references have been updated.

This Indian standard (Part 1/Sec 7) is one of the series dealing with methods of sampling and test for paints, varnishes and related products.

The other sections of this Indian Standard (Part 1) are:

Sec 1 Sampling

Sec 2 Preliminary examination and preparation of samples for testing

Sec 3 Preparation of panels

Sec 4 Brushing Test

Sec 5 Consistency

Sec 6 Flash point

Sec 8 Pigments and extenders determination of pH value of aqueous suspension

The major changes in this revision are as follows:

a) A requirement to de-aerate the sample prior to the determination in order to achieve reproducible results for the density has been added to 8.2;
b) The text has been editorially revised and the normative references have been updated.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words `International Standard' appear referring to this standard, they should be read as `Indian Standard'.

b) Comma (,) has been used as a decimal marker in the International Standard, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along withtheir degree of equivalence for the editions indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*

ISO 1513 Paints and varnishes — Examination and preparation of test samples	IS 101 (Part 1/Sec 2): 2023/ ISO 1513: 2010 Methods of sampling and test for paints, varnishes and related products : Part 1 test on liquid paints (general and physical) : Sec 2 preliminary examination and preparation of samples for testing (*fourth revision*)	Identical

In this adopted standard, the reference appears to certain International Standards for which Indian Standards do not exist. So, the technical committee has reviewed the provisions of the following International Standards/ documents referred in this adopted standard and has decided that they are acceptable for use in conjunction with this Standard:

International Standards	*Title*
ISO 3696	Water for analytical laboratory use — Specification and test methods
ISO 15528	Paints, varnishes and raw materials for paints and varnishes — Sampling

In this adopted standard, reference appears to certain International Standards/documents where the standard atmospheric conditions to be observed are stipulated which are not applicable to tropical/subtropical countries. The applicable standard atmospheric conditions for Indian conditions are (27 ± 2) °C and (65 ± 5) percent relative humidity and shall be observed while using this standard.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2: 2022 ‘Rules for rounding off numerical values *(second revision)*’.

FOR COMPLETE TEXT OF THE DOCUMENT, KINDLY REFER ISO 2811-1: 2023

Note: The technical content of the document has not been enclosed as these are identical with the corresponding ISO Standard. For obtaining the copy of the complete ISO Standard, please contact:

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