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IS 642 (1963): Varnish medium for aluminium paint [CHD 20: Paints, Varnishes and Related Products]



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(Reaffirmed 2009)

Indian Standard

SPECIFICATION FOR

VARNISH MEDIUM FOR ALUMINIUM PAINT

(Revised)

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR VARNISH MEDIUM FOR ALUMINIUM PAINT

(Revised)

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Indian Standard
SPECIFICATION FOR
VARNISH MEDIUM FOR ALUMINIUM PAINT
(Revised)

0. FOREWORD

0.1 This revised Indian Standard was adopted by the Indian Standards Institution on 16 May 1963, after the draft finalized by the Paints and Allied Products Sectional Committee had been approved by the Chemical Division Council.

0.2 This standard was originally issued in 1955. It was based largely on the specification of the Directorate General of Supplies & Disposals on Varnish Medium for Aluminium Paint (G/P-307/276). Of late comments had been received on the requirements stipulated for the viscosity and acid value of the material and also urging a change in the requirement of volatile matter of the prepared aluminium paint to *IS : 165-1950 Specification for Aluminium Paint, Brushing, for General Purposes, in Dual Container. On a scrutiny of these comments by the Committee responsible for the formulation of this standard, it was agreed to lower the volatile matter limit of the varnish medium covered by this standard in order to make it consistent with the maximum limit of volatile matter, stipulated in *IS : 165-1950. Raising the percentage of volatile matter limit in *IS : 165-1950 was not considered desirable because this might adversely affect the durability of the paint.

0.2.1 The present revision incorporates changes in the limits of volatile matter, viscosity and acid value. Besides, all other changes found necessary to align this standard with others in the group concerning aluminium paint and components have been incorporated.

0.3 This standard is one of a series of Indian Standard specifications on

*IS : 165-1950 and IS : 166-1950 Specifications for Aluminium Paint (Brushing and Spraying, respectively) for General Purposes, in Dual Containers have since been revised and amalgamated as IS : 2339-1963 Specification for Aluminium Paint for General Purposes, in Dual Container.

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aluminium paint and components. Other specifications published so far in the series are:

IS : 289-1963 ALUMINIUM PASTE FOR PAINTS (*Revised*)

IS : 2339-1963 ALUMINIUM PAINT FOR GENERAL PURPOSES, IN DUAL CONTAINER

0.4 Wherever a reference to any Indian Standard appears in this specification, it shall be taken as a reference to the latest version of the standard.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960 Rules for Rounding Off Numerical Values (*Revised*). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

0.6 This standard is intended chiefly to cover the technical provisions relating to varnish medium for aluminium paint, and it does not include all the necessary provisions of a contract.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of test for the material commercially known as varnish medium for aluminium paint.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in *IS : 1303-1958 Glossary of Terms Relating to Paints and *IS : 197-1952 Methods of Test for Varnishes and Lacquers shall apply.

3. SAMPLING

3.1 The supplier shall submit a tender sample packed in three different containers, each containing not less than 300 ml of the material.

3.2 Representative samples of the material shall be drawn as prescribed in 3 of *IS : 197-1952 Methods of Test for Varnishes and Lacquers.

*Since revised.

4. REQUIREMENTS

4.1 Description — The material shall be clear and transparent, and free from foreign matter, sediment and undissolved water.

4.2 Composition — The material shall be prepared from resins, drying oils, driers and thinners in suitable proportions to satisfy the requirements of this standard.

4.3 The material shall also comply with the requirements given in Table I.

TABLE I REQUIREMENTS FOR VARNISH MEDIUM FOR ALUMINIUM PAINT

SL NO.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO CL NO. IN *IS : 197-1952
(1)	(2)	(3)	(4)
i)	Flash point, <i>Min</i>	30°C	13
ii)	Volatile matter content, percent by weight, <i>Max</i>	54	14
iii)	Viscosity at 30°C	0.3 to 0.8 stoke	16
iv)	Aoid value, <i>Max</i>	6.0	17
v)	Keeping properties	Not less than one year from the date of manufacture	10

*IS : 197-1952 Methods of Test for Varnishes and Lacquere. (Since revised).

5. TESTS

5.1 Tests shall be conducted as prescribed in *IS : 197-1952 Methods of Test for Varnishes and Lacquers. References to the relevant clauses of that standard are given in col 4 of Table I.

5.2 Quality of Reagents — Unless otherwise specified, pure chemicals and distilled water [*see* *IS : 1070-1960 Specification for Water, Distilled Quality (*Revised*)] shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

5.3 Performance — An aluminium paint containing the equivalent of not less than 15 percent by weight of aluminium powder prepared from

*Since revised.

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the material by mixing with aluminium paste [conforming to IS: 289-1963 Specification for Aluminium Paste for Paints (*Revised*)], and keeping in airtight containers for 48 hours before application, shall comply with the relevant requirements of various characteristics given in Table II.

TABLE II REQUIREMENTS OF PREPARED ALUMINIUM PAINT
(Clause 5.8)

SL NO.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO CL NO. IN *IS : 101-1961
(1)	(2)	(3)	(4)
i)	Drying time: Hard Dry	Not more than 8 hours	†
ii)	Finish	Bright, lustrous and smooth	7.5
iii)	Flexibility and adhesion after 48 hours air-drying	No visible damage, detachment or cracking of the film	16
iv)	Protection against corrosion under conditions of condensation	No signs of corrosion	18

*IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*).

†The nature of the paint film shall be adjudged by the usual finger nail test. Until such time that an objective method of test has been standardized, the finger nail test shall be followed.

5.4 Freedom from Lead (Lead Free) — The material shall not contain more than 0.03 percent of lead or compounds of lead or a mixture of both [calculated as metallic lead (Pb)], when tested by the method prescribed under 29 of *IS : 101-1961 Methods of Tests for Ready Mixed Paints and Enamels (*Revised*).

6. PACKING AND MARKING

6.1 Packing — The material shall be packed in dual containers or if agreed to between the purchaser and the supplier in metal containers conforming to IS : 1407-1959 Specification for Round Paint Tins.

6.1 Marking — The containers shall be marked with the name of the material; manufacturer's name and trade-mark, if any; weight of the material; and the month and year of manufacture.

*Second revision issued in 1964.

†Since revised.

6.2.1 The product may also be marked with Standard mark.

6.2.2 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6.3 Other details of packing and marking shall be in accordance with the instructions given by the purchaser.

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