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IS 2339 (1963): Aluminium paint for general purposes, in dual container [CHD 20: Paints, Varnishes and Related Products]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS : 2339 - 1963

(Superseding IS : 165 and 166 - 1950)

(Reaffirmed 2009)

Indian Standard

**SPECIFICATION FOR ALUMINIUM PAINT
FOR GENERAL PURPOSES, IN DUAL
CONTAINER**

Tenth Reprint JANUARY 1998

(Incorporating Amendment No. 1)

UDC 667.633.42:669.71

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

Gr 2

July 1963

**AMENDMENT NO. 4 APRIL 2006
TO
IS 2399 : 1963 SPECIFICATION FOR ALUMINIUM
PAINT FOR GENERAL PURPOSES**

(Page 6, clause 6.1.1) — Delete the clause.

(CHD 20)

AMENDMENT NO. 3 SEPTEMBER 1988
TO
IS : 2339 - 1963 SPECIFICATION FOR ALUMINIUM
PAINT FOR GENERAL PURPOSES. IN DUAL
CONTAINER

(*Page 5, clause 5.4*) — Delete.

[*Page 6, Table 1, Sl No. (vii)*] — Add the following new requirement after Sl No. (vii):

(1)	(2)	(3)	(4)
viii)	Wet opacity	Between — 10 percent and + 20 percent of the approved sample	10

(CDC 8)

Reprography Unit, BIS, New Delhi, India

**AMENDMENT NO. 2 AUGUST 1982
TO
IS : 2339-1963 SPECIFICATION FOR
ALUMINIUM PAINT FOR GENERAL
PURPOSES, IN DUAL CONTAINER**

[This amendment is issued to overcome the difficulties experienced by the manufacturers for the packing of aluminium paint in dual containers above 4 litre capacity.]

Alterations

(*First cover, pages 1 and 3, title*) — Substitute the following for the existing title:

' Indian Standard
**SPECIFICATION FOR ALUMINIUM PAINTS
FOR GENERAL PURPOSES'**

(*Page 4, clause 1.1*):

- a) *line 3* — Delete the words ' in dual container '.
- b) *line 4* — Substitute ' chambers/containers ' *for* ' chambers '.

(*Page 6, Table 1, caption*) — Substitute the following for the existing caption:

**' TABLE 1 REQUIREMENTS FOR ALUMINIUM PAINT FOR
GENERAL PURPOSES'**

[*Page 6 (page 7 of Reprint), clause 7.1*] — Substitute the following for the existing clause:

'7.1 The paint shall be packed in dual container. However, when varnish medium is more than 4 litres, aluminium paste may be packed separately.'

Addendum

(*Page 5, clause 5.1*) — Add the following new note after **5.1**:

' NOTE — When varnish medium is more than 4 litres, aluminium paste may be packed separately.'

(CDC 8)

Reprography Unit, BIS, New Delhi, India

IS : 2339 - 1963

(Superseding IS: 165 and 166 - 1950)

(Reaffirmed 2009)

Indian Standard

SPECIFICATION FOR ALUMINIUM PAINT FOR GENERAL PURPOSES, IN DUAL CONTAINER

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(Continued on page 2)

BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI 110002

IS:2339 - 1963

(Continued from page 1)

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Indian Standard
**SPECIFICATION FOR ALUMINIUM PAINT
FOR GENERAL PURPOSES, IN DUAL
CONTAINER**

0 . F O R E W O R D

0.1 This Indian Standard was adopted by the Indian Standards Institution on 1 June 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 amalgamates the revision of the two Indian Standard Specifications, IS: 165-1950 Specification for Aluminium Paint, Brushing, for General Purposes, in Dual Container, and IS: 166-1950 Specification for Aluminium Paint, Spraying, for General Purposes in Dual Container, which were first issued in 1950. These two specifications were based on the interim co-ordinated draft, compiled with the assistance of all concerned by the Co-ordinating Subcommittee of the No. 5 Standing Committee on Specifications for Paints and Allied Stores of the General Headquarters, India (now Army Headquarters), Master General of the Ordnance Branch, which was set up in 1942 and continued to function till 1947. In the study for revision, ample consideration has been given to compatibility of composition *vis-a-vis* performance tests and the examination of all other anomalies. An important change in the procedure for determination of leafing property was found necessary and has been stipulated. Sharing the views of all concerned, the Committee responsible for the formulation of these standards agreed to combine the two separate specifications and give the spraying and brushing qualities of the material as two types in this amalgamated standard.

0.2.1 Full alignment of JSS 3022 Specification for Paint, PFU, Aluminium, Brushing/Spraying, issued by the Department of Standardization, Ministry of Defence, Government of India, has also been achieved with this Indian Standard as it fully covers the requirements prescribed in JSS 3022.

0.3 In the preparation of this standard, the Committee has freely drawn upon the experience of all concerned. Amongst other sources valuable assistance obtained from relevant foreign standards on the subject is gratefully acknowledged.

IS : 2339 - 1963

0.4 This standard is one of a series of Indian Standards on aluminium paint and components. The other specifications published so far in the series are:

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

IS : 642-1963 VARNISH MEDIUM FOR ALUMINIUM PAINT (*Revised*)

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

0.6 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.

0.7 This standard is intended chiefly to cover the technical provisions relating to aluminium paint for general purposes, in dual container, 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 aluminium paint for general purposes, in dual container. The ready mixed paint obtained by mixing the materials in the two chambers is used for protective and decorative purposes, particularly where a heat-reflecting surface is required. The use of this material is extended to appliances connected with ammunition.

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

3. TYPES

3.1 There shall be two types of the material:

- a) Brushing) and
- b) Spraying.

*Since revised.

†Second revision issued in 1964.

IS : 2339 - 1963

3.1.1 The type of material required, whether brushing or spraying, shall be stated in the contract.

4. SAMPLING

4.1 The supplier shall submit a tender sample packed in three different containers, each containing not less than 500 g of the components.

4.2 Representative samples of the components shall be drawn as in **3** of *IS: 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*).

4.2.1 The proportion of the paste and medium sampled shall be the same as packed in dual containers.

5. REQUIREMENTS

5.1 Composition — The ready mixed material shall be obtained by mixing aluminium paste [conforming to IS : 289-1963 Specification for Aluminium Paste for Paints (*Revised*)] and a varnish medium [conforming to IS: 642-1963 Specification for Varnish Medium for Alummium Paint (*Revised*)] contained in separate chambers of the dual container. The ingredients shall be provided in such proportions that, when mixed, the material shall contain not less than the equivalent of 15 percent by weight of aluminium powder, the remainder being a medium, and the ready mixed material shall contain not more than 50 percent of volatile matter.

5.1.1 The leafing property of the aluminium pigment in the ready mixed material, when tested within 4 hours of mixing, shall not be inferior to the leafing property of aluminium paste conforming to IS : 289-1963 Specification for Aluminium Paste for Paints (*Revised*).

NOTE — Leafing property shall be examined after the leafing comes to rest, but not later than 30 minutes.

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

5.3 The minimum weight in kg/10 litres of the material when tested in accordance with 25 of *IS: 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*) is 9. It shall be, however, within ± 3 percent of the sample approved against the specification, if any.

5.4 Optional Requirements — In addition, if agreed to between the purchaser and the supplier, the spreading capacity, spreading time and wet opacity shall be determined in accordance with relevant methods of

*Second revision issued in 1964.

IS : 2339 - 1963

test as given in *IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*) and the results recorded on the sample offered for approval against the specification. In the case of supplies offered against any approved sample to this specification, these characteristics shall be within 90 percent of the approved sample.

6. TESTS

6.1 Tests shall be conducted as prescribed in *IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*). References to the relevant clauses of that standard are given in col 4 of Table I and in 5.3.

TABLE I REQUIREMENTS FOR ALUMINIUM PAINT FOR GENERAL PURPOSES, IN DUAL CONTAINER

(Clauses 5.2 and 6.1)

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)	Consistency	Smooth and uniform and suitable for brushing or spraying	7.4
iii)	Finish	Bright, lustrous and smooth	7.5
iv)	Flexibility and adhesion after 48 hours air-drying	No visible damage, detachment, or cracking of the film	16
v)	Protection against corrosion under conditions of condensation	No signs of corrosion	18
vi)	Flash point	Not below 30°C	24
vii)	Keeping properties	Not less than one year	31

*IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*) (Second revision of this standard issued in 1964).

†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.

6.1.1 Unless specified otherwise, the material shall be tested after keeping in an air-tight container for 48 hours, after mixing.

*Second revision issued in 1964.

IS : 2399 - 1963

6.2 Quality of Reagents — Unless specified otherwise, 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.

7. PACKING AND MARKING

7.1 Packing — The paint shall be packed in dual containers.

7.2 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 month and year of manufacture.

7.2.1 The containers may also be marked with Standard mark.

7.2.2 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.

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

7.4 The material, When intended for defence purposes, shall be packed and marked in accordance with IS: 5661-1970 Code of practice for packing and marking of packages of paints, enamels, varnishes and allied products.

BUREAU OF INDIAN STANDARDS**Headquarters:**

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002
 Telephones: 323 0131, 323 3375, 323 9402
 Fax: 91 11 3234062, 91 11 3239399, 91 11 3239382

Telegrams : Manaksanstha
 (Common to all Offices)

Central Laboratory:

Telephone

Plot No. 20/9, Site IV, Sahibabad Industrial Area, Sahibabad 201010 8-77 00 32

Regional Offices:

Central: Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002 323 76 17

*Eastern : 1/14 CIT Scheme VII M, V.I.P. Road, Maniktola, CALCUTTA 700054 337 86 62

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160022 60 38 43

Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600113 235 23 15

†Western : Manakalaya, E9, Behind Marol Telephone Exchange, Andheri (East), 832 92 95
 MUMBAI 400093

Branch Offices::

'Pushpak', Nurmohamed Shaikh Marg, Khanpur. AHMEDABAD 380001 550 13 48

‡Peenya Industrial Area, 1st Stage, Bangaiore-Tumkur Road, 839 49 55
 BANGALORE 560058

Gangotri Complex, 5th Floor, Bhadbhada Road, T.T. Nagar, BHOPAL 462003 55 40 21

Plot No. 62-63, Unit VI, Ganga Nagar, BHUBANESHWAR 751001 40 36 27

Kalaikathir Buildings, 670 Avinashi Road, COIMBATORE 641037 21 01 41

Plot No. 43, Sector 16 A, Mathura Road, FARIDABAD 121001 8-28 88 01

Savitri Complex, 116 G.T. Road, GHAZIABAD 201001 8-71 19 96

53/5 Ward No.29, R.G. Barua Road, 5th By-lane, GUWAHATI 781003 54 11 37

5-8-56C, L.N. Gupta Marg, Nampally Station Road, HYDERABAD 500001 20 10 83

E-52, Chitaranjan Marg, C- Scheme, JAIPUR 302001 37 29 25

117/418 B, Sarvodaya Nagar, KANPUR 208005 21 68 76

Seth Bhawan, 2nd Floor, Behind Leela Cinema, Naval Kishore Road, 23 89 23
 LUCKNOW 226001

NIT Building, Second Floor, Gokulpat Market. NAGPUR 440010 52 51 71

Patliputra Industrial Estate, PATNA 800013 26 23 05

Institution of Engineers (India) Building 1332 Shivaji Nagar, PUNE 411005 32 36 35

T.C. No, 14/1421, University P. O. Palayam, THIRUVANANTHAPURAM 695034 6 21 17

*Sales Office is at 5 Chowringhee Approach, P.O. Princep Street, 27 10 85
 CALCUTTA 700072

†Sales Office is at Novelty Chambers, Grant Road, MUMBAI 400007 309 65 28

‡Sales OFFICE is at 'F' Block, Unity Building, Narashimaraja Square, 222 39 71
 BANGALORE 560002

Reprography Unit, BIS, New Delhi, India