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# मानक

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IS 347 (1975): Varnish, shellac, for general purposes [CHD  
20: Paints, Varnishes and Related Products]



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*Indian Standard*  
**SPECIFICATION FOR VARNISH, SHELLAC,  
FOR GENERAL PURPOSES**

*( First Revision )*

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

# Indian Standard

## SPECIFICATION FOR VARNISH, SHELLAC, FOR GENERAL PURPOSES

### ( First Revision )

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*Indian Standard*  
SPECIFICATION FOR VARNISH, SHELLAC,  
FOR GENERAL PURPOSES  
( *First Revision* )

**0. FOREWORD**

**0.1** This Indian Standard ( First Revision ) was adopted by the Indian Standards Institution on 31 March 1975, 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 first published in 1952 and was based largely on the interim co-ordinated draft produced with the assistance of the representatives of manufacturers and various departments and authorities of the Government of India, by the Co-ordinating Subcommittee of the No. 5 Standing Committee on Specifications for Paints and Allied Stores of the General Headquarters ( now Army Headquarters ), India.

**0.3** In this revision which has been prepared based on the recommendations of an *Ad hoc* Panel specially set up for review of published Indian Standards on paints, the requirement for shellac content in the composition of the material has been modified to  $20 \pm 2$  percent by mass with a view to have the material ready for use. Solvent used for the material was so far prescribed as denatured spirit only. In the recent past the supply position of the solvent has been very uncertain causing hardship to all concerned. The concerned Sectional Committee has examined the matter in detail and the use of isopropyl alcohol is also being prescribed. Amendment No. 1 to this standard has been incorporated in this revision.

**0.4** 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\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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**1. SCOPE**

**1.1** This standard prescribes requirements and methods of sampling and test for the material commercially known as varnish, shellac, for general purposes. The material is used for knotting and finishing woodwork.

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\*Rules for rounding off numerical values ( revised ).

## 2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 6667-1972\* and IS : 197-1969† shall apply.

## 3. REQUIREMENTS

3.1 **Description** — The material shall be free from foreign matter and visible impurities.

3.2 **Composition** — The material shall contain  $20 \pm 2$  percent by mass of shellac [ see IS : 16 ( Part I )-1973‡ and IS : 16 ( Part II )-1973§ ] dissolved in denatured spirit ( see IS : 324-1959|| ) or isopropyl alcohol ( see IS : 2631-1964¶ ) or a mixture of the two.

3.3 **Iodine Value** — The iodine value of the residue obtained from the materials after evaporation at 40°C under vacuum shall be not more than 20.0.

3.3.1 The iodine value shall be determined as prescribed under 24.2 of IS : 6921-1973\*\*.

3.4 **Colour Index** — The colour index of the material shall not exceed 18.0.

3.4.1 The colour index shall be determined as prescribed under 7 of IS : 6921-1973\*\* with the following modification in 7.2.1.2 of that standard:

‘ 7.2.1.2 *Shellac solution* — Weigh accurately a quantity of the material equivalent to 10.0 g of dry shellac and dilute to 100 ml with cold 95 percent ( v/v ) ethyl alcohol ( see IS : 321-1964†† ). Filter the solution in an ordinary funnel using a medium grade filter paper. Discard the first 15 ml of the filtrate and then collect 5 ml or more of the clear filtrate for the test. ’

3.5 The material shall also comply with the requirements given in Table 1.

\*Glossary of terms used in synthetic resin industry.

†Methods of test for varnishes and lacquers ( revised ).

‡Specification for shellac: Part I Handmade shellac ( second revision ).

§Specification for shellac: Part II Machine made shellac ( second revision ).

||Specification for ordinary denatured spirit ( revised ).

¶Specification for isopropyl alcohol.

\*\*Methods of sampling and test for lac and lac products.

††Specification for absolute alcohol ( revised ).



**TABLE 1 REQUIREMENTS FOR VARNISH, SHELLAC,  
FOR GENERAL PURPOSES**

( Clause 3.5 )

| Sl. No. | CHARACTERISTIC                              | REQUIREMENT  | METHOD OF TEST,<br>REF. TO CL. NO. IN<br>IS : 197-1969* |
|---------|---|--|---|
| (1)     | (2)   | (3)  | (4)   |
| i)      | Drying time, <i>Max</i> :<br>Hard dry       | 2 hours  | 7.2   |
| ii)     | Finish                                      | Smooth and glossy  | 8   |
| iii)    | Ash content, percent by<br>mass, <i>Max</i> | 0.50   | 16  |
| iv)     | Freedom from rosin                          | Shall show no positive re-<br>action when subjected to<br>Liebermann Storch or<br>Halphen Hicks test | 19  |
| v)      | Keeping properties†                         | Not less than one year from<br>the date of manufac-<br>ture, in stone-ware or glass<br>containers    | 20  |

\*Methods of sampling and test for varnishes and lacquers ( *first revision* ).

†Since shellacs do change in colour on storage the test for colour index shall not be carried out after storage of one year.

## 4. PACKING AND MARKING

**4.1 Packing** — The material shall be packed in tin or galvanized container or as agreed to between the purchaser and the supplier.

**4.2 Marking** — Each container shall be marked with the following:

- a) Name of the material;
- b) Name of the manufacturer or/his trade-mark, if any;
- c) Volume of the material;
- d) Batch No. or lot No. in code or otherwise; and
- e) Month and year of manufacture.

## 4.3 BIS Certification Marking

The product may also be marked with Standard Mark.

**4.3.1** The use of the Standard Mark is governed by the provisions of 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.

## **IS : 347 - 1975**

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

## **5. SAMPLING**

**5.1** Representative samples of the material shall be prepared as prescribed under 3 of IS : 197-1969\*.

## **6. TEST METHODS**

**6.1** Tests shall be conducted as prescribed in IS : 197-1969\* and IS : 6921-1973†. References to relevant clauses of IS : 197-1969\* are given in col 4 of Table 1 and those of IS : 6921-1973† in 3.3.1 and 3.4.1.

**6.2 Quality of Reagents** — Unless specified otherwise, pure chemicals and distilled water ( *see* IS : 1070-1960‡ ) shall be employed in tests.

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

## **7. CRITERIA FOR CONFORMITY**

**7.1** A lot shall be declared as conforming to the requirements of this standard if the test results of the composite samples satisfy the requirements prescribed under 3.

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\*Methods of sampling and test for varnishes and lacquers (*first revision*).

†Methods of sampling and test for lac and lac products.

‡Specification for water, distilled quality (*revised*).

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\*Sales Office in Calcutta is at 5 Chowringhee Approach, P. O. Princep Street, Calcutta 700072

†Sales Office in Bombay is at Novelty Chambers, Grant Road, 89 65 28  
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‡Sales Office in Bangalore is at Unity Building, Narasimharaja Square, 22 36 71  
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