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# मानक

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IS 101-6-2 (1989): Methods of sampling and test for paints, varnishes and related products, Part 6: Durability tests on paint films, Section 2: Keeping properties [CHD 20: Paints, Varnishes and Related Products]



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“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard*

**METHODS OF SAMPLING AND TEST FOR  
PAINTS, VARNISHES AND RELATED PRODUCTS**

**PART 6 DURABILITY TEST ON PAINT FILMS**

**Section 2 Keeping Properties**

**( *Third Revision* )**

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## FOREWORD

This Indian Standard ( Part 6/Sec 2 ) ( Third Revision ) was adopted by the Bureau of Indian Standards on 25 July 1989, after the draft finalized by the Paints and Allied Products Sectional Committee had been approved by the Chemical Division Council.

This standard ( Part 6/Sec 2 ) is one of a series dealing with sampling and test of paints, varnishes and related products.

In the preparation of this standard, considerable assistance has been derived from ASTM D - 1849 - 80 'Standard test method for package stability of paints', issued by the American Society for Testing and Materials, USA. This standard supersedes clause 31 of IS 101 : 1964 'Methods of test for ready mixed paints and enamels ( *second revision* )'.

# Indian Standard

## METHODS OF SAMPLING AND TEST FOR PAINTS, VARNISHES AND RELATED PRODUCTS

### PART 6 DURABILITY TEST ON PAINT FILMS

#### Section 2 Keeping Properties

#### ( Third Revision )

### 1 SCOPE

1.1 This standard ( Part 6/Sec 2 ) prescribes the method to determine the change in certain properties that may take place when packaged paint of either the solvent thinned or latex type is stored at normal room conditions.

### 2 APPARATUS

2.1 Spatula weighing  $45 \pm 1$  g with square-ended blade, 120 mm in length and approximately 20 mm in width. It is prepared by cutting the tip from an ordinary 127 mm flexible steel laboratory spatula of the specified length.

2.2 Paint Brush nylon, 25 mm.

2.3 Test surface, a smooth-surfaced paper chart coated with a suitable varnish or lacquer so as to render the surface impervious and resistant to paint liquids.

### 3 PROCEDURE

3.1 Open the container and note skinning, corrosion and odour of putrefaction, rancidity or souring. The other odours may be ignored. Skinning shall be designated as in Table 1.

**Table 1 Designation of Changes in Skinning**  
( Clauses 3.1 and 3.4 )

Grading	Description
5	None
4	Very slight
3	Slight
2	Moderate
1	Considerable
0	Severe

3.2 Hold the can without shaking or agitation and examine the sample without the removal of supernatant vehicle. Determine the extent and character of portions of the paint that may have separated during storage by the use of spatula. Hold the spatula perpendicular to and in the centre area of the paint at a height whereby the bottom edge of the spatula is level with the top of the can. Drop the spatula from that position. Rate the conditions of sample in accordance with Table 2.

NOTE — This test shall be carried out with the sample stored in one litre or smaller container.

**Table 2 Rating for Degree of Settling**  
( Clauses 3.2 and 3.3 )

Rating	Description of Paints Condition
5	Perfect suspension. No change from the original conditions of the paint.
4	A definite feel of settling and a slight deposit brought up on a spatula. No significant resistance to sidewise movement of the spatula.
3	Definite cake of settled pigment. Spatula drops through cake to bottom of container under its own mass. Define resistance to sidewise motion of spatula. Coherent portions of cake may be removed on spatula.
2	Spatula does not fall to the bottom of container under its own mass. Difficult to move spatula through cake sidewise and slight edgewise resistance. Paint can be remixed readily to a homogeneous state.
1	When spatula has been forced through the settled layer, it is very difficult to move spatula sidewise. Definite edgewise resistance to movement of spatula. Paint can be remixed to a homogeneous state.
0	Very firm cake that cannot be reincorporated with the liquid to form a smooth paint by stirring manually.

3.3 After examination of the entire sample as described in 3.2, if a portion of the pigment has separated out to form a firm cake at the bottom of the container, pour the supernatant portion of the liquid into a clean container and hold for subsequent use. Reincorporate the separate cake by hand stirring with the spatula, adding back the liquid in small amounts until the pigment has been reincorporated to form a homogeneous paint suitable for the intended use or until it is determined that the pigment cake cannot be reincorporated by hand stirring. Rate the condition of the sample in accordance with Table 2.

3.4 Apply the stored paint to one test panel and fresh control paint to the other. After the brushed film has completely dried, examine it for grains 0.8 mm in diameter, even larger gelatinous lumps, and streaks caused by such grains or lumps and designate as in Table 1.

NOTE — The use of mechanical shaker shall be avoided so that the lumps may not disperse.

3.5 Determine the mass per 10 litre of liquid paints prescribed in IS 101 ( Part 1/Sec 7 ) : 1988 'Methods of sampling and test for paints, varnishes and related products: Part 1 Tests on liquid paints ( general and physical ), Sec 7 Mass per ten litres ( third revision )'. Calculate the loss of mass resulting from storage.

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