

## केन्द्रीयमुहरविभाग- 2

हमारासंदर्भ: सीएमडी 2/16:2932

22 05 2018

विषय - आई एस 2932:2013 के अनुसार उत्पाद के लिए अनिमित एस टी आई (डॉक:एस टी आई/ 2932/7, सितम्बर 2015) .

उपरोक्त विषय के संदर्भमें आई एस 2932:2013 के अनुसारप्रमाणन हेतु एस टी आई संलग्न है ।

उपरोक्त एस टी आई, जो कि पहले से ही अनुमोदित और प्रचालित है, सभी संबंधित पक्षकारों के तत्काल संदर्भ के लिए बी आई एस इंटरनेट पर अपलोड किया जा रहा है ।

(अदाने खासी )

वैज्ञानिक सी, सी एम डी-2

प्रमुख (सी एम डी-2)(हस्ता/-)

सभी क्षेत्रीय/शाखा/प्रयोगशाला/सीएचडी/एमएसडी कार्यालयों को परिचालित  
आईटीएस - इंटरनेट पर अपलोड करने के लिए

## CENTRAL MARKS DEPARTMENT – 2

Our Ref: CMD-2/16:2932

22 05 2018

**Subject: Finalized STI Doc: STI/2932/7, September 2015 Enamel, synthetic, Exterior: (a) Undercoating (b) Finishing as per IS 2932:2013.**

With reference to the subject mentioned above, please find enclosed the STI for Certification of Enamel, synthetic, Exterior: (a) Undercoating (b) Finishing as per IS 2932:2013.

The above STI which is already approved and implemented, is being hosted in BIS intranet for ready reference of all concerned.

(Adane Khraasi)

Scientist-C, CMD-2

Head (CMD-2)(Sd/-)

Circulated to All BOs/ROs/Labs/CHD/MSD

ITS- for hosting on intranet please.

## SCHEME OF TESTING AND INSPECTION

FOR CERTIFICATION OF ENAMEL, SYNTHETIC, EXTERIOR:  
(a) UNDERCOATING (b) FINISHING, COLOUR as required used in  
painting system for protection and decoration — SPECIFICATION  
ACCORDING TO IS 2932:2013

**1. LABORATORY:** A laboratory shall be maintained which shall be suitably equipped and staffed where the tests shall be carried out in accordance with the methods given in the specification.

1.1 All the testing equipment shall be periodically checked and records of such checks shall be maintained.

**2. TEST RECORDS:** All records of tests and analysis shall be maintained as specified in Table 1.

2.1 Copies of any records or charts that may be required by BIS shall be made available at any time on request.

**3. Quality Control** - It is recommended that, as far as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the products as envisaged in this Scheme [See IS 397 (Part 1), IS 397 (Part 2), IS 397 (Part 3) and IS 397 (Part 4)].

3.1 In addition, effort should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001:2008.

3.2 All instruments/equipment are required to be brought under calibration control.

**4. STANDARD MARK:** The Standard Mark, as given in Column (1) of the First Schedule of the license shall be printed on each container or on the label applied to the container; provided always that the material in each container on which this Mark is thus applied conforms to every requirement of the specification.

**5.0 MARKING** - In addition the following information shall be given on each container or on the label applied to it:

- a) Name of the material and indication whether undercoating or finishing;
- b) Indication of source of manufacturer;
- c) Lead Content (Max);
- d) A statement 'synthetic', if the material contains phthalic anhydride.
- e) Volume of the material;
- f) Batch No. or Lot No in code or otherwise;
- g) Month and year of manufacture;
- h) Colour/shade of the material;
- i) A cautionary note as given below:
  - 1) Keep out of reach of children
  - 2) Dried film of this paint may be harmful if eaten or chewed.
  - 3) This product may be harmful swallowed or inhaled.
- j) Licence No. CM/L.....

5.1 The material when intended for defence purposes, shall be marked in accordance with IS 5661.

6. For the purpose of supplying the product to purchaser compliance to General Provisions as specified in clause 10 of IS 2932: 2013 shall be ensured.

**7.0 LEVELS OF CONTROL** :- The analysis and tests, as indicated in Table 1 and at the levels of controls specified therein, shall be carried out on the whole production of the factory which is covered by this scheme and appropriate records and charts maintained in accordance with item 2 above. All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

**8.0 CONTROL UNIT**:- For the purpose of sampling, enamel of same colour and same class produced during a shift at one uniroll and thoroughly homogenized shall constitute a control unit.

8.1 On the basis of the tests on the samples drawn from a control unit, the conformity to the various requirements of the specification shall be made as follows:

8.2.1 For the purpose of registration of the sample of the material the colour categories as prescribed in clause 5 of the Standard shall be employed.

8.2.2 A sample drawn from a control unit shall be tested for its colour by matching it with a specified IS Colour, or to an agreed colour where IS colour is not specified. In case of undercoating, the colour shall be of approximate match to the finishing enamel. If it fails to conform to the requirement, the control unit from which the sample is drawn shall be considered unfit for the purpose of marking.

8.2.2.1 In addition to the test as given in para 8.2.2. above, a sample taken from every control unit shall also be tested for its consistency, drying time, finish, resistance to acid and alkali (only finishing enamel).

8.2.2.2 Two samples from every control unit shall also be tested for scratch hardness, flexibility & adhesion, and mass per ten litres. If any sample fails in respect of one or more of these requirements, the control unit represented by that sample shall be considered unfit for the purpose of marking.

**9.0 RAW MATERIALS**- Each consignment of thinner received in the factory shall be tested for flash point and only those consignments conforming to the relevant IS specification shall be used in the manufacture of Enamel.

9.1 Only such resins pigments and vehicles received in the factory shall be used for certified enamel's production whose composition is similar to that of the raw materials used for manufacture of the registered sample. Each consignment of these material shall be tested for the moisture content and in no case, the moisture shall exceed 0.5% by weight, when tested by Deen & Stark Method.

10.0 In respect of all other clauses of the specification the factory will maintain appropriate controls and checks to ensure that their product conforms to the various requirements of the specification.

**11. REJECTIONS**: A separate record shall be maintained giving information relating to the rejection of paint not conforming to the specification and the method of their disposal. Such material, if packed, shall in no case be stored together with that conforming to the specification.

**12. SAMPLES**: The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations from his factory or godown. BIS shall, however, pay for the samples taken by it from the open market.

**13. REPLACEMENT:** Whenever a complaint is received soon after the goods with certificationMark have been purchased and used and if there is adequate evidence that the goods have not been misused, defective goods shall be replaced free of cost by the licensee in case the complaint is proved to be genuine and the warranty period (where applicable) has not expired. The final authority to judgeconformity of the product to the Standard shall be with BIS. The firm should have its own complaint investigation systems as per IS/ISO 10002.

**13.1** In the event of any damages caused by the goods bearing the Standard Mark, or claim being filedby the consumers against BIS Standard Mark and not "conforming to" their relevant Indian Standard, entire liability arising out of such non conforming product shall be of licensee and BIS shall not in any way be responsible in such cases.

**14. STOP MARKING:** The marking of the product shall be stopped under intimation to BIS, if, atany time, there is some difficulty in maintaining the conformity of the product to the specification or the testing equipment goes out of order or if directed to do so by BIS for any reason. The marking may be resumed as soon as the defects are removed under intimation to BIS.

The marking of the product shall be stopped immediately if directed to do so by BIS for any reason. The marking may then be resumed only after permission by BIS. The information regarding resumption of marking shall also be sent to BIS.

**15. PRODUCTION:** The licensee shall send to BIS a statement of quantity produced, marked andexported by him and the trade value thereof, at the end of each operative year of the licence (to be authenticated by a Chartered Accountant or by the manufacturer by giving an affidavit /undertaking).

**TABLE 1**  
**IS 2932:2013**  
**ENAMEL, SYNTHETIC, EXTERIOR, (a) UNDERCOATING (b) FINISHING**  
**TABLE 1 LEVELS OF CONTROL**  
**(Para 6.0 of the Scheme of Testing and Inspection)**

Clause	Test Details		Levels of control	
	Requirement	Test method Reference	No. of Samples	Frequency
6.1	Composition			
6.1.1	i) General	IS 101 (Part 9/Sec2)	One	Each control unit
6.1.2	ii) Total Non-Volatile Content	IS 101 (Part 8/Sec2)	One	Each control unit
6.2	Condition in container			
6.2.1	a) At delivery	IS 2932:2013	One	Each control unit
6.2.2	b) During Storage	IS 101 (Part 6/Sec2)	One	Once in six months
6.3	Freedom from coarse particles	IS 101(Part1/Sec 2)	One	Each control unit
6.4	Skin Formation	IS 101(Part1/Sec 2)	One	Each control unit
6.5	Thinning properties	IS 2932:2013	One	Each control unit
6.6	Application properties	IS 2932:2013	One	Each control unit
6.7	<b>Durability</b>	<b>IS 2932:2013</b>	<b>One</b>	<b>Once in a year</b>
6.8	Lead Restriction	IS 101(Part8/Sec 5)	One	Each control unit
6.9 & Table 2	i) a) Consistency	IS 101(Part1/Sec 5)	One	Each control unit
	b) Viscosity			
	ii) Mass	IS 101(Part1/Sec 7)	One	Each control unit
	iii) Drying Time:			
	a) Surface Dry	IS 101(Part3/Sec 1)	One	Each control unit
	b) Hard Dry			
	c) Tack Dry			
	iv) a) Finish	IS 101(Part3/Sec 4)	One	Each control unit
	b) Gloss	IS 101(Part4/Sec 4)		
	v) Fineness of Grind	IS 101(Part3/Sec 5)	One	Each control unit
	vi) Colour	IS 101(Part4/Sec 2)	One	Each control unit
	vii) Flexibility and adhesion			
	a) Scratch Hardness	IS 101(Part5/Sec 2)	Two	Each control unit
	b) Bend Test	IS 101(Part5/Sec 2)		
	viii) Flash Point	IS 101(Part1/Sec 6)	One	Each consignment of thinner received
	ix) Composition		One	Each control unit
	a) Volume solids	IS 101(Part8/Sec 6)		
	b) Pthalic anhydride	IS 101(Part8/Sec 4)		

x) Resistance to Acid*	Annex E of IS 2932:2013	One	Each control unit
xi) Resistance to Alkali*	Annex F of IS 2932:2013	One	Each control unit
xii) Accelerated storage stability	Annex G IS 2932:2013	One	Every 10 <sup>th</sup> control Unit
xiii) Keeping properties	IS 101(Part6/Sec 2)	One	Every 10 <sup>th</sup> control Unit
xiv) Wet opacity (To be read with clause 5 and Table1 of IS 2932)	IS 101(Part4/Sec 1)	One	Each control unit

\* For finishing enamel only.