

छत के ऊपरी भाग को ठंडा रखने के लिये
सौर ताप के परावर्तन हेतु बाहरी कोटिंग

**Solar Thermo-Reflective Exterior
Coating for Cooling of Roof Top**

ICS 87.020

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भारतीय मानक ब्यूरो
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- f) Batch number or lot number in code or otherwise;
- g) Month and year of manufacture;
- h) Colour/shade of the material; and
- j) 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 if swallowed or inhaled.

6.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.

7 SAMPLING

7.1 Preparation of Test Samples

7.1.1 For Registration

The sample shall be submitted in three different containers each containing not less than 500 ml of the material.

7.1.2 Bulk Supply Sample

Representative samples of the materials shall be drawn and treated as prescribed in IS 101 (Part 1/Sec 1).

7.1.3 For Drying Time Test

Prepare mild steel panel of sizes 150 mm × 100 mm × 1.25 mm as prescribed in 2 of IS 101 (Part 1/Sec 3) and concrete panel of size 150 mm × 150 mm × 12.5 mm as prescribed in 7 of IS 101 (Part 1/Sec 3). Apply the

Table 1 Requirement for Solar Thermo-Reflective Exterior Coating for Cooling of Roof Top for Roof Top
(Clause 5.4)

Sl No.	Characteristic	Requirement		Method of Test
		Emulsion Paints	Solvent Based Paint	
(1)	(2)	(3)	(4)	(5)
i)	Drying time, <i>Max</i>			IS 101 (Part 3/Sec 1)
	a) Surface dry	30 min	2 h	
	b) Hard dry	3 h	12 h	
	c) Tack free	4 Days	7 Days	
ii)	Mass, kg/10 litre, <i>Min</i>	13	12.5	IS 101 (Part 1/Sec 7)
iii)	a) Consistency	Smooth, uniform and suitable for brushing without appreciable drag on the brush		Annex C of IS 133
	b) Viscosity, sec, in No. 4 Ford Cup at $27 \pm 2^\circ\text{C}$	80 to 120		
iv)	a) Finish	Matt	Glossy	IS 101 (Part 1/Sec 5)
	b) Gloss, 60°	—	50-60	IS 101 (Part 3/Sec 4)
v)	Volume Solids, percent, <i>Min</i>	47		IS 101 (Part 4/Sec 4)
vi)	Colour	Close match to the specified IS colour as in IS 5 or to an agreed colour		IS 101 (Part 8/Sec 6)
vii)	Thickness, dry film, microns, <i>Min</i>	120	120	IS 101 (Part 4/Sec 2)
viii)	Solar reflectance index, <i>Min</i>	102	102	Annex A of IS 16676
	a) Reflectance, <i>Min</i>	80 percent	80 percent	ASTM E 1980-11
	b) Emissivity, <i>Min</i>	0.92	0.92	ISO 9050
ix)	Pull off adhesion, <i>Min</i>	2.8 MPa	7.2 MPa	EN 673
x)	Hardness (pencil), <i>Min</i>	3h	5h	Annex D of IS 16676
xi)	Pot life at 30°C , <i>Min</i>	—	3 h	IS 101 (Part 5/sec 1)
xii)	Accelerated weatherometer test, 2 000 h exposure	Gloss retention and colour fastness shall be minimum 90 percent of original.	Gloss retention and colour fastness shall be minimum 95 percent of original.	Annex J of IS 5410
				IS 101 (Part 6 / Sec 5)