



TSD 6206

PLANT PURCHASING SPECIFICATION BHOPAL

BP 56183

Rev. No.02

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SUPERSEDES
BP 56183 Rev.01

OIL RESISTANT NON-YELLOWING FULL GLOSSY WHITE PAINT

1. GENERAL:

This specification governs the quality requirements of Oil Resistant Non-Yellowing Full Glossy White Paint which shall be capable of being brushed, sprayed or flow coated by thinning suitably with white spirit conforming to Corporate Purchasing Specification AA 56701.

2. APPLICATION:

Suitable for painting metallic surfaces where mineral oil resistant property is required. The enamel shall be used on metallic surfaces without the use of any primer.

3. COLOUR :

White.

4. COMPLIANCE WITH NATIONAL STANDARDS:

There is no National Standard covering this type of material.

5. FINISH :

Smooth and Full glossy.

6. FREEDOM FROM DEFECTS:

The paint shall remain free from defects like hard settling of pigments, skinning when kept in a closed container and livering excessive viscosity build up) during its rated shelf life.

The dried paint film shall be free from defects like bittyness, floating of pigments, surface haze, orange peeling, yellowing tendency, wrinkles, etc.

Revision :
Reviewed

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STANDARDS AND MATERIALS GROUP
TECHNICAL SERVICES DEPARTMENT

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7. CHEMICAL COMPOSITION :**7.1 Binder :**

The binder shall be based on oil modified alkyd resin of about 60% oil length. Modifying oils shall be of non-yellowing type eg. Kardyseed oil, dehydrated castor oil, soyabean oil etc. other binders like methyl methacrylate acrylated alkyds may also be used. It shall be free from natural or modified natural resins.

7.2 Pigments :

22 $\pm$ 2 %by weight of base paint.

7.2.1 Rutile Titanium Dioxide:

90% minimum by weight of base paint.

7.2.2 Zinc Oxide :

10% maximum by weight of pigment.

7.2.3 No Lead pigment shall be used. Extenders shall not be used in general. If absolutely necessary good quality extenders upto a maximum of 5% may be used.

8. TEST METHOD :

Shall be tested as per IS:101 unless otherwise specified.

9. TEST SAMPLES:

Tender samples will not be required when once the type approval is given and the supplier concerned declares that the material for which the tender is given is of the same quality as the type approved sample.

Representative samples of the material shall be drawn and treated as prescribed in relevant parts of IS:101

10. PROPERTIES :

When tested in accordance with IS:101, the test samples shall show the following properties:



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10.1 Drying Time :

Surface dry : 2 1/2 hours maximum

Hard dry } : 16 hours maximum
Tack free }

10.2 Consistency :

130 $\pm$ 10 seconds in Ford Cuup No. 4 at 27 $\pm$ 2Dec.C.

10.3 Fineness of Grind:

6 minimum on Hegman's gauge..

10.4 Gloss & its Retention (Type Test) :

80% minimum when supplied. The gloss after outdoor exposure for 6 months shall not be less than 50% of the original value.

10.5 Pressure Test (Type Test):

The metal surface shall not be rendered visible when the two test pieces are separated after the test was carried out.

10.6 Fastness to light

There should be no undue change in colour.

10.7 Flash Point

Not below 34 deg. C.

10.8 Scratch Hardness:

1800 g minimum on mild steel panel.

10.9 Protection Against Corrosion Under Conditions of Condensation :

The painted film should not show any sign of deterioration and the metal surface no sign of corrosion.

10.10 Weight :

11.5 kg $\pm$ 3% per 10 litres.

10.11 Pigment and Non-volatile Matter Content:

60 percent minimum by weight of the base paint.



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10.12 Accelerated Weathering Test : (Type Test)

After 21 days exposure under accelerated weathering conditions, the film shall not show any sign of general breakdown.

10.13 Freedom From Yellowing:

Apply a coat of the paint by brushing over a cleaned mild steel panel of size 150 mm x 150 mm. allow the paint to dry for 24 hours. The weight of the dried film should be in accordance with IS:101 (27 to 34 g/m in this case). Apply a second coat of the paint in a similar manner and allow it to dry for another 24 hours.

The panel prepared as above, after ten days of exposure to darkness shall not have darkened or yellowed in colour when compared with a freshly prepared panel from the same paint in the same manner.

10.14. Resistance to oil :

When tested in transformer oil conforming to CPS AA27101/IS:335 at 90 deg.C for 48 hours the painted film shall not soften nor there be any change in the colour of the painted film. The electrical properties of the transformer oil should not be adversely affected.

11. TYPE APPROVAL:

11.1 Samples :

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory to ensure continuous supply of good product.

12. TEST CERTIFICATE :

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment giving the following information.

In addition, the supplier shall ensure to enclose one copy of test Certificates along with their dispatch document to facilitate quick clearance of the material.



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BP 56183 : Oil Resistant Non Yellowing Full Glossy White Paint.

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BHEL Order No.

Manufacturer's/Supplier's Name

Trade Mark, if any.

Date of Manufacturing & Expiry

Test Results of Clause 7,9 & 10.

13. KEEPING PROPERTY :

When stored under cover in a dry place in the original sealed Container under normal temperature conditions, the material shall retain the properties prescribed in this specification for a period of not less than 12 months after the date of manufacture which shall not be earlier than one month of the scheduled delivery date mentioned in the purchase order

14. PACKING AND MARKING :

Unless otherwise stated, the paint shall be packed in 20 litre Steel drums. Each container shall bear the following information.

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BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch No.

Date of Manufacture & Expiry

Quantity supplied.