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|  | <b>CORPORATE PURCHASING SPECIFICATION</b> | AA56135     |
|                                                                                   |                                           | Rev No. 05  |
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## HIGH BUILD BLACK COAL TAR EPOXIDE PAINT

### 1 GENERAL

This specification governs the quality requirements of two pack anticorrosive High Build Black Coal Tar Epoxide Paint which shall be capable of being brushed or sprayed by suitable thinning with the recommended thinner, if any, so as to obtain a dry film thickness of 4 to 5 mils (100-125µm) per coat.

### 2 APPLICATION

Suitable for application where high humidity, total immersion in water, severe saline atmospheric condition and chemically corrosive environments prevail.

### 3 COLOUR

Black

### 4 COMPLIANCE WITH NATIONAL STANDARDS

Assistance has been derived from IS: 14948 in preparation of this specification.

### 5 FINISH

Smooth and uniform (See note at clause 9).

### 6 FREEDOM FROM DEFECTS

The paint shall remain free from defects like hard setting of pigments, skinning when kept in closed container and livering (excess 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, colour fading, wrinkles, etc.

### 7 CHEMICAL COMPOSITION

The paint shall be composed of suitable grade of coal tar pitch, epoxy resins and accelerator in appropriate proportions to comply with the requirements of this specification. The infra-red spectrograph of epoxy resin used in binder shall be strictly adhered to that of type approved sample. Pigments and extenders used in the composition shall be resistant to chemicals and water.

### 8 TEST SAMPLES

Tender samples will not be required when once the type approval (Clause 10) 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 IS: 101.

### 9 PROPERTIES

The paint shall be so thinned as to obtain a dry film thickness of 4 to 5 mils per coat. When tested in accordance with relevant parts and clauses of IS: 101 and Appendix-1 to this specification, the test samples shall show the following properties.

|                   |         |            |                                                                                    |                    |                                            |
|-------------------|---------|------------|------------------------------------------------------------------------------------|--------------------|--------------------------------------------|
| <b>Revisions:</b> |         |            | <b>APPROVED:</b><br>INTERPLANT MATERIAL RATIONALISATION<br>COMMITTEE – MRC(CPO+NM) |                    |                                            |
| Rev No.05         | Amd No. | Reaffirmed | Prepared<br>HEP, Bhopal                                                            | Issued<br>Corp.R&D | Dt. of 1 <sup>st</sup> Issue<br>01-01-1980 |
| Dt:26-05-2012     | Dt:     | Year:2019  |                                                                                    |                    |                                            |

**9.1 Drying Time at room temperature**

- Surface dry : 4 hours maximum.
- Hard dry : 16 hours maximum.

**9.2 Scratch Hardness (type Test)\***

After the film is cured for 7 days under ambient conditions and tested under a load of 1200 g, no such scratch as to show the base metal shall be produced.

**9.3 Flexibility And Adhesion (Type Test)\***

The film shall not show sign of damage, detachment or cracking when tested after 7 days curing under ambient conditions.

**9.4 Flash Point**

Not below 25°C.

**9.5 Pot Life (Appendix-1)**

4 to 8 hours, min.

**9.6 Epoxy Resin Content**

25% minimum by mass.

**9.7 Volume solid**

64%, minimum

**9.8 Recoating Property**

The painted film shall be capable of receiving one more coat of the same paint between 24 and 96 hours of applying the first coat.

**9.9 Effect of Boiling Water for 48 Hours on cured film (Type Test)**

No softening or peeling off, of the film shall take place.

**9.10 Effect of heating at 150°C + 2°C in air for 48 hours**

No softening or peeling off, of the film shall take place.

\*Note: Scratch hardness, flexibility and adhesion and finish tests shall be conducted on painted grit blast steel panel while the other conditions of IS: 101 remaining unchanged.

**10 TYPE APPROVAL**

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.

**11 TEST CERTIFICATES**

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment:

In addition, the supplier shall ensure to send one copy of the test certificates along with the dispatch documents to facilitate quick clearance of the material.

The test certificates shall bear the following information:

- AA56135, Rev. 05: HIGH BUILD BLACK COAL TAR EPOXIDE PAINT
- BHEL Order No.
- Batch / Lot No.
- Supplier's/ Manufacturer's Name and Trade mark, if any



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- Date of manufacture and expiry
- Test results of clauses 7 and 9

### 12 KEEPING PROPERTY:

When stored in a covered dry place in the original sealed container under normal temperature conditions, the base and accelerator when mixed in appropriate proportions shall retain the properties prescribed in this specification for a period of 12 months after the date of manufacture, which shall not be earlier than one month from the scheduled delivery date mentioned in BHEL order.

### 13 PACKING AND MARKING

Unless otherwise stated, base and accelerator shall be packed separately in steel containers of appropriate capacities.

If stated in BHEL order, the recommended thinner shall also be supplied in sufficient quantity.

Each container shall bear the following information:

- AA56135: HIGH BUILD BLACK COAL TAR EPOXIDE PAINT
- BHEL Order No.
- Batch / Lot No.
- Supplier's/ Manufacturer's Name and Trade mark, if any
- Quantity
- Date of manufacture and expiry

### 14 ENVIRONMENTAL REQUIREMENTS

The supplier shall furnish Material Safety Data Sheet (MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

### 15 REFERRED STANDARDS (Latest Publications Including Amendments)

- 1) IS: 101

#### APPENDIX – 1

#### DETERMINATION OF POT LIFE (CLAUSE 9.6)

About 100 ml of the mixed paint prepared by mixing the base and accelerator in the recommended proportions is taken in a beaker. The paint shall be such that it should be usable by brush under a specified pot life of 6 - 12 hours at room temperature.

In order to see if the paint has jelled or not, a small quantity of the mixed paint is dissolved in the recommended thinner. It should not dissolve if the paint has jelled and vice-versa.