

BHARAT HEAVY ELECTRICALS LIMITED
HEEP HARIDWAR INDIA-PIN 249403
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Sub: Requirement of Full Gloss Polyurethane Finishing Paint (Liquid)

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam turbines, turbo generators and so on.

Bids are invited for the following item through GeM Portal- <https://gem.gov.in>

Item Description	Mat. Code	Lot Quantity	Unit (Kg)	Delivery
Full Gloss Polyurethane Finishing Paint (Liquid) Spec: AA56142 Rev: 06 Size: Grey, Ral 9002 Grade: FINSH-PNT	HW5610042933	500	Litre	On intimation (within 15 days of intimation)

Remarks-

1. Material required on intimation. Supply to be arranged within 15 days from date of intimation. LD will be applicable accordingly.
2. Testing & certification shall be as per ordering specification.
3. Quantity tolerance $\pm 5\%$ is acceptable.
4. Test Certificate as per specification is required.
5. Guarantee Certificate is required.
6. **Breach of Contract:**

In case of breach of contract, wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is at least 10% of the contract value, the same be encashed. In case the value of the security instruments available is less than 10% of the contract value, the balance amount be recovered from other financial remedies (i.e. available bills of the contractor, retention amount, etc. with BHEL) or legal remedies be pursued. The balance scope shall be got done independently without Risk & Cost of the failed supplier/ contractor. Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. Accordingly, recovery of an amount equivalent to 10% of the contract value shall be made in case of breach of contract.

7. Payment terms shall be as follows:

Type of Bidder	Payment Terms (Number of days)
Micro & Small Enterprises (MSEs)	45 days
Medium Enterprises	60 days
Non MSME	90 days

Note: Benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists / Dealers / Traders etc. for the items offered but not manufactured by themselves.

8. “A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity’s interests. **The bidder found to have a conflict of interest shall be disqualified.** A bidder may be considered to have a conflict of interest with one or more parties in the bidding process, if”
- a. They have controlling partner (s) in common; **or**
 - b. They receive or have received any direct or indirect subsidy/financial state from any of them; **or**
 - c. They have the same legal representative/ agent for purposes of this bid; **or**
 - d. They have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**
 - e. Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components / sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; **or**
 - f. In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent / dealer. There can be only one bid from the following:
 1. The principal manufacturer directly or through one Indian agent on his behalf; and
 2. Indian/ foreign agent on behalf of only one principal;**or**
 - g. A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; **or**
 - h. In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidder must proactively declare such sister/ common business/ management units in same/ similar line of business.”

- 9.** Kindly submit duly-filled and signed & stamped Annexures (Pre-qualification requirements, Quality requirements, Self-declaration for local content etc. as applicable) with the offer.
- 10.** Deviations, if any, to be mentioned explicitly in the offer. In case of no explicit mention of deviation (if any), it's deemed that all terms and conditions of the tender are acceptable to the supplier in-toto.
- 11.** In course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discount from respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/draw of lots, in the presence of respective L-1 bidders or their representatives.
- 12.** Rest terms & condition shall be as per latest GeM GTC.

ANNEXURE-I

PRE-QUALIFICATION REQUIREMENT

**PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR
FULL GLOSS POLYURETHANE FINISHING PAINT (AA56142)**

INTRODUCTION: The Full Gloss Polyurethane Finishing Paint is used on exterior surfaces to retain color and gloss for long period in addition to provide excellent chemical corrosion resistance.

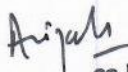
1. **ELIGIBLE VENDORS:** Vendor/Bidder should be either original manufacturer (OEM) or authorised Distributor/Dealer of Original manufacturer. In case of Authorized Distributor / Dealer, Vendor/Bidder to furnish supporting documents.
2. **EXPERIENCE:** The vendor should have the experience of successfully supplying minimum 500 litres of Full Gloss Polyurethane Finish Paint (Cumulative supply to be 500 litres) for Industrial applications during the last seven years from date of enquiry. The paint shall comply with the requirement of national standard IS:13213-1991 latest edition. In support of this, vendor to submit the following documents: -
 - 2.1. Copy of at least one unpriced purchase order of Full Gloss Polyurethane Finish Paint. (In case of submission of more than 1 POs, each POs submitted should be of more than 100 litres).
 - 2.2. Copy of Test Certificates (for Drying Time, Pot Life, Flash Point, Scratch hardness test etc.) for the Full Gloss Polyurethane Finish Paint corresponding to one of the unpriced purchase orders submitted above as per clause 2.1.
 - 2.3. Vendor to submit documentary evidence of acceptance of material, pertaining to one of the purchase order submitted above as per clause 2.1 for which TC as per clause 2.2 has been submitted.


In case of quotation by authorized distributor / dealer, the experience of OEM will also be admissible.


3. **MANUFACTURING FACILITIES:** Vendor to confirm that they have all the in-house manufacturing facilities for above Full Gloss Polyurethane Finish Paint meeting the requirements as per BHEL specification AA56142 rev 06 (In case of authorised Dealer of Original manufacturer confirmation to be taken from principal supplier).
4. **TESTING FACILITIES:** Vendor/bidder to confirm that they have all the in-house test facilities (duly calibrated), sufficient to carry out all the tests as per enquired specification AA56142 rev 06 (In case of authorised Dealer of Original manufacturer confirmation to be taken from principal supplier).
5. Vendor to confirm the detailed technical requirements given in the enquired specification (In case of authorized Dealer of Original manufacturer, confirmation to be taken from principal supplier).
6. Vendor who is supplying this item to BHEL for the first time has to submit 1 litre of Full Gloss Polyurethane Finish Paint free of cost sample for testing the material as per clause 9 of BHEL specification AA56142 rev 06. Vendor will be qualified on the basis of successfully passing of all the tests mentioned above for submitted sample in addition to qualifying other requirements of PQR.

NOTE

BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected.


Avinash Akela 27/3/23
Dy. Manager / ISE & CPL


Priyadarshi Rahul 27/03/23
Manager / ISE & CPL


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AGM / ISE, CPL & GRI

ANNEXURE-II**Checklist****FULL GLOSS POLYURETHANE FINISHING PAINT (LIQUID)****(To be confirmed and submitted along with the offer)**

S. N.	Description	Bidder's Confirmation
		(Yes/No or remarks to be filled by vendor)
1	Kindly confirm that item/material shall be supplied as per attached specification AA56142 Rev 06 & GEM bid documents.	
2	Kindly confirm that price have been quoted on FOR HEEP Haridwar basis.	
3	Kindly confirm that delivery period shall be 15 days from the intimation & offer validity shall be as per GeM bid.	
4	Kindly confirm that payment term shall be as per GeM bid.	
5	Kindly confirm that penalty for late deliveries shall be as per GeM GTC.	
6	Kindly confirm that Breach of contract clause is acceptable as per GeM bid.	
7	Kindly confirm that all the charges (Including GST) are inclusive in the quoted rate.	
8	Kindly ensure that UDYAM certificate (MSE) is submitted along with the offer (if eligible).	
9	Kindly ensure that Self declaration for local supplier (class 1 or 2) is submitted along with the offer under MII clause.	
10	Quality Requirement: Kindly confirm that Testing and Certification shall be done as per ordering specification.	
12	Quantity tolerance +/-5% is acceptable. Kindly confirm.	
13	Rest terms & conditions shall be as per latest GEM GTC, unless otherwise specified. Kindly confirm.	

**Signature with seal
Bidder representative**

ANNEXURE-III

Self-Certification for local content

In line with Government Public Procurement Order 2017 dated 16.09.2020, we hereby certify that we

.....
(supplier name) inform that local content is% (indicate percentage of local content) and are

Class- I local supplier (meeting requirement of)-

Minimum Local content 50%

or

Class- II local supplier (meeting requirement of)-

Minimum Local content 20%

(mark wherever applicable)

defined by Nodal Ministries/ Departments as per above order for the material against Enquiry No.

.....
Details of location at which local value addition will be made is as follows:

.....
.....
.....

We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Seal and Signature of Supplier

ANNEXURE-IV

SPECIFICATION – AA56142 REV:06



CORPORATE PURCHASE SPECIFICATION

AA 561 42

Rev. No. 06

PREFACE SHEET

FULL GLOSS POLYURETHANE FINISHING PAINT

FOR INTERNAL USE ONLY
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

Comparable Standards:

1. INDIAN : IS:13213-1991(RA-2007)

Suggested/Probable Suppliers and Grades:

1. Berger paints : Bergerthane Enamel
2. Asian paints : Apcothane CF 674
3. J & N paints : J & N 992
4. Refer plant vendor's list

User Plant References:

1. TIRUCHY
2. HEEP, HARDWAR
3. BHOPAL

Revisions :

As per 40th MOM of MRC -CPO

APPROVED :

INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (CPO)

Rev. No. 06

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt. 26.05.2012

Dt :

Year :

BHOPAL

Corp. R&D

JANUARY. 1991



FULL GLOSS POLYURETHANE FINISHING PAINT

1.0 SCOPE

This specification governs the quality requirements of Polyurethane Finishing Paint (Two pack system). This is recommended for exterior applications where it is desirable for gloss retention for long periods, chemical and corrosion resistance. This paint is suitable for both brush and spray application.

The paint shall be compatible on surface primed with epoxy priming as per AA 56109 and intermediate paint as per AA 561 12.

2.0 APPLICATION

Suitable for use in as those exterior surfaces where it is designed to retain colour and gloss for long period in addition to provide excellent chemical and corrosion resistance.

3.0 COLOUR

As specified in BHEL order.

4.0 COMPLIANCE WITH NATIONAL STANDARDS

The material shall comply with the requirements of the following national standard and also shall meet the requirements of this specification.

IS : 13213 - 1991 (RA-2007) | "POLYURETHANE FULL GLOSS ENAMEL (TWO PACK)"

5.0 FINISH

Smooth and full glossy

6.0 FREEDOM FROM DEFECTS

The components of the paint shall remain free from defects like hard settling of pigments, skinning, livering (excessive viscosity build up) when kept in closed container till its shelf life.

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

The paint shall conform to the requirements of ISO 14001 and shall be free from lead/ lead components.

Revisions :

As per 40th MOM of MRC -CPO

APPROVED :

INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (CPO)

Rev. No. 06

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt. 26.05.2012

Dt :

Year :

BHOPAL

Corp. R&D

JANUARY.

**7.0 CHEMICAL COMPOSITION**

The paint consists of two components enamel and a hardener solution to be mixed by volume. The mixing ratio of base and hardener shall be as per supplier's recommendation.

Enamel shall consist of an appropriate polyol, pigments, solvents and additives. The hardener solution shall consist of an aliphatic polyisocyanate, solvents, and additives.

Note:

- 1) The base contains acrylic resin and acid /alkalic / light fast pigments.
- 2) The mixed paint shall be stirred well for 20 minutes to mature and must be consumed within 4.0 hours after mixing.
- 3) The content and nature of the components shall be strictly same as type approved sample. This shall be confirmed by IR spectrography / thin layer chromatography which should be provided by supplier.

8.0 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 of the same quality as the type approved sample.

Sampling of paint shall be done as per IS:101.

- 8.1 To draw a representative sample, the contents of the container selected for sampling shall be mixed as thoroughly as possible by shaking or stirring or both or by rolling, so as to bring all portions into uniform distribution.
- 8.2 The samples shall be taken in a suitable, clean, dry air-tight glass bottle of one liter capacity. It should be almost but not completely filled by the sample.
- 8.3 In case of failure of first sample, two samples shall be drawn from other two drums of the same consignment at random and failure of the second sample in complying with the specification will lead to the rejection of the whole consignment.

9.0 TEST METHODS

Unless otherwise specified, the samples shall be tested in accordance with relevant part and section of IS 101.

9.1 PROPERTIES**9.1.1 Drying Time (at ambient temperature)**

- a) Surface dry : 3.0 hours, maximum
- b) Hard dry : 8.0 hours, maximum
- c) Full cure : 7 days, maximum
- d) Hard dry at 70° C : 30 minutes, maximum with 15 minutes flash off time.

9.1.2 Consistency

Suitable for brushing and spraying. 40 - 60 secs by F.C No.4 at 27±2° C.

9.1.3 Fineness of grind

10 microns, minimum

CS-9000



CORPORATE PURCHASE SPECIFICATION

AA 56 1 42

Rev. No. 06

PAGE 3 OF 8

9.1.4 Gloss at 60°

85, minimum.

9.1.5 Scratch Hardness after full cure for 7 days under load of 1000 gms, min.

No such scratch as to show the bare metal

9.1.6 Flexibility and adhesion test

No visible damage or detachment of paint film when tested by Erichsen cupping test upto 8mm.

9.1.7 Weight

9.0 kg, minimum per 10 litres of mixed paint However it shall be within $\pm 3.0\%$ of type approved sample.

9.1.8 Dry film thickness per coat of application

25 - 30 microns

9.1.9 Volume solids

40.0% , minimum

9.1.10 Flash Point

20°C, minimum of each component

9.1.11 Pot life at $27 \pm 2^\circ \text{C}$

4.0 hours, minimum

10.0 TYPE APPROVAL

10.1 Samples

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

CS-988



10.2 Type Test

10.2.1 Accelerated Tests (IS:13213):

Tests shall be conducted as per procedure given in below for chemical resistance to Sulphuric acid, Caustic potash, Oil & Solvents and the result shall not show any signs of blistering, wrinkling and lifting. Difference in gloss and colour between immersed and un-immersed area of paint film shall be minimum.

PROCEDURE:

Preparation of painted panels generally as per IS:101.

Apply one coat of epoxy zinc phosphate primer (two pack) at minimum 35 microns dry film thickness by spraying and allow to dry for at least 6 hours and not more than 24 hours. Dry rub with emery paper No.400 and wipe clean with a dry soft cloth.

Apply one coat of epoxy surfacer (two pack) at minimum 35 microns dry film thickness by spraying and allow to dry for at least 6 hours and not more than 24 hours. Wet rub with water proof emery paper No.400 and allow to dry.

Apply one coat of full gloss polyurethane enamel (two pack) at minimum 35 microns dry film thickness by spraying and allow to air dry for 7 days.

Note: For immersion tests prepare and paint both sides of the panels and protect the edges of the panels by sealing with a chlorinated rubber paint.

Resistance to Sulphuric acid:

Immerse $3/4^{\text{th}}$ of the panel in 30% sulphuric acid for 24 hours. Remove the panel, wash in running fresh water and allow it to dry for an hour.

Resistance to Caustic potash:

Immerse $3/4^{\text{th}}$ of the panel in 20% solution of potassium hydroxide for 24 hours. Remove the panel, wash in running fresh water and allow it to dry for an hour.

Resistance to Oil:

Immerse $3/4^{\text{th}}$ of the panel in a mineral lubricating oil for 24 hours. Remove the Panel and wipe the excess oil with cotton, wash it with mineral turpentine and allow to dry for 30 minutes.

CS-988



CORPORATE PURCHASE SPECIFICATION

AA 56 1 42

Rev. No. 06

PAGE 5 OF 8

Resistance to Solvents:

Test one panel for resistance to xylene, ethanol and acetone respectively. Take a clean white sterilized cotton and soak it in the solvent and place it on the painted panel without squeezing the cotton. Immediately cover the soaked cotton with a suitable watch glass and leave it for 6 hours. Remove the watch glass and the soaked cotton, wipe the area with a clean dry cotton.

10.2.2 Durability Test (IS:8662)

10.2.2.1 Normal Outdoor Exposure Test:

Preparation of panels for the test and tests shall be as per procedure given in **Annexure**.
Test panels shall be exposed at an angle of 45° facing south.
The test shall satisfy the requirements laid down for at least 12 months after painting.

10.2.2.2 Accelerated Weathering Test (IS:8662)

The test shall satisfy the requirement laid down, after 1000 hrs. test in Xenon Arc Type Weatherometer (with rotating day / night device) with a cycle of 3 minutes rainfall and 17 minutes dry period.

PROCEDURE:

Preparation of panels for the test shall be as per the procedure given in the Annexure. Samples of panels shall be tested in duplicate in a accelerated weathering apparatus and samples drawn from the exposed films shall be evaluated for gloss and various film properties.


The requirement of the test shall be taken to have been satisfied if the performance in respect of the film characteristics is within the limits specified below:

- | | |
|--|---|
| a) Gloss | : The film shall have a minimum gloss retention of 50% of the original value. |
| b) Colour | : The film shall have a minimum rating of 8. |
| c) Freedom from Checking, Cracking, Flaking, Chalking, Spotting, Blistering and corrosion. | - do- |

NOTE:

- Test certificate of Cl.10.2.1 & 10.2.2 shall be forwarded by the supplier in line with IS:13213 and IS:8662 at the time of type approval. While supplying the material supplier shall furnish these test certificates after every two years.
- Supplier should submit the results of Cl 10.0 at the time of type approval and once in a year there after.

CS-488

AA 561 42	CORPORATE PURCHASE SPECIFICATION	
Rev. No. 06		
PAGE 6 OF 8		

11.0 TEST CERTIFICATES
Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment furnishing the following information.
In addition, the supplier shall ensure to one copy of test certificate along with their despatch documents / packing list to facilitate quick clearance of the material.

AA .561 42, Rev 06 : Full Gloss Polyurethane Finishing Paint.
BHEL Order No.
Manufacturer's / supplier's name.
Trade mark, if any.
Batch / lot no.
Quantity supplied.
Date of manufacture and expiry.
Test results of clause 7.0, 9.0 and 10.0.
T.C.No & date
Mixing ratio

12.0 KEEPING PROPERTIES
When stored under cover in a dry place in the original sealed container under normal temperature conditions, the base and accelerator shall retain the properties of the mixed paint prescribed in this specification for 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 BHEL order.

13.0 PACKING & MARKING
Unless otherwise stated, base and accelerator shall be packed separately in steel containers of appropriate capacities. Each container shall bear the following information:

AA .561 42: Base / Accelerator for Full Gloss Polyurethane Finishing Paint.
BHEL Order No.
Manufacturer's / supplier's name.
Trade mark, if any.
Batch/lot no.
Date of manufacture and expiry.
Quantity supplied.
Mixing ratio

14.0 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 alongwith 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

15.0 REFERRED STANDARDS (Latest publications including amendments):
1) IS : 101 2) IS:335 3) IS:8662 4)IS: 13213
5) AA 56109 6) AA 56112

25-988

**A N N E X U R E (Cl: 10.2.2.1)****PROCEDURE OF DURABILITY TEST:****PREPARATION OF TEST PANELS:**

The panel shall be mild steel plate of 1.25mm thick and free from surface defects. Size of the panel for out door exposure test shall be 300mm x 300mm and for the Accelerated weathering test 150mm x 150mm. Panels shall be cleaned and the back and edges of the panels shall be protected with two coats of a suitable paint.

The surface of the test panels to be exposed shall be prepared as follows, taking care that total dry film thickness of the complete system shall be between 75 and 100 microns. Air drying of films shall be done at temperature $27 \pm 2^{\circ} \text{C}$ and at a relative humidity of 65 ± 5 percent.

- Apply one coat of ready mixed paint red oxide zinc chrome primer by brushing and allow to air dry for 24 hours.
- Rub down lightly with waterproof emery paper No.280/330, wipe off the surface with a clean and dry soft cloth and then apply by brushing one coat of the under coating enamel and allow it to dry for 24 hours.
- Rub down, wet, with water proof emery paper No.280/320 wipe off the surface with a clean and dry soft cloth and then apply by brushing one coat of the finishing enamel and allow it to dry for 24 hours.
- Rub down, wet, with water proof emery paper No.220, wash and wipe off water, and when the surface is dry, apply by brushing a second coat of the finishing enamel and allow it to dry for 7 days before subjecting to exposure test.

OUT DOOR EXPOSURE TEST:

Expose in open the test panels prepared as above in duplicate at an angle of 45° facing south. Examine the condition of the exposed films at monthly intervals for the first quarter and thereafter quarterly for the rest of the period for the properties gloss, colour, checking, cracking, flaking, chalking and spotting.

For the above examinations, wash the right hand half of the surface of the two test panels by pouring water and then wiping with a soft cloth or chamois leather. Examine the same half of the test panel at each examination. At the end of the stipulated period for durability test examine the two halves of the test panels. The sample shall be considered satisfactory if the material surface underneath as well as condition of the film in both the halves, the one washed periodically as well as the one washed only for the final examination is satisfactory by the method of evaluation given below. Stray film failure due to extraneous causes other than climatic shall be ignored.

88-52



ANNEXURE - CONTINUED

Evaluation and Rating of Film Characteristics:

- a) Gloss: Specular 45 ° and 60 ° head glossometer reading.
 b) Colour: The initial rating for a good colour match shall be 10. The colour Retention on exposure shall be expressed and recorded as the abbreviation of the type of colour change followed by numerical rating as follows:

<u>RATING</u>	<u>TYPE OF COLOUR CHANGE</u>
10 - Good match	D - Darkening
9 - Satisfactory	F - Fading
8-7 - Slight colour change	B - Blueing
6-5 - Definite colour change	R - Reddening
4-3 - Bad colour change	Y - Yellowing
2-1 - Very bad colour change	L - Loss of colour
0 - Complete colour change	

- c) Checking: Freedom for checking shall be rated as 10 for no checking and 0 for most severe and complete checking.
 d) Cracking: Freedom for cracking shall be rated as 10 for no cracking and 0 for most severe and complete cracking.
 e) Flaking: Freedom for flaking shall be rated as 10 for no flaking and 0 for most severe and complete flaking.
 f) Chalking: Freedom for chalking shall be rated as 10 for no chalking and 0 for most severe and complete chalking.
 g) Spotting: Freedom from spotting shall be rated as follows:

<u>Numerical value</u>	<u>Rating</u>
10	No spotting
9	Satisfactory
8-7	Slight spotting
6-5	Definite spotting
4-3	Bad spotting
2-1	Very bad spotting
0	Complete spotting

- h) Blistering and Corrosion: The film shall remain generally free from blisters and the metal underneath shall show no signs of corrosion on exposure for 12 months. A few isolated blisters without any signs of corrosion underneath as well as one or two localized corrosion and/or rust spots shall not constitute a cause of failure.