



भारत सरकार Government of India  
राष्ट्रीय परीक्षण शाला (पश्चिमी क्षेत्र)  
National Test House (WR)  
राष्ट्रीय परीक्षण शाला (पश्चिमी क्षेत्र), प्लॉट नं. एफ -10, एम.आई.डी.सी., मरोल, अंधेरी  
(पूर्व), मुंबई, महाराष्ट्र - 400093  
Plot No. F - 10, M.I.D.C, Marol, Andheri (E), Mumbai  
Maharashtra - 400093



PART A. PARTICULARS OF SAMPLE SUBMITTED

COMPLETE TEST CERTIFICATE

भाग 'अ' जमा किये गये नमूने का विवरण

परीक्षण प्रमाणपत्र सं/Test Certificate No:  
NTH(WR)/CH(P)/23/789\_1

SRF Number:  
NTH(WR)/CH(P)/23/789

जारी होने की तिथि/Date of issue  
04 Jan, 2024

कोड सं/QR Code  
: NTH230015815

a) जिसे जारी करना है/Issued To	:	Grasim Industries Limited ( Birla Paints Division)
b) पता/Address	:	Aditya Birla Science and Technology centre, Plot No. 1 & 1- A/1, MIDC Taloja, Taluka Panvel, Navi Mumbai,, Panvel, Raigad, Maharashtra, India - 410208
c) ग्राहक का संदर्भ सं एवं दिनांक/Customer's Ref. No.	:	TR/WR/23/72 - 02 Feb, 2023
d) नमूना मुहरबंद स्थिति/Sample Sealed Status	:	Sealed
e) परीक्षण सामग्री का विवरण/Description of Test item	:	Paint- Glossy Enamel Smoke Grey - Initial Testing
f) नामपद्धति का विवरण/Description of Nomenclature	:	Glossy Enamel Smoke Grey
g) नमूना का विशिष्टता (यदि हो)/Product Specification(if any)	:	IS 2932 (2013) - Enamel, synthetic, exterior: (a) Undercoating (b) Finishing - Specification (Fourth Revision)
h) नमूना प्राप्ति की तिथि /Date of Receipt of the Test item	:	28 Feb, 2023
i) कार्य सम्पादन की तिथि/Date(s)of Performance of Tests	:	From: 06 Jun, 2023 To: 03 Jan, 2024
j) Quantity	:	1.0 Kg
k) Any other Information / Expiry Date, If any	:	
l) Section Code	:	23CHPF78CN (Pages:3), 23CHPF78CN (Pages:4)
m) Section Certificate No.	:	23CHPF78CN_1, 23CHPF78CN_2
n) Certificate Type	:	New
o) Reference Certificate No.	:	
p) Remarks	:	Read with Part B, C & D

Santhosh S  
OIC SAMPLE CELL  
(Authorized Signatory)  
Authorized on: 04 Jan, 2024 11:52 AM

This Certificate Shall not be reproduced except in full, unless permission has been obtained. This Test/Calibration Certificate relates only to the sample/items submitted to the laboratory for Test/Calibration. The Conformity Statement is based on the limiting values of the Product Specification.

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**Plot No. F - 10, M.I.D.C, Marol, Andheri (E), Mumbai**  
**Maharashtra - 400093**



**Section Certificate No. : 23CHPF78CN\_1**

**IS 2932 (2013)**

**PART B. SUPPLEMENTARY INFORMATION**

1.	नमूना लेने की प्रक्रिया का संदर्भ, जहां लागू हो। Reference to sampling procedure, wherever applicable.	Not Applicable
2.	परीक्षण रिपोर्ट से संबंधित मापन एवं परिमाण प्रसि हेतु सहायक प्रलेख जैसे ग्राफ, तालिका, चित्र और / अथवा फोटोग्राफ, यदि कोई हो। Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test certificate, if any.	Not Applicable
3.	सम्बद्ध मानक / कार्य निर्देशों में निर्धारित परीक्षण पद्धति से विचलन, यदि कोई हो। Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any.	Not Applicable
4.	परीक्षण सामग्री की पहचान/identification of Test item	Received sample in packed 500 ml tin containers labelled as Glossy Enamel Smoke Grey
5.	व्यावर्त की प्राणाली की पहचान/Method(s) used for Test	As referred in IS 2932(Part-I) : 2013
6.	नमूना प्रक्रिया जहां प्रासंगिक हो/Sampling Procedure where relevant	Not Applicable
7.	पर्यावरण की स्थिति/Environmental Conditions	As specified in the specification
8.	उपयोग किए जाने वाले प्रमुख मानक/उपकरण/Major Standards/Equipments used	-
9.	कैलिब्रेशन स्थल/Site of Calibration	Not Applicable
10.	मापन का पता लगाने की क्षमता/Traceability of Measurement	-

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
 (Authorized Signatory)  
 Authorized on: 05 Oct, 2023 19:37 PM

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**Plot No. F - 10, M.I.D.C, Marol, Andheri (E), Mumbai**  
**Maharashtra - 400093**



Section Report No. : 23CHPF78CN\_1

IS 2932 (2013)

PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	IS 2932 : 2013	Please refer Annexure	-	-	-	-	Test Not Applicable
2	6.1.2	Total Non-Volatile Content (IS 101 Part 8/Sec 2)	shall not deviate by more than $\pm 2$ units by mass from the recorded data of registered sample	-	-	% by mass	52.87
3	6.2	Condition in Container	such a condition that manual stirring readily produces a uniform product.	-	-	-	The paint was in such a condition that manual stirring readily produced uniform product.
4	6.3	Freedom from Coarse Particles	shall be free from coarse aggregates, suspended particles of gel and foreign matter	-	-	-	The paint was free from coarse aggregates, suspended particles of gel and foreign matter.
5	6.4	Skin formation	shall show no skin formation	-	-	-	Paint was free from any skin formation.
6	6.5	Thinning Properties	shall be capable of being readily mixed with the petroleum hydrocarbon, solvent grade (see IS 1745) or with a suitable thinner as agreed to between the purchaser and the supplier	-	-	-	Satisfactory.
7	6.6	Application Properties	suitable for application by brushing	-	-	-	Suitable for application by brushing.
8	6.8	Lead Restriction, (IS 101 (Part 8/Sec 4))	-	-	-	-	Practically Nil
9	6.9.i. a	Consistency	Smooth, uniform and suitable for brushing without appreciable drag on the brush	-	-	-	Smooth, uniform and suitable for brushing without appreciable drag on the brush
10	6.9.i.b	Viscosity by Ford cup No. 4 at $27 \pm 2^\circ\text{C}$ (IS 101 (Part 1/Sec 5))	-	80.0	120.0	seconds	81
11	6.9.ii	Mass, kg/10litre (IS 101 (Part 1/Sec 7))	11.5 for undercoating 9.0 for finishing	9.0	-	kg/ 10litre	9.31
12	6.9.iii.a	Drying time: surface dry, (IS 101 (Part 3/ Sec 1))	2 hours for undercoating 4 hours for finishing	-	-	-	Less than 4 hours
13	6.9.iii.b	Drying time: Hard dry, (IS 101 (Part 3/ Sec 1))	8 hours for undercoating 12 hours for finishing	-	-	-	Less than 12 hours
14	6.9.iii.c	Drying time: Tack free, (IS 101 (Part 3/ Sec 1))	24 hours for undercoating 24 hours for finishing	-	-	-	Less than 24 hours

15	6.9,iv.a	Finish, (IS 101 (Part 3/Sec 4))	Smooth and matt to egg shell gloss for undercoating Smooth and glossy for finishing	-	-	-	Smooth and glossy
16	6.9,iv.b	Gloss, 60°, (IS 101 (Part 3/Sec 4))	0-20 for undercoating Above 70 for finishing	-	-	-	87.2
17	6.9,v	Fineness of grind, microns (IS 101 (Part 3/Sec 5))	50 for undercoating 15 for finishing	-	-	-	Less than 10 micron
18	6.9, vi	Colour, (IS 101 (Part 4/Sec 2))	Close match to the specified IS colour as per IS 5 or to an agreed colour where IS colour is not specified	-	-	-	Colour closely matches with ISC No. 692 as per IS 5. Colour: Smoke Grey.
19	6.9,vii.a	Flexibility and adhesion:Scratch hardness (Load 1 000 g), (IS 101 (Part 5/Sec 2))	No such scratch as to show the bare metal after 48 h of air drying for undercoating 96 h of air drying for finishing	-	-	-	No such scratch as to show the bare metal after 96 hours of air drying.
20	6.9,vii.b	Flexibility and adhesion:Bend test (with 6.25 mm in type 1 apparatus), (IS 101 (Part 5/Sec 2))	No visible damage or detachment after 48 h of air drying for undercoating 96 h of air drying for finishing	-	-	-	No visible damage or detachment observed after 96 hours of air drying.
21	6.9,viii	Flash point, (IS 101 (Part 1/Sec 6))	Not below 30 degree C	-	-	-	More than 30 degree C
22	6.9,ix.a	Composition: Volume solids, (IS 101 (Part 8/Sec 6))	40 for undercoating 35 for finishing	-	-	% by mass	39.44
23	6.9,ix.b	Composition: Phthalic Anhydride Content, (IS 101 (Part 8/Sec 4))	20 both undercoat & finishing	20.0	-	% by mass	25.12
24	6.9,x	Resistance to acid (for finishing only), (Annex E)	To pass the test	-	-	-	Passes the test. Test panel does not show any kind of disintegration, blistering, wrinkling and lifting.
25	6.9,xi	Resistance to alkali(for finishing only), (Annex F)	To pass the test	-	-	-	Passes the test. Test panel does not show any kind of disintegration, blistering, wrinkling and lifting.
26	6.9,xii	Accelerated storage stability test, (Annex G)	Shall pass the test	-	-	-	Passes the test.
27	6.9,xiv	Wet opacity, (IS 101 (Part 4/Sec 1))	As per values given in clause 5	-	-	Sq.m/10liter	210.45

**Prasanna Muley**  
**Lab Sc. Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
 (Authorized Signatory)

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
 (Authorized Signatory)  
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**Maharashtra - 400093**



Section Certificate No. : 23CHPF78CN\_1

IS 2932 (2013)

## Part D.

### REMARKS

The sample meets the requirements for the IS 2932(Part-I) : 2013 specification in respect of the above tested parameters for finish coat.

### Notes

This is a interim report, complete report will be issue after completion of accelerated weathering test. The remark conformity statement is given based upon the limiting values of the IS 2932(Part-I) : 2013 specification without considering measurement uncertainty.

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
(Authorized Signatory)  
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 (पू.), मुंबई, महाराष्ट्र - 400093  
**Plot No. F - 10, M.I.D.C, Marol, Andheri (E), Mumbai**  
**Maharashtra - 400093**



Section Certificate No. : 23CHPF78CN\_2

IS 2932 (2013)

PART B. SUPPLEMENTARY INFORMATION

1.	नमूना लेने की प्रक्रिया का संदर्भ, जहां लागू हो। Reference to sampling procedure, wherever applicable.	Not Applicable
2.	परीक्षण रिपोर्ट से संबंधित मापन एवं परिमाण प्रसि हेतु सहायक प्रलेख जैसे ग्राफ, तालिका, चित्र और / अथवा फोटोग्राफ, यदि कोई हो। Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test certificate, if any.	Not Applicable
3.	सम्बद्ध मानक / कार्य निर्देशों में निर्धारित परीक्षण पद्धति से विचलन, यदि कोई हो। Deviation from the test methods as prescribed in relevant ISS/ Work instruction, if any.	Not Applicable
4.	परीक्षण सामग्री की पहचान/identification of Test item	Received sample of Glossy Enamel Smoke Grey in tin containers stated as Birla Opus Prime N52 Enamel Premium Gloss Solvent Coating - Smoke Greay, Code - 9219329923.
5.	व्यावर्त की प्राणाली की पहचान/Method(s) used for Test	As referred in IS 2932(Part-I) : 2013
6.	नमूना प्रक्रिया जहां प्रासंगिक हो/Sampling Procedure where relevant	Not Applicable
7.	पर्यावरण की स्थिति/Environmental Conditions	-
8.	उपयोग किए जाने वाले प्रमुख मानक/उपकरण/Major Standards/Equipments used	-
9.	कैलिब्रेशन स्थल/Site of Calibration	Not Applicable
10.	मापन का पता लगाने की क्षमता/Traceability of Measurement	-

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
 (Authorized Signatory)  
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**Plot No. F - 10, M.I.D.C, Marol, Andheri (E), Mumbai**  
**Maharashtra - 400093**



Section Report No. : 23CHPF78CN\_2

IS 2932 (2013)

PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	6.7.1.3	Durability: Accelerated weathering test Xenon Arc (700hrs.) (Annex C-4)	as prescribed under C-4. It shall be examined every third day for a period of 700 h for xenon arc and a complete record of its performance maintained.	-	-	-	Satisfactory. Gloss Retention: Gloss at 60 degree after exposure: 82.4 (Difference in gloss value = 4.8 ) Rating for Colour: 9, Rating for Freedom from checking: 10, Rating for Freedom from cracking: 10, Rating for Freedom from flaking: 10, Rating for Freedom from chalking: 10, Rating for Freedom from spotting: 10

**Prasanna Muley**  
 Lab Sc. Testing/Calibration Chemical (Paint, High Polymer,  
 Outdoor)  
 (Authorized Signatory)

**Dr. Mangesh Pandharinath Gharpure**  
 OIC Testing/Calibration Chemical (Paint, High Polymer,  
 Outdoor)  
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Section Certificate No. : 23CHPF78CN\_2

IS 2932 (2013)

## Part D.

### REMARKS

The sample meets the requirements for the IS 2932(Part-I) : 2013 specification in respect of the above tested parameters for finish coat.

### Notes

The remark conformity statement is given based upon the limiting values of the IS 2932(Part-I) : 2013 specification without considering measurement uncertainty.

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
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