



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)/23/777\_1

SRF Number:  
NTH(WR)/CH(P)/23/777

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

कोड सं/QR Code  
: NTH230016206

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/23/143 - 13 Jan, 2023
d) नमूना मुहरबंद स्थिति/Sample Sealed Status	:	Sealed
e) परीक्षण सामग्री का विवरण/Description of Test item	:	Glossy Enamel Golden Yellow
f) नामपद्धति का विवरण/Description of Nomenclature	:	Glossy Enamel Golden Yellow
g) नमूना का विशिष्टता (यदि हो)/Product Specification(if any)	:	2933 (Part 1) (2013) - Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications
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: 20 Dec, 2023 To: 05 Jan, 2024
j) Quantity	:	1.0 Kg
k) Any other Information / Expiry Date, If any	:	
l) Section Code	:	23CHP17F1N (Pages:6)
m) Section Certificate No.	:	23CHP17F1N_1_A1
n) Certificate Type	:	Revised
o) Reference Certificate No.	:	NTH(WR)/CH(P)/23/777_1
p) Remarks	:	Read with Part B, C & D. This report supersedes the previous one.

Santhosh S  
OIC SAMPLE CELL  
(Authorized Signatory)  
Authorized on: 08 Jan, 2024 17:09 PM

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.

This is a Computer Generated Report.



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



Section Certificate No. : 23CHP17F1N\_1\_A1

2933 (Part 1) (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 Golden Yellow in tin containers stated as Birla Opus Prime N53 Enamel Premium Gloss Solvent Coating - Golden Yellow, Code - 9219339925.
5.	व्यावृत्त की प्राणाली की पहचान/Method(s) used for Test	As referred in IS 2933 (part 1): 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)  
Authorized on: 08 Jan, 2024 10:24 AM

This is a Computer Generated Report.



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



Section Report No. : 23CHP17F1N\_1\_A1

2933 (Part 1) (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	Enamel, Exterior: (a) Undercoat g (b) Finishing - Specification n Part 1 for Domestic and Decorative Applications	Gloss (specular 60 deg), (IS 101 (Part 4/ Sec 4))	-	-	-	-	82.6
2	Enamel, Exterior: (a) Undercoat g (b) Finishing - Specification n Part 1 for Domestic and Decorative Applications	Please refer annexure	-	-	-	-	Test Not Applicable
3	Enamel, Exterior: (a) Undercoat g (b) Finishing - Specification n Part 1 for Domestic and Decorative Applications	Phthalic anhydride content of the non- volatile vehicle, (IS 101 (Part 8/Sec 4))	-	-	-	Perce nt	31
4	Enamel, Exterior: (a) Undercoat g (b) Finishing - Specification n Part 1 for Domestic and Decorative Applications	Total pigment content	-	-	-	Perce nt	9.29
5	Enamel, Exterior: (a) Undercoat g (b) Finishing - Specification n Part 1 for Domestic and Decorative Applications	Total non-volatile matter, (IS 101 (Part 8/Sec 2))	-	-	-	Perce nt	47.66

6	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Durability: Accelerated Weathering test (Xenon arc ) (clause no. 6.2 of IS 2933 (Part 1))	-	-	-	-	Satisfactory. Gloss value- 80.2, Rating on colour: 9, Rating on freedom from checking: 10, Rating on freedom from cracking: 10, Rating on freedom from flaking: 10, Rating on freedom from chalking: 10, Rating on freedom from spotting: 10
7	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Flash Point, (IS 101 (Part 1/Sec 6))	-	-	-	-	Above 30 degree C
8	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Striping test (Annex D)	-	-	-	-	Satisfactory, scratches free from jagged edges was observed.
9	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Flexibility and adhesion: b) Bend test, (with 6.25 mm Dia Mandrel in type 1 apparatus), clause 2 of (IS 101 (Part 5/ Sec 2))	-	-	-	-	Satisfactory, no visible damage or detachment was observed.
10	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Flexibility and adhesion: a) Scratch hardness, (Load 1000 g), clause 3 of (IS 101 (Part 5/Sec 2))	-	-	-	-	Satisfactory, no such scratch was observed as to show the bare metal.
11	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Water content (if water is suspected to be present), Max, (IS 101 (Part 2/Sec 1))	Maximum 0.5 percent by mass for finishing	-	-	-	Practically nil
12	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Colour, (IS 101 (Part 4/Sec 2))	Undercoating- Approximate match to the finishing enamel/ Finishing - Close match to the specified IS colour as per IS 5 or to an agreed colour where IS colour not specified	-	-	-	Close match to the colour of Golden Yellow (ISC 356) as per IS 5.

13	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Fineness of grind, Max (IS 101 (Part 3/Sec 5))	For undercoating maximum 50 and for finishing maximum 15	-	-	-	Less than 10 micron
14	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Finish, (IS 101 (Part 3/Sec 4))	For Undercoating - Smooth and matt to egg shell gloss and for Finishing - Smooth and glossy	-	-	-	Smooth and glossy
15	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Wet opacity, Min, (IS 101 (Part 4/Sec 1))	-	-	-	sq.m/10 litre	103.67
16	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Drying time, h, Max : c) Tack free (IS 101 (Part 3/Sec 1))	-	-	-	-	Less than 24 hours
17	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Drying time, h, Max : b) Hard dry (IS 101 (Part 3/Sec 1))	12 hours for Undercoating and 18 hours for Finishing	-	-	-	Less than 18 hours
18	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Drying time, h, Max : a) Surface dry (IS 101 (Part 3/Sec 1))	-	-	-	-	Less than 8 hours
19	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Mass, kg/10 litre, Min, (IS 101 (Part 1/Sec 7))	Minimum (12.0 for Undercoating and 8.5 for Finishing)	-	-	Kg/10 litre	9.38

20	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	b) Viscosity by ford cup No. 4 at (27 +/- 2 deg C), (IS 101 (Part 1/Sec 5))	-	80.0	120.0	Seconds	82
21	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	a) Consistency, (Annex C)	-	-	-	-	Smooth, uniform and suitable for brushing without appreciable drag on the brush.
22	Enamel, Exterior: (a) Undercoating (b) Finishing - Specification Part 1 for Domestic and Decorative Applications	Lead Restriction, (IS 101 (Part 8/Sec 5))	-	-	-	-	Practically nil

**Souvik Sarkar**  
**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)  
 Authorized on: 08 Jan, 2024 10:24 AM

This is a Computer Generated Report.



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**



Section Certificate No. : 23CHP17F1N\_1\_A1

2933 (Part 1) (2013)

## Part D.

### REMARKS

The sample meets the requirements for the IS 2933(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 2933(Part-I) : 2013 specification without considering measurement uncertainty.

**Dr. Mangesh Pandharinath Gharpure**  
**OIC Testing/Calibration Chemical (Paint, High Polymer, Outdoor)**  
(Authorized Signatory)  
Authorized on: 08 Jan, 2024 10:24 AM

This is a Computer Generated Report.