



**GVM TEST HOUSE**  
AND RESEARCH CENTRE

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ISO 9001:2015 Certified

**TESTING | TRAINING | AUDITING**

Report No.: GVM: WPC: 04812-6/02/2024

Date: 20-02-2024

Date of Receipt: 18.01.2024

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**GRASIM INDUSTRIES LTD.**

P.O. Birlagram, Nagda-456331, District Ujjain,  
Madhya Pradesh, India

**TEST REPORT ON BIRLA OPUS PRIME - B90 EXTERIORS ULTRA LUXURY WATERPROOF COATING**

Source of sample : Sample Submitted by Customer  
Number of samples Tested : 01 (One Only).  
Condition of sample : Satisfactory  
Customer's Reference : Purchase Order No. 4900003150 dt.06.02.2024  
Lab Reference Number : 2024/FEB/04812-6  
Sample Identification # : Birla Opus Prime - B90 Exteriors Ultra Luxury Waterproof Coating  
Coverage # : Primer Coat with 35% dilution with water coverage @ 60 sq ft/ lit.  
& 2 coats without dilution coverage @ 25 sq ft/ lit/ coat  
Curing Period : 14 Days Temperature 23°C & Relative Humidity 50%  
Period of Test : 19.01.2024 to 19.02.2024

**TEST RESULTS:**

S. N.	Test Conducted	Unit	Test Results	Test Method
1	Appearance	Visual	White	---
2	Consistency	Visual	Brushable	--
3	Density	g/cc	1.22	ASTM D 1475-2013
4	Solid Content	%	52.27	ASTM D 1644-2001
5	Viscosity	KU	114	ASTM D 562-2010
6	Recoat time	Hours	4	ASTM C 1640-2018
7	Dry Film Thickness	mm	0.560	ASTM D 3767-2003
8	Tensile Strength	N/mm <sup>2</sup>	3.20	ASTM D 412-2016
9	Elongation at Break	%	305	ASTM D 412-2016
10	Crack Bridging Ability	mm	3.16	EN 1062-7(A)-2004
11	Pull off Adhesion strength	N/mm <sup>2</sup>	1.79(S.F.)	ASTM D 7234-2022
12	Depth of Water Penetration @ 12 Bar	mm	Nil	EN 12390-8-2019
13	RCPT -Control	Coulombs	3930	ASTM C 1202-2022
14	RCPT - With Coating	Coulombs	804	ASTM C 1202-2022
15	Reduction in RCPT	%	80	----
16	Water Vapour Transmission	g/m <sup>2</sup> .day	14.8	ASTM E 96-2022

**Regd. Office:**

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GSTIN: 27BPBPB4090Q1ZM



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**TEST RESULTS:**

S. N.	Test Conducted	Unit	Test Results	Test Method
17	Toxic Elements			ICP Analysis
a	Lead (%)		Less than- 0.001	
b	Cadmium (%)		Less than- 0.001	
c	Chromium (%)		Less than- 0.001	
18	Surface Temperature Reduction			ASTM D 4803-2018
a	Control Sample	°C	63.1	
b	With Coating	°C	48.0	
c	Reduction in Surface Temp. against Control (°C)	°C	15.1	
19	Anti-carbonation Properties			EN 1062 Part 6:2002 - Method A
a	Dry Film Thickness of Coating, DFT	µm	550	
b	Carbon dioxide permeability	g (m <sup>2</sup> .d)	0.58	
c	Carbon diffusion- Equivalent air layer thickness	Meter	428	
d	Diffusion resistance number	µ	7.78 x 10 <sup>5</sup>	

**Classes for carbon dioxide permeability (C)**

Class	Requirement	Requirement
	Carbon dioxide permeability g/ (m <sup>2</sup> · d)	Carbon diffusion- Equivalent air layer thickness(meter)
C0	No requirement	
C1	< 5	> 50

# As furnished by the customer. S. F. – Substrate Failure

- Note:
1. The Results relate only to the samples tested.
  2. Report shall not be reproduced, except in full, without the written approval of the lab.
  3. Any correction invalidates this report.

For GVM Test House And Research Centre



**DINESH BURDE**  
*[Signature]*  
**Authorised Signatory**



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