



**GVM TEST HOUSE**  
AND RESEARCH CENTRE

23-24, Yashodeep Heights,  
Plot No. 14/15, Sector 29C,  
Rabale-Ghansoli Node,  
Navi Mumbai - 400 701, INDIA.  
Phone: +91 93244 69890  
Email: lab@gvmtesthouse.com  
www.gvmtesthouse.com



TESTING | TRAINING | AUDITING

Test Order Ref: GVM/HDPE/05156-3/04/2024

Date of Receipt: 09.04.2024

Date: 13.05.2024

Page No. 1 of 2

**GRASIM INDUSTRIES LTD.**

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

**TEST REPORT ON RESISTANCE TO HYDROLYSIS IN WATER OF HDPE MEMBRANE**

Source of Sample	: Sample Submitted by Customer
Number of samples Tested	: 01 (One only).
Customer's Reference	: PO No.- 4900003848, dt 22.03.2024
Lab Reference Number	: 2024/APR/05156-3
Condition of sample	: Satisfactory
Sample Identification #	: Birla Opus Prime HW15 (1.5 mm Sand Finish Weldable HDPE Membrane)
Period of Test	: 12.04.2024 to 11.05.2024

**INTRODUCTION:**

This report describes the Resistance to Hydrolysis in water of HDPE Membrane test carried out at the request of "GRASIM INDUSTRIES LTD" on 22<sup>th</sup> March 2024 at GVM Test House And Research Centre, Navi Mumbai. Testing for Resistance to Hydrolysis in water of HDPE Membrane was conducted according to guidelines of EN 12447:2001.

**SAMPLE DESCRIPTION:**

GVM Test House And Research Centre received sample of size of 1 m x 1 m. The sample was given unique sample identification (Birla Opus Prime HS15 (1.5 mm sand finish Weldable HDPE membrane) for reference purpose.

**BRIEF SUMMARY OF THE TEST:**

1. Test specimens and control specimens were prepared in each direction in accordance with EN 12226: 2012.
2. **Conditioning for Control specimens** - Control test specimens were stored in water at  $(95 \pm 1)^\circ\text{C}$  for 1 hour and then removed and stored for 28 days.
3. **Conditioning for test specimens** - Test specimens were stored in water at  $(95 \pm 1)^\circ\text{C}$  for 28 days and monitored pH of water every seven days at room temperature.
4. Before testing the test, specimens were conditioned at  $(20 \pm 2)^\circ\text{C}$  temperature &  $(65 \pm 5)\%$  RH for 16 hrs. The tensile strength is then carried out on test and control specimens. The mean results obtained are shown in the table.

**Regd. Office:**

402, Yogesh Apartment CHS, Plot No. 26, Sector 8A, Airoli, Navi Mumbai - 400 708, INDIA.  
GSTIN: 27BPPB4090Q1ZM



**GVM TEST HOUSE**  
AND RESEARCH CENTRE

23-24, Yashodeep Heights,  
Plot No. 14/15, Sector 29C,  
Rabale-Ghansoli Node,  
Navi Mumbai - 400 701, INDIA.  
Phone: +91 93244 69890  
Email: lab@gvmtesthouse.com  
www.gvmtesthouse.com



ISO 9001:2015 Certified

**TESTING | TRAINING | AUDITING**

Test Order Ref: GVM/HDPE/05156-3/04/2024

Date of Receipt: 09.04.2024

Date: 13.05.2024

Page No. 2 of 2

**TEST RESULTS:**

S. N.	Test Conducted	Unit	Test Results	Test Method
<b>A</b>	<b>Control Specimens</b>			
1	Tensile Strength- Longitudinal	N/mm <sup>2</sup>	29.86	ASTM D 412: 2016
2	Tensile Strength- Transverse	N/mm <sup>2</sup>	28.63	ASTM D 412: 2016
3	Elongation- Longitudinal	%	874	ASTM D 412: 2016
4	Elongation- Transverse	%	917	ASTM D 412: 2016
<b>B</b>	<b>Test Specimens</b>			
1	Tensile Strength- Longitudinal	N/mm <sup>2</sup>	27.41	ASTM D 412: 2016
2	Tensile Strength- Transverse	N/mm <sup>2</sup>	26.16	ASTM D 412: 2016
3	Elongation- Longitudinal	%	805	ASTM D 412: 2016
4	Elongation- Transverse	%	856	ASTM D 412: 2016
<b>C</b>	<b>Retained Tensile Strength &amp; % Elongation</b>			
1	Retained Tensile Strength- Longitudinal	%	92	---
2	Retained Elongation - Longitudinal	%	91	---
3	Retained Tensile Strength- Transverse	%	92	---
4	Retained Elongation - Longitudinal	%	93	---

# As furnished by the customer.

- Note:
1. The results relate only to the items 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**

Authorised Signatory



Regd. Office:

402, Yogesh Apartment CHS, Plot No. 26, Sector 8A, Airoli, Navi Mumbai - 400 708, INDIA.

GSTIN: 27BPPB4090Q1ZM