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Test Report

Bearing Response Test

Prepared for

Unique Fiberglass LLC

Document No. CT-TWR-18-41 Rev 0

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Prepared for

Unique Fiberglass LLC

By

CTRM Testing Laboratory Sdn Bhd

PO Number:	UFG/CTRM/1475/1018
Document Number:	CT-TWR-18-41 Rev 0
Classification:	For Unique Fiberglass and CTRM TL only
Client:	Unique Fiberglass LLC
Address:	Unique Fiberglass & Composites L.L.C. Ras Al Khaimah, U.A.E.
Date Sample Received:	27 th November 2018

	Authored By	Reviewed By	Authorized By
Signature			
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Date	3/1/2019	3/1/2019	3.1.19

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Revision History

Date of Revision	Revision	Reason for change

1. Introduction

A series of tests have been conducted to determine the performance of the product under testing scope of Bearing Response test. This report is prepared for Unique Fiberglass LLC, which presents the methodology and results of the test.

2. Description of Test Item

Test	Quantity
Bearing Response (ASTM D953-10) – LW	5
Bearing Response (ASTM D953-10) – CW	5

3. Test Condition

Testing was carried out at $23\pm 3^{\circ}\text{C}$ and relative humidity of $50\pm 5\%$ room condition.

4. Preparation of Test Specimen

Panel received on 27th November 2018 were packed and sealed in packaging.

5. Testing Equipment

5.1. Universal Testing Machine

Machine brand : ZWICK/ROELL
Model : Z400

6. Comment/Observation

No abnormalities found during the testing.

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7. Appendix

7.1. Bearing Response CW

Test report

Customer : POLYMER PLUS
 Job no. :
 Test standard : ASTM D953-10
 Material : BEARING STRENGTH(CW)
 Test speed : 1.3 mm/min

Tester : FAIZAL/AIDIL
 Note :
 Machine data : UTM 4/ZWICK Z400

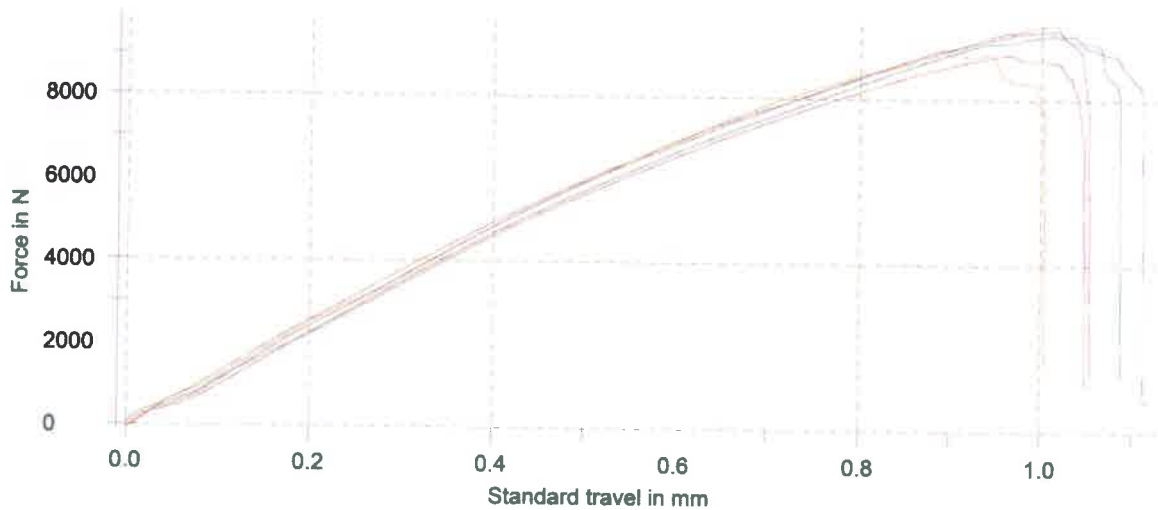
Test results:

Specimen ID	Bearing hole diameter, d mm	Thickness, h mm	Maximum Force N	Tensile Strength, σ_M MPa
1	6.05	6.79	9098.30	221.480
2	5.97	6.8	9572.95	235.810
3	5.9	6.85	9833.21	243.306
4	5.99	6.81	9123.69	223.664
5	6.01	6.79	9669.45	236.950

Statistics:

Series	Bearing hole diameter, d mm	Thickness, h mm	Maximum Force N	Tensile Strength, σ_M MPa
n = 5				
\bar{x}	5.984	6.808	9459.52	232.242
s	0.0555	0.0249	331.60	9.30999
v	0.93	0.37	3.51	4.01

Series graph:



7.2. Bearing Response LW

Test report

Customer : POLYMER PLUS Tester : FAIZAL/AIDIL
 Job no. : Note :
 Test standard : ASTM D953-10 Machine data : UTM 4/ZWICK Z400
 Material : BEARING STRENGTH(LW)
 Test speed : 1.3 mm/min

Test results:

Specimen ID	Bearing hole diameter, d	Thickness,h	Maximum Force	Tensile Strength, σ_M
	mm	mm	N	MPa
1	6.02	6.79	12472.47	305.131
2	6.01	6.7	12070.59	299.764
3	5.98	6.76	13634.81	337.288
4	6.05	6.76	12505.27	305.767
5	5.97	6.75	12955.31	321.492

Statistics:

Series	Bearing hole diameter, d	Thickness,h	Maximum Force	Tensile Strength, σ_M
n = 5	mm	mm	N	MPa
x	6.006	6.752	12727.89	313.888
s	0.03209	0.03271	596.04	15.3908
v	0.53	0.48	4.68	4.90

Series graph:

