



BLACKWATER TESTING INC.

7341 Westport Pl Suite 1A, West Palm Beach, Fl. 33413

Phone: 561-508-2830 E-mail: Engdep@blackwatertesting.com

REPORT NO: BT-HWE-17-001_RND

MIAMI-DADE CERTIFICATION #16-0801.05

Test Dates: Start:12/08/2017 End:12/08/2017



12/14/2017

TESTING FOR LARGE MISSILE IMPACTS TAS 201-94 "POLYCARBONATE PANELS"

Client:

Hanwood Enterprises

51 King's Court #9-B

San Juan, Puerto Rico 00911

Phone: 1-939-969-1977



Product Description of Units: Polycarbonate Panels

Overall Size: 42"wX65"h

Rough Opening Buck: 39"wX59"h

Test Protocol: Large Missile Impacts TAS 201-94

Disclaimer:

This is a general statement and does not supersede the specific product descriptions in this report. Blackwater Testing Inc. does not take responsibility of product performance and whose only purpose is to test and gather pertinent data under test report format for the client.

Witness to Testing:

Dennis Duffy, BT CEO

Michael Hanrahan, BT Lab Technician

Testing Buck: x2 SYP 2X10 top, bottom, and jambs

Substrate: Wood

Installation Specimens: Face Mounted

Anchor:

Top and Bottom: $\varnothing 1/4$ "X2" Wood Lag screws with washers. X4 distributed through length_1/2" from edge at both sides and at center line of overlaps.



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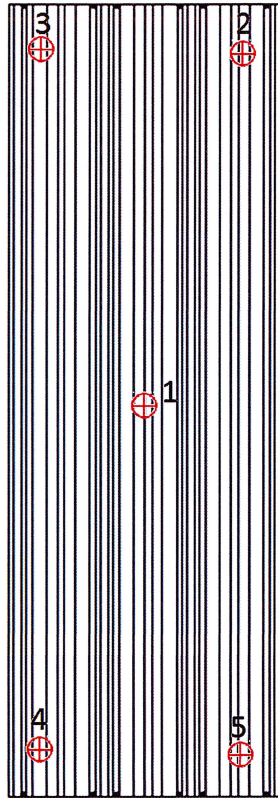
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TEST RESULTS



Large Missile Impact Locations

LARGE MISSILE IMPACT DATA SHEET						
Ambient Temperature	T=74°F	Location				Results
Sample	Shot	Area	X (in.)	Y (in.)	Keyence (ft/s)	Pass/Fail
1	1	Center Panel	22	32	50	PASS
1	2	Top Right Corner Panel	40	59	50	PASS
1	3	Top Left Corner Panel	6	59	50.1	PASS
1	4	Bottom Left Corner Panel	6	7	50	PASS
1	5	Bottom Right Corner Panel	40	7	50.1	PASS
Notes: 1. Large Missile Velocity 50 ft/s Measurements taken from bottom left corner. 2. Impacted with a 9.05 lb., 96 "long, S4S, 2x4, of No. 2 Southern Pine lumber. 3. Impact location is given on Cartesian Grid, right (x) and up (y) from lower left hand corner. 4. The location description is relative to the product assembly i.e. Corner, Center, and Left Center. 5. Impact velocity measured with a Keyence KV-16DR, verified by the video method.						



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SUMMARY OF TESTING

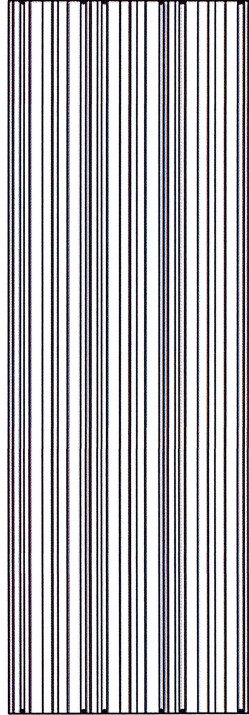
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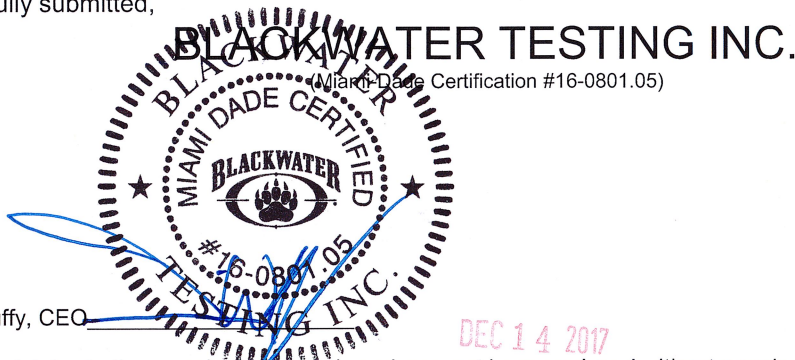
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LARGE MISSILE IMPACTS TAS 201-94: Specimen was subjected to large missile impacts per TAS 201-94. Specimen passed testing criteria.

CONCLUSION: Specimen was disassembled. No failures were observed in the panels or anchorages. The "Polycarbonate Panels" product was tested in accordance with client requirements.

Respectfully submitted,



Dennis Duffy, CEO

DEC 14 2017

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