

ALL WEATHER ARCHITECTURAL ALUMINUM TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON SERIES 6100 FIXED WINDOW

REPORT NUMBER

M0355.01-301-44-R1

TEST DATES

03/22/21 - 03/23/21

ISSUE DATE

08/06/21

REVISION 1 DATE

09/01/21

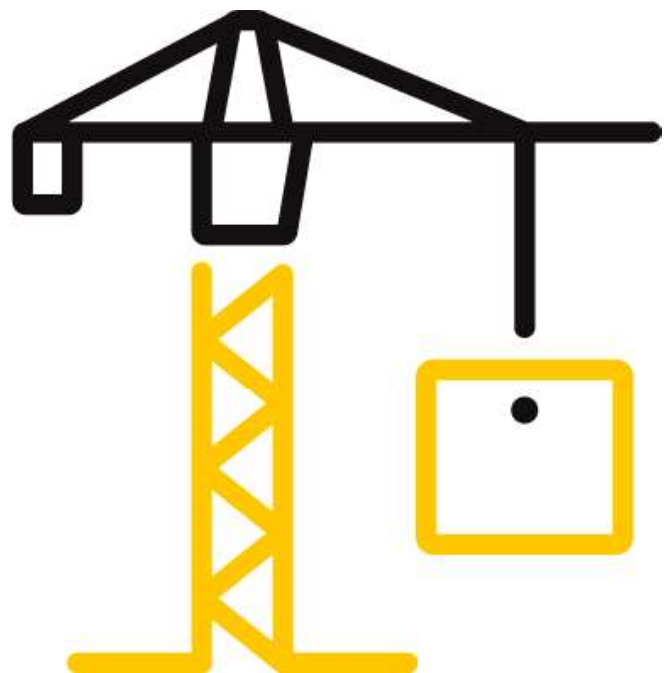
PAGES

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TEST REPORT FOR ALL WEATHER ARCHITECTURAL ALUMINUM

Report No.: M0355.01-301-44-R1

Date: 09/01/21

REPORT ISSUED TO

ALL WEATHER ARCHITECTURAL ALUMINUM

777 Aldridge Road
Vacaville, CA 95688

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by All Weather Architectural Aluminum to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their Series 6100 Fixed Window. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in Fresno, California. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends ten years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for two years after the test date

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For INTERTEK B&C:

COMPLETED BY: Ricardo Cortez

TITLE: Technician

SIGNATURE:



Digitally Signed by: Ricardo Cortez

DATE: 09/01/21

REVIEWED BY: Tyler Westerling, P.E.

TITLE: Operations Manager

SIGNATURE:



Digitally Signed by: Tyler Westerling

DATE: 09/01/21

RC:ms

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SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class LC – PG 70 - Size Tested: 1524 x 1524 mm (60 x 60 in) Type: FW
Air Infiltration	0.9 L/s/m ² (0.17 cfm/ft ²)
Canadian Air Infiltration/Exfiltration Level	A2
Water Penetration Resistance Test Pressure	580 Pa (12.11 psf)
Design Pressure	±3360 Pa (±70.18 psf)

Reference must be made to Intertek B&C Report No. M0355.01-301-44 R1, dated 09/01/21 for complete test specimen description and detailed test results.

SECTION 3

TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-17- *North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

The following test methods were used during testing:

AAMA 205-15, *In-Plant Testing Guidelines for Manufacturers and Independent Laboratories*

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM F588-17, *Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact*

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SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of two years from the test completion date.

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space and the exterior perimeter of the specimen was sealed to the test buck.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
(Nail Fin) Head, Jambs, Sill	#8 x 1-5/8" flat head screw	6" from corners, 10" on center

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Meng Vang	Intertek B&C
Tyler Westerling, P.E.	Intertek B&C

SECTION 6

TEST SPECIMEN DESCRIPTION

Product Type: Fixed Window

Series/Model: Series 6100 Fixed Window

Product Size(s):

OVERALL AREA:	WIDTH		HEIGHT	
	Millimeters	Inches	Millimeters	Inches
2.32 m ² (25.0 ft ²)				
Overall size	1524	60	1524	60

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, Jambs, Sill	Aluminum	Thermally broken
	JOINERY TYPE	DETAIL
All corners	Mitered	Corner Keys, Screwed, Sealed

Reinforcement: *No reinforcement was utilized.*

Weatherstripping: *No weatherstripping was utilized.*

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Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	LITE COMPOSITION	GLAZING METHOD	
1" IG	Kodispac 4SG Thermoplastic	3/16" tempered, Interior / Exterior	Glass set on setting blocks Exterior glazed w/ aluminum snap-in bead.	
LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		Millimeters	Inches	
Frame	1	1387 x 1387	54-5/8 x 54-5/8	1/2"

Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Notch	7/8" wide by 1/8" high	2	Sill face - 2-1/2" from jamb

Hardware: *No hardware was utilized.*

Screen Construction: *No screen was utilized.*

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SECTION 7

TEST RESULTS

The temperature during testing was 23°C (73.9°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	0.9 L/s/m ² (0.17 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	1.0 L/s/m ² (0.19 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Canadian Air Infiltration/Exfiltration Level	A2	N/A	
Water Penetration, per ASTM E547 at 580 Pa (12.11 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 Deflections taken at <u>Between Anchors @ Jamb</u> +3360 Pa (+70.18 psf) -3360 Pa (-70.18 psf)	<0.1 mm (<0.01") 0.3 mm (0.01")	Report only	3,4,5
Uniform Load Structural, per ASTM E330 Permanent set taken at <u>Between Anchors @ Jamb</u> +5040 Pa (+105.26 psf) -5040 Pa (-105.26 psf)	0.1 mm (0.01") <0.1 mm (<0.01")	1.0 mm (0.04") max. 1.0 mm (0.04") max.	4,5
Forced Entry Resistance, per ASTM F588, Type: D - Grade: 10	Pass	No entry	

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 03/22/21 , Time: 2:22 PM

Note 3: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 4: Loads were held for 10 seconds.

Note 5: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

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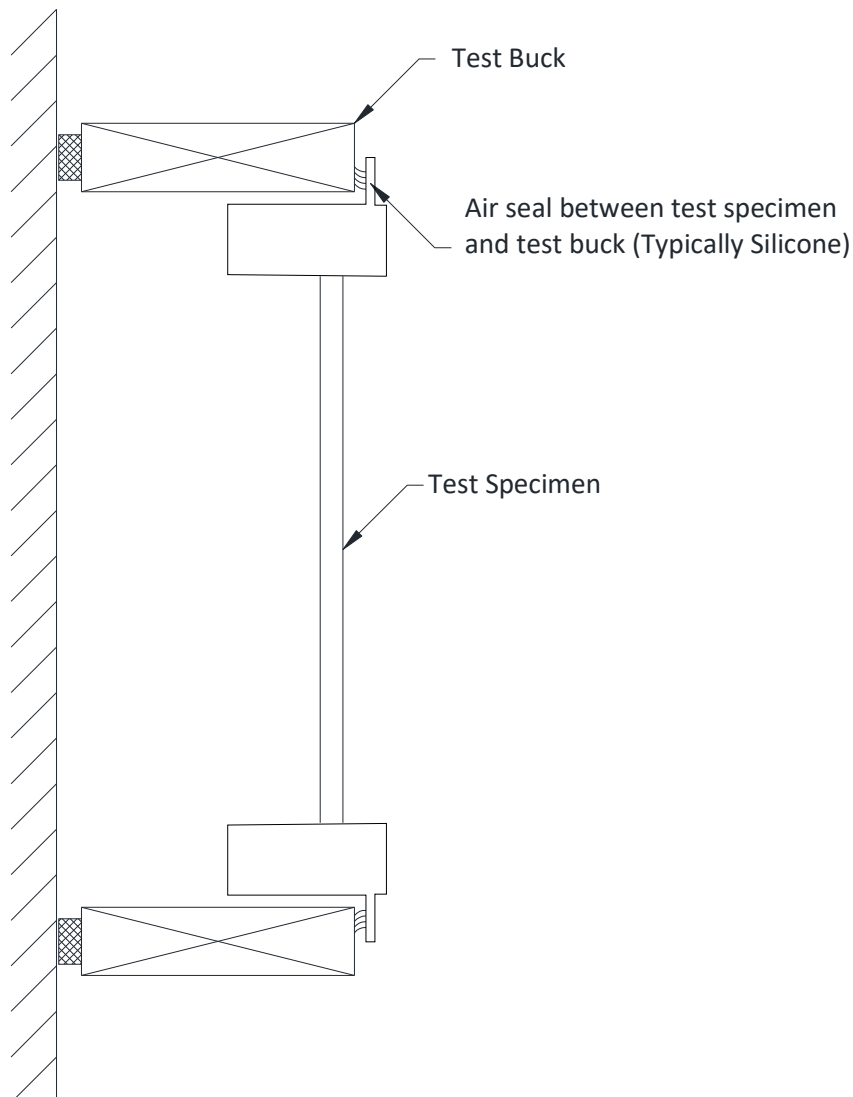
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SECTION 8 ALTERATIONS

No alterations were required.

SECTION 9 LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.





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SECTION 10

CONCLUSION

The specimens tested successfully met the performance requirements for the following ratings:

Class LC – PG 70 - Size Tested: 1524 x 1524 mm (60 x 60 in) Type: FW



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SECTION 11

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

All drawings are on file with Intertek-ATI.



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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/06/21	N/A	Original Report Issue
1	09/01/21	Page 5	IG Spacer Type Changed Weep Locations Revised