

REPORT SUMMARY:

REPORT #: T15-013

TESTED FOR: International Window Corporation

PRODUCT TYPE: Aluminum Fixed Window O

SERIES: 8220

SPECIFICATION: NAFS – North American Fenestration Standard/specification for windows, doors, and skylights AAMA/WDMA/CSA 101/I.S.2/A440-11

PERFORMANCE GRADE: PG30 LC30

TEST COMPLETION DATE: 3/18/2015

REPORT DATE: 3/19/2015

Fenestration Testing Laboratory, Inc.
10235 8th. Street, Rancho Cucamonga, CA 91730

Report No.: T15-013

1.0 Tested For: International Window Corporation
A/P Dept.
1551 E. Orangethorpe Ave
Fullerton , Ca 92831

2.0 Purpose:

The purpose of this report is to present the testing methods employed and the test results obtained during the performance testing of one (1) Aluminum Fixed Window described in paragraph 4.0 of this report.

3.0 Test References:

3.1 NAFS – North American Fenestration Standard/specification for windows, doors, and skylights AAMA/WDMA/CSA 101/I.S.2/A440-11

3.2 ASTM F 588 -14 Forced Entry Resistance Tests for Windows.

3.3 CAWM 301 - 90 Forced Entry Resistance Tests for Windows.

4.0 Compliance Statement: The test results in paragraph 6.0 indicate that the test sample described in paragraph 5.0 of this report met the performance requirements of the above specifications for the performance grade shown in 4.1 below.

4.1 Class LC -PG 30 2438 mm x 1829 mm (96" x 72") Type: FW

5.0 Sample Submitted

5.1 Product Type: Aluminum Fixed Window

5.2 Series/Model: 8220 PW

5.3 Configuration: O

5.4 Product Size:	Millimeters	Inches
Frame:	1816 mm x 2426 mm	71.50" x 95.50"
Fixed Panel DLO	1759 mm x 2369 mm	69.25" x 93.25"

5.5 Glass and Glazing

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1.01 Overall	.64" wide Intercept Spacer	3/16" clear annealed	3/16" tinted annealed	The glass lite rested on (2) rubber setting blocks placed 4" in from each end. The glass was glazed from the exterior with double-sided adhesive foam tape.

5.6 Weepage

Draining Method	Size	Quantity	Location
Weep slot	0.75" x 0.125"	2	1 1/2" from each end of the sill glazing stop on the outside face.
Weep slot	0.75" x 0.125"	2	1 1/2" from each end of the frame sill.

5.7 Weatherstripping/ Sealant

Type:	Quantity	Location
Push in vinyl seal	1 strip	On the glazing stops full length.
Sealant	1	Sill / jamb joints full profile

5.8 Hardware

Type:	Quantity	Location
N/A	N/A	N/A

5.9 Construction

Location	Joinery Type	Number of Fasteners	Fastern size
All frame corners	Mechanically joined	2	#6 x 1" PPH screws
Aluminum Glazing stops	Snap fastened	4	1.41" x 0.75"
Frame- Thermally broke frame with a debridged gap of 0.42"	N/A	N/A	N/A

5.10 Reinforcement

Drawing #	Location	Material
N/A	N/A	N/A

5.11 Installation

The test specimen was installed into a 2" x 8" wooden rough opening.

Location on frame	Anchor type	Spacing
Head, jambs, and sill	#8 x 1.25" PFH screw applied through the nail-on fin	4" from each corner and 12" on center in the field.

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6.0 Test Procedures and Results: All testing procedures were conducted in accordance with the performance requirements of the test specifications referenced in paragraph 3.0 of this report. (Laboratory conditions during test were 23.8 degrees Celsius (75 degrees Fahrenheit))

Test Description	Results	Allowed	Comments
9.3.2 - Air Leakage (ASTM E 283-04 (2012))			
75 Pa	0.00 L/s*sq.m	1.5 L/s*sq.m	
1.57 psf	0.00 cfm/sq.ft.	0.30 cfm/sq.ft.	
The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.			
9.3.3 Water Penetration (ASTM E 547-00 (2009))			
180 Pa (3.76 psf)	Pass	No Leakage	
9.3.4.2 Uniform Load Deflection at Design Pressure (ASTM E 330-14)			
1200 Pa (25.06 psf) Pos	0.00 mm (0.00")	Report	
1200 Pa (25.06 psf) Neg	0.00 mm (0.00")	Report	
9.3.4.3 Uniform Load Structural Test (ASTM E 330-14)			
1800 Pa (37.59 psf) Pos	0.00 mm (0.00")	9.65 mm (0.38")	
1800 Pa (37.59 psf) Neg	0.00 mm (0.00")	9.65 mm (0.38")	
9.3.5 Forced Entry Resistance			
ASTM F 588-14 Type D Grade 10	Pass	No Entry	
CAWM 301-90 Type V	Pass	No Entry	
Optional Performance Test			
9.3.3 Water Penetration (ASTM E 547-00 (2009))			
220 Pa (4.59 psf)	Pass	No Leakage	
9.3.4.2 Uniform load deflection at Design Pressure (ASTM E 330-14)			
1440 Pa (30.08 psf) Pos	0.00 mm (0.00")	Report	
1440 Pa (30.08 psf) Neg	0.00 mm (0.00")	Report	
9.3.4.3 Uniform Load Structural Test (ASTM E 330-14)			
2160 Pa (45.11 psf) Pos	0.00 mm (0.00")	9.65 mm (.38")	
2160 Pa (45.11 psf) Neg	0.00 mm (0.00")	9.65 mm (.38")	

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For a complete description of the tested sample refer to the attached seven (7) pages consisting of the bill of materials, cross section drawings, and individual die drawings. This report is complete only when all of the above referenced drawings and bill of materials are attached.

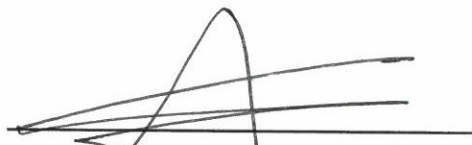
Cross section drawings and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings and a copy of this report will be retained at the test laboratory for four years.

This test report may not be modified in any way without the written consent of Fenestration Testing Laboratory.

The preceding test results relate only to the tested specimen and were obtained by using the applicable test methods listed in sections 3.0 and 6.0 above. This report does not constitute certification of this product or an endorsement by this laboratory. It is the property of the client named in section 1.0 above. Certification can only be granted by an approved administrator and/or validator.

Date Testing Completed: March 18, 2015

Date Report Completed: March 19, 2015



Pete Cruz
Test Engineer



James Farmer
Test Consultant