

**AAMA/WDMA/CSA 101/LS.2/A440-05
TEST REPORT**

Rendered to:

INTERNATIONAL WINDOW CORPORATION

SERIES/MODEL: 5301

PRODUCT TYPE: Polyvinyl Chloride (PVC) Fixed Window

Title	Summary of Results
Primary Product Designator	FW-C30 1819 x 1830 (72 x 72)
Design Pressure	± 1440 Pa (± 30.08 psf)
Air Infiltration	0.00 L/s/m ² (0.0 cfm/ft ²)
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)
Uniform Load Structural Test Pressure	± 2160 Pa (± 45.11 psf)
Forced Entry Resistance	ASTM F 588 CAWM 301

Test Completion Date: 08/04/09

Reference must be made to Report No. 92434.01-301-44, dated 08/13/09 for complete test specimen description and data.

AAMA/WDMA/CSA 101/I.S.2/A440-05 TEST REPORT

Rendered to:

INTERNATIONAL WINDOW CORPORATION
5625 East Firestone Boulevard
South Gate, California 90280

Report No.: 92434.01-301-44
Test Dates: 06/11/09
Through: 08/04/09
Report Date: 08/13/09
Expiration Date: 08/04/13

Project Summary: Architectural Testing, Inc. was contracted by International Window Corporation to perform and validate testing on a Series/Model 5301, Polyvinyl Chloride (PVC) Fixed Window. The sample tested successfully met the performance requirements for an FW-C30 1819 x 1830 (72 x 72) rating. Test specimen description and results are reported herein. The sample was provided by the client.

Test Specifications: The test specimen was evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

CAWM 301, *Forced Entry Resistance Tests for Windows.*

Test Specimen Description:

Series/Model: 5301

Product Type: Polyvinyl Chloride (PVC) Fixed Window

Overall Size: 1819 mm (71-5/8") wide by 1830 mm (72-1/16") high

Daylite Opening Size: 1750 mm (68-7/8") wide by 1758 mm (69-3/16") high

Overall Area: 3.33 m² (35.83 ft²)

Finish: All PVC was white.

Test Specimen Description: (Continued)

Frame Construction: All members were constructed of extruded PVC. The corners were mitered and full welded.

Weatherstripping: No weatherstripping was utilized.

Glazing Details: The window utilized 1/4" thick monolythic glass. The glass was exterior glazed onto 1/2" wide x 1/16" thick glazing tape and secured with a snap-in extruded PVC glazing bead.

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-3/4" x 1/4" oval weephole (1-1/4" x 1/8" effective)	2	1-1/2" from each end of the sill face through two layers.
1/4" round weephole	2	2-1/4" from each end of the sill glazing track.

Hardware: No hardware was utilized.

Reinforcement: No reinforcement was utilized.

Installation: The window was installed into a 2 x 8 test buck constructed of Douglas Fir No. 2 lumber. The nailing fin was set against the test buck and secured using #6 x 1-5/8" drywall screws located 4" from each corner and 10" on center. The rough opening was 13/16" wider and a 3/8" taller than the window. The nailing fin was sealed to the test buck with silicone.

Test Results: The temperature during testing was 23°C (74°F). The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.2.1	Air Leakage Resistance per ASTM E 283 75 Pa (1.57 psf)	0.0 L/s/m ² (0.0 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.

Note #1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-05 for air leakage resistance.*

5.3.3.2	Water Penetration Resistance per ASTM E 547 220 Pa (4.59 psf)	No leakage	No leakage
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Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.4.2	Uniform Load Deflection per ASTM E 330 (Deflections were taken on the left jamb) (Loads were held for 10 seconds)		
	1440 Pa (30.08 psf) (positive)	0.3 mm (0.01")	See Note #2
	1440 Pa (30.08 psf) (negative)	0.5 mm (0.02")	See Note #2
5.3.4.3	Uniform Load Structural per ASTM E 330 (Permanent sets were taken on the left jamb) (Loads were held for 10 seconds)		
	2160 Pa (45.11 psf) (positive)	0.0 mm (0.00")	8.1 mm (0.32") max.
	2160 Pa (45.11 psf) (negative)	0.3 mm (0.01")	8.1 mm (0.32") max.
<i>Note #2: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440-05 for this product designation. The deflection data is recorded in this report for special code compliance and information only.</i>			
5.3.5	Forced Entry Resistance per ASTM F 588 Type: D		
	Disassembly Test	No entry	No entry
	Forced Entry Resistance per CAWM 3301 Type: V		
	Test A	No entry	No entry
	Test B	No entry	No entry
5.3.6.2	Thermoplastic Corner Weld Test	Meets as stated	Meets as stated

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.

Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein.

List of Official Observers:

<u>Name</u>	<u>Company</u>
Jeffrey T. Osugi	Architectural Testing Inc.
Eric Williamson	Architectural Testing Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Jeffrey T. Osugi
Technician

Kenny C. White
Laboratory Manager

JO: ms/ss

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Test Equipment (1)

Appendix-C: Drawings (5) Complete drawings packet on file with Architectural Testing, Inc.

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	08/13/09	N/A	Original report issue

Appendix A

Alteration Addendum

Alteration #1: Date – 08/03/09
Cause for alteration – Client request
Remedial action taken – Replaced dual glazed test unit with single glazed.

Appendix C

Drawings

Note: Complete drawings packet on file with Architectural Testing, Inc.