



TEST REPORT

Report No.: B6277.01-801-47

Rendered to:

CROFT LLC
MAGNOLIA, MISSISSIPPI

PRODUCT TYPE: 21
SERIES/MODEL: Fixed Window

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results	
	Test Specimen #1	Test Specimen #2
Primary Product Designator	Class R-PG50 1829 x 1829 (72 x 72) Type FW	Class R-PG50 1524 x 2438 (60 x 96) Type FW
Design Pressure	±2400 Pa (±50.13 psf)	±2400 Pa (±50.13 psf)
Air Infiltration	0.10 L/s/m ² (0.02 cfm/ft ²)	0.10 L/s/m ² (0.02 cfm/ft ²)
Water Penetration Resistance Test Pressure	360 Pa (7.52 psf)	360 Pa (7.52 psf)

Test Completion Date: 03/05/2012

Reference must be made to Report No. B6277.01-801-47 dated 03/08/2012 for complete test specimen description and detailed test results.



1.0 Report Issued To: Croft LLC
P.O. Box 826
McComb, Mississippi 39649

2.0 Test Laboratory: Architectural Testing, Inc.
2865 Market Loop
Southlake, Texas 76092
(817)410-7202

3.0 Project Summary:

3.1 Product Type: Fixed Window

3.2 Series/Model: 21

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a Class R-PG50 1829 x 1829 (72 x 72) Type FW rating and R-PG50 1524 x 2438 (60 x 96) Type FW.

3.4 Test Dates: 02/08/2012 - 03/05/2012

3.5 Test Record Retention End Date: All test records for this report will be retained until March 08, 2016.

3.6 Test Location: Croft LLC test facility in Magnolia, Mississippi. Calibration of test equipment was performed by Architectural Testing in accordance with AAMA 205-01 "In-Plant Testing Guidelines for Manufacturers and Independent Laboratories".

3.7 Test Sample Source: The test specimens were provided by the client. Representative samples of the test specimens will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Jim Bitz	Croft LLC
Paul Osprey	Croft LLC
Clint Barnett	Architectural Testing, Inc.

4.0 Test Specification(s):

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimen#1:

Overall Area: 3.6 m ² (36 ft ²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1829	72	1829	72

Test Specimen#2:

Overall Area: 3.7 m ² (40 ft ²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1524	60	2438	96

The following descriptions apply to all specimens.

5.2 Frame Construction:

Frame Member	Material	Description
All members	Vinyl	Custom extruded

	Joinery Type	Detail
All corners	Mitered & welded	Thermoplastic welded

5.0 Test Specimen Description: (Continued)

5.3 Weatherstripping: No weatherstripping was utilized.

5.4 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	Interior Lite	Exterior Lite	Glazing Method
5/8" IG	Aluminum U-Shaped	3/16" Annealed	3/16" Annealed	Interior wet glazed

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Fixed lite specimen #1	1	1753 x 1753	69 x 69	0.50"
Fixed lite specimen #2	1	1422 x 2350	56 x 92-1/2	0.50"

5.5 Drainage: No drainage was utilized.

5.6 Hardware: No hardware was utilized.

5.7 Reinforcement: No reinforcement was utilized.

5.8 Screen Construction: No screen was utilized during testing.

6.0 Installation:

The specimen was installed into a Spruce-Pine-Fir wood buck. A wood 2 x 2 was secured over the nail fin full perimeter. The rough opening allowed for a 1/4" shim space. The window was secured to the wood buck with sealant located behind the nail fin. The

Location	Anchor Description	Anchor Location
Head, Sill, Jamb	1-1/4" wood screw	2" from each corner then 12" full perimeter

7.0 Test Results: The temperature during testing was 22°C (71°F). The results are tabulated as follows:

Test Specimen # 1

Title of Test	Results	Allowed	Note
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.10 L/s/m ² (0.02 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1
Water Penetration, per ASTM E 547 at 140 Pa (2.92 psf)	N/A	N/A	2
Uniform Load Deflection, per ASTM E 330 taken on frame jamb +720 Pa (+15.04 psf) -720 Pa (-15.04 psf)	N/A	N/A	2
Uniform Load Structural, per ASTM E 330 taken on frame jamb +1080 Pa (+22.56 psf) -1080 Pa (-22.56 psf)	N/A	N/A	2
Forced Entry Resistance, per ASTM F 588 Type: D - Grade: 10	Pass	No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Optional Performance			
Water Penetration, per ASTM E 547 at 360 Pa (7.52 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E 330 taken on frame jamb +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	1 mm (0.04") 2 mm (0.08")	Report Only	3, 4, 5
Uniform Load Structural, per ASTM E 330 taken on frame jamb +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	< 1 mm (0.01") < 1 mm (0.01")	1 mm (0.05") max. 1 mm (0.05") max.	4, 5

7.0 Test Results: (Continued)

Test Specimen # 2

Title of Test	Results	Allowed	Note
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.10 L/s/m ² (0.02 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1
Water Penetration, per ASTM E 547 at 140 Pa (2.92 psf)	N/A	N/A	2
Uniform Load Deflection, per ASTM E 330 taken on frame jamb +720 Pa (+15.04 psf) -720 Pa (-15.04 psf)	N/A	N/A	2
Uniform Load Structural, per ASTM E 330 taken on frame jamb +1080 Pa (+22.56 psf) -1080 Pa (-22.56 psf)	N/A	N/A	2
Optional Performance			
Water Penetration, per ASTM E 547 at 360 Pa (7.52 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E 330 taken on frame jamb +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	2 mm (0.07") 1 mm (0.04")	Report Only	3, 4, 5
Uniform Load Structural, per ASTM E 330 taken on frame jamb +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	< 1 mm (< 0.01") 1 mm (0.03")	1 mm (0.05") max. 1 mm (0.05") max.	4, 5



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: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

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.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

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.



Digitally Signed by: Clint Barnett

Clint Barnett
Technician



Digitally Signed by: Andy Cost

Andy Cost
Laboratory Manager

CB:hd

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

Appendix-A: Alteration Addendum (1)

Appendix-B: Drawings (4) complete drawings packet on file with Architectural Testing, Inc.

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