



Architectural Testing

**AAMA/NWWDA101/I.S. 2-97 STRUCTURAL TEST REPORT**

Rendered to:

**EAGLE WINDOW & DOOR, INC.**  
375 East Ninth Street  
Dubuque, Iowa 52004-1072

Report No: 02-33921.01  
Test Date: 01/24/02  
Report Date: 01/29/02  
Expiration Date: 01/24/06

**Project Summary:** Architectural Testing, Inc. (ATI) was contracted to perform tests on one Eagle Series 01 One Piece Fixed Radius Top Casement. The sample tested successfully met the performance requirements for a F-C90 96 x 60 rating. Test specimen description and results are reported herein.

**Test Procedure:** The test specimen was evaluated in accordance with ANSI/AAMA/NWWDA 101/I.S. 2-97, "*Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*"

**Test Specimen Description:**

**Series/Model:** Series 01 One Piece Fixed Radius Top Casement

**Type:** Aluminum Clad Fixed Wood Window

**Overall Size:** 8' 0" wide by 5' 0" high

**Day Light Opening Size:** 7' 5-3/4" wide by 4' 5-3/4" high

**Overall Area:** 40.0 ft<sup>2</sup>

**Finish:** Interior wood was natural, exterior cladding was painted white.

**Glazing:** The window utilized nominal 3/4" insulating glass fabricated from two nominal 3/16" annealed sheets separated by a desiccant-filled metal spacer system. The glass was set from the interior against silicone backbedding. Wood glazing stops and foam tape were secured on the interior with 18-gauge 1-1/4" brad nails spaced 1-1/2" from each corner and 6" to 8" on center.

587 First Street SW  
New Brighton, MN 55112  
phone: 651.636.3835  
fax: 651.636.3843  
[www.archtest.com](http://www.archtest.com)



## Test Specimen Description (Continued)

**Weatherstripping:** None.

**Frame Construction:** The wood frame was comprised of laminated veneer lumber with the corners square-cut, butted, glued and secured with two 1/2" by 1-3/4" staples and two corrugated staples per corner. Aluminum cladding was slip-fit over the exterior frame members, and the corners were miter-cut with a nylon corner key inserted and secured with two #6 by 7/16" sheetmetal screws per corner. The cladding corners were sealed with silicone.

**Sash Construction:** None.

**Installation:** The window was installed within a nominal 2" by 8" SPF #2 wood test buck. The window was anchored to the buck through the nailing flange with 2" roofing nails spaced 3-1/2" from each corner and 6" on center. The nailing flange was sealed to the buck with silicone.

## Test Results:

The results are tabulated as follows.

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.1.2	Air Infiltration per ASTM E 283 (See Note #1) @ 1.56 psf (25 mph) @ 6.24 psf (50 mph)	< 0.01 cfm/ft <sup>2</sup> < 0.01 cfm/ft <sup>2</sup>	0.3 cfm/ft <sup>2</sup> max. --
<i>Note #1: The tested specimen exceeds the performance levels specified in AAMA/NWDA 101/I.S. 2-97 for air infiltration.</i>			
2.1.3	Water Resistance per ASTM 547-96 WTP = 12.00 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330-97 (permanent set reading were taken between anchor points) (10 seconds) @ 45.0 psf (positive) @ 45.0 psf (negative)	< 0.01" < 0.01"	0.4% L = 0.56" 0.4% L = 0.56"
2.1.8	Forced Entry Resistance per ASTM F 588-97 Level 40 Tool Manipulation Test	No entry	No entry



**Test Results: (Continued)**

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547-96 & E 331-96 WTP = 15.00 psf	No leakage	No leakage @ 13.50 psf
4.4.1	Uniform Load at Design Pressure per ASTM E 330-97* (60 seconds) @ 90.0 psf (positive) @ 90.0 psf (negative)	No damage No damage	No damage No damage
4.4.2	Uniform Load Structural per ASTM E 330-97 (permanent set reading were taken between anchor points) (10 seconds) @ 135.0 psf (positive) @ 135.0 psf (negative)	< 0.01" < 0.01"	0.4% L = 0.56" 0.4% L = 0.56"

\*Not a requirement of AAMA/NWWDA 101/I.S. 2-97

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC.

Michael J. Sovell  
Project Manager

Daniel A. Johnson  
Regional Manager