ARCHITECTURAL TESTING INC.
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# AAMA/NWWDA STRUCTURAL TEST REPORT

Rendered to:

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

| | |
|---|---|
| Report No: | 02-32198.01 |
| Test Date: | 03/13/2000 |
| Report Date: | 04/05/2000 |
| Expiration Date: | 03/13/2004 |

**Project Summary:** Architectural Testing, Inc. (ATI) was contracted to perform tests on one Eagle Window & Door 6060 clad casement fixed window (one-piece frame)

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

AAMA/NWWDA 101/I.S. 2-97, *"Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors,"* for conformance to the Class F-C45 (72 x 72) performance requirements. Testing was additionally conducted for conformance to the equivalency of a design pressure of ±47.0 psf.

**Test Specimen Description:**

**Series/Model:** 6060 Clad Casement Fixed (one-piece frame)

**Type:** Aluminum Clad Fixed Wood Window

**Overall Size:** 6' 0" wide by 6' 0" high

**Sash Size:** 5' 10-1/2" wide by 5' 10-1/2" high

**Overall Area:** 36.0 $ft^2$

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

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

**Frame Construction:** The wood frame was comprised of Ponderosa pine with the corners utilizing mortise-and-tenon construction and secured with one brad nail 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 outer corner and a nylon/metal insert per inner corner. The cladding corners were sealed with silicone.

**Test Specimen Description** (Continued)

**Installation**: The window was installed within a nominal 2" by 8" #2 SPF 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**

| Paragraph | Title of Test | Results | Allowed |
|---|---|---|---|
| 2.1.2 | Air Infiltration per ASTM E 283 | | |
| | @ 1.56 psf (25 mph) | < 0.01 cfm/ft$^2$ | 0.3 cfm/ft$^2$ max. |
| | @ 6.24 psf (50 mph) | < 0.01 cfm/ft$^2$ | -- |
| | *The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.* | | |
| 2.1.3 | Water Resistance per ASTM 547-96 | | |
| | WTP = 4.50 psf | No leakage | No leakage |
| 2.1.4.2 | Uniform Load Structural per ASTM E 330-97 (10 seconds) | | |
| | @ 45.0 psf (positive) | No damage | No damage |
| | @ 45.0 psf (negative) | No damage | No damage |
| 2.1.8 | Forced Entry Resistance per ASTM F 588-97 | | |
| | Grade: 10 | | |
| | Lock Manipulation Test | No entry | No entry |

**Optional Performance**

| Paragraph | Title of Test | Results | Allowed |
|---|---|---|---|
| 4.3 | Water Resistance per ASTM E 547-96 & E 331-96 | | |
| | WTP = 12.0 psf | No leakage | No leakage @ 7.50 psf |
| 4.4.1 | Uniform Load Deflection at Design Pressure per ASTM E 330-97 (60 seconds) | | |
| | @ 47.0 psf (positive) | No damage | No damage |
| | @ 47.0 psf (negative) | No damage | No damage |
| 4.4.2 | Uniform Load Structural per ASTM E 330-97 (10 seconds) | | |
| | @ 70.5 psf (positive) | No damage | No damage |
| | @ 70.5 psf (negative) | No damage | No damage |

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.

Daniel A. Johnson
Regional Manager

Daniel P. Braun
Regional Manager

DAJ/jb
02-32198