



Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

MI HOME PRODUCTS, INC.
P.O. Box 370
650 West Market Street
Gratz, Pennsylvania 17030-0370

Report No: 01-40486.02
Test Dates: 11/13/01
And: 11/14/01
Report Date: 02/15/02
Expiration Date: 11/14/05

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to witness performance testing on a Series/Model 740/744, aluminum picture window with vertical mullion at their facility located in Elizabethville, Pennsylvania. The sample tested successfully met the performance requirements for an F-R40 109 x 53 rating.

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

Test Specimen Description:

Series/Model: 740/744

Type: Aluminum Picture Window with Vertical Mullion

Overall Size: 9' 1" wide by 4' 5-1/8" high

Fixed Daylight Opening Size (2): 4' 5-1/8" wide by 4' 2-7/8" high

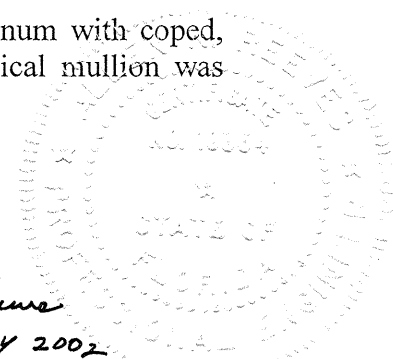
Finish: All aluminum was painted.

Glazing Details: The unit utilized one sheet of 1/8" thick, clear tempered glass. The lites were interior glazed against double-sided adhesive tape and secured with an aluminum glazing bead, held-in-place with 7/8" screws placed 12" on center.

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two screws each. The vertical mullion was secured utilizing two 5/8" screws per end.

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15 FEBRUARY 2002



Test Specimen Description: (Continued)

Installation: The wood test buck was fabricated using 2 x 8 #2 Spruce-Pine-Fir. #8 x 1-5/8" installation screws were utilized 3" from ends and midspan through all frame members. Exterior perimeter was sealed with silicone.

Reinforcement: No reinforcement was utilized.

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.1.2	Air Infiltration per ASTM E 283 (See Note #1) @ 1.57 psf (25 mph)	0.03 cfm/ft ²	0.3 cfm/ft ² max.

Note #1: 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 E 547 (See Note #2)		
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Note #2: The client opted to begin at a pressure higher than the minimum required. Those results are listed under "Optional Performance".

2.1.4.2	Uniform Load Structural per ASTM E 330 (See Note#2)		
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2.1.8	Forced Entry Resistance per ASTM F 588-97		
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Type: D
Grade: 10

Manipulation Test	No entry	No entry
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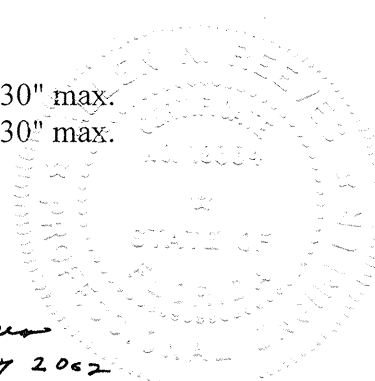
Optional Performance

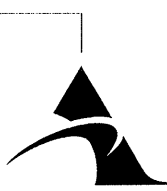
4.3	Water Resistance per ASTM E 547-96 WTP = 6.00 psf	No leakage	No leakage
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4.4.1	Uniform Load Deflection per ASTM E 330-97 (Measurements reported were taken on mullion) (Loads were held for 52 seconds)		
	@ 45.0 psf (positive)	0.87"*	0.30" max.
	@ 47.2 psf (negative)	0.54"*	0.30" max.

**Exceeds L/175 for deflection, but meets all other test requirements.*

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15 FEBRUARY 2002





Test Results:

Optional Performance: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
4.4.2	Uniform Load Structural per ASTM E 330-97 (Measurements reported were taken on mullion) (Loads held for 10 seconds)		
	@ 60.0 psf (positive)	0.08"	0.21" max.
	@ 60.0 psf (negative)	0.11"	0.21" max.

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 an they indicated 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.

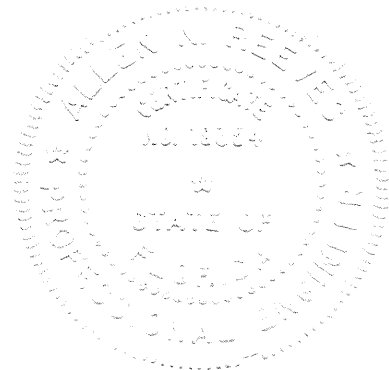
For ARCHITECTURAL TESTING, INC.:

Mark A. Hess
Technician

MAH:baw
01-40486.02

Allen N. Reeves, P.E.
Director - Engineering Services

15 FEBRUARY 2002





DOCUMENT CONTROL ADDENDUM #01-40486.00

Current Issue Date: 02/15/02

Report No.: 01-40486.01

Requested by: William Emley, MI Home Products, Inc.

Purpose: AAMA/NWWDA 101/I.S.2-97 testing of Series/Model 744, aluminum picture window with vertical mullion.

Issued Date: 01/02/02

Comments: Florida P.E. seal required on report.

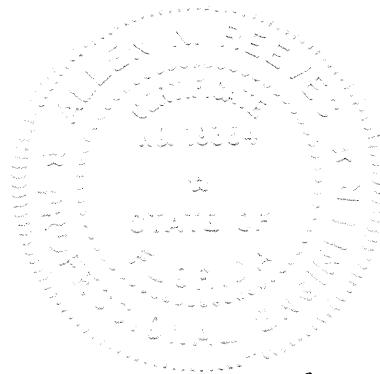
Report No.: 01-40486.02

Requested by: William Emley, MI Home Products, Inc.

Purpose: AAMA/NWWDA 101/I.S.2-97 testing of Series/Model 740/744, aluminum picture window with vertical mullion, and installation fasteners through frame.

Issued Date: 02/15/02

Comments: Florida P.E. seal required on all pages of report. Certification copy to John Smith at Associated Laboratories, Inc.



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15 FEBRUARY 2002

**Metal Industries Home Products
In-Plant Witness
Structural Performance Test Report
NCTL 310-0005-5.1
Series "740/744" Fixed Lite
Aluminum Prime Window
Test Date: 07/15/98**

Handwritten signature and date:
2/13/02

Seal:
D. PORTNOY
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW YORK
No. 10750