Architectural Testing

ANSI/AAMA/WDMA 101/I.S.2-97 TEST REPORT

Rendered to:

CMI ARCHITECTURAL PRODUCTS INC.
2800 Freeway Boulevard, Suite 205
Minneapolis, Minnesota 55430

ATI Report Identification No.: 02-49821.01
Test Date: 04/05/04
Through: 04/14/04
Report Date: 06/10/04

Project Summary: Architectural Testing, Inc. (ATI) was contracted by CMI Architectural Products to perform testing on a Series/Model 450 TB Storefront Framing System. Test specimen description and results are reported herein.

Test Specifications:

ASTM E 283-91(99), *"Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen."*

ASTM E 330-97, *"Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."*

ASTM E 331-00, "Standard *Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."*

Test Specimen Description:

Series/Model: 450 TB

Product Type: 4-1/2" Deep Thermally-broken Two-wide Fixed Lite

Overall Size: 8' 0" wide by 8' 3/8" high

Daylight Opening Size (2): 3' 9" wide by 7' 8" high

Area: 64.25 ft^2

Finish: All aluminum was painted white.

849 Western Avenue North
Saint Paul, MN 55117-5245
phone: 651.636.3835
fax: 651.636.3843
www.archtest.com

450 TB Framing
Test Specimen Description: (Continued)

Glazing Details: The glazing consisted of a nominal 1" insulating glass comprised of two 1/4" tempered sheets separated by a desiccant-filled metal spacer system. The glass was set from the exterior against an EPDM gasket. Aluminum glazing beads with EPDM gaskets were used on the exterior.

Frame Construction: The frame consisted of extruded aluminum with corners square-cut, sealed and secured with two #10 by 1-1/4" screws. The mullion was attached to the head and sill with shear blocks secured to the mullion with eight #10 by 2" screws and to the head and sill with four #10 by 3/8" screws. The mullion was additionally secured with four 3/16" by 1-1/2" slotted steel spring pins one on each side at the head and sill. All frame members were thermally improved with a poured-and-debridged urethane thermal break system. The frame was set into an aluminum sill starter with a 1-3/4" interior upturned leg. The frame was attached to the sill starter with a continuous bead of sealant and six #8 by 1/2" sheet metal screws spaced at one at each corner, two at the mullion and one at each midspan of each lite.

Installation: The unit was installed within a SPF #2 wood test buck and secured through the jambs and head with #10 by 2" screws spaced 6" from each corner and 12" on center. The sill receptor was secured with #10 by 2" screws spaced 6" from each corner and 12" on center. The test specimen was sealed to the buck with silicone.

Test Results: The results are tabulated as follows.

Title of Test – Test Method	Results	Allowed
Air Infiltration per ASTM E 283-01		
@ 1.56 psf (25 mph)	<0.01 cfm/ft^2	--
@ 6.24 psf (50 mph)	<0.01 cfm/ft^2	0.01 cfm/ft^2 max.
@ 8.00 psf (57 mph)	<0.01 cfm/ft^2	--
@ 10.0 psf (63 mph)	<0.01 cfm/ft^2	--
Water Resistance per ASTM E 331-00		
@ 12.0 psf	No entry	No leakage @ 8.0 psf
Uniform Load Deflection per ASTM E 330-97		
(Deflections reported were taken on the mullion)		
(Loads were held for 60 seconds)		
20.0 psf (positive)	0.42"	0.457" max.
20.0 psf (negative)	0.44"	0.457" max.
Uniform Load Structural per ASTM E 330-97		
(Permanent sets reported were taken on the mullion)		
(Loads were held for 10 seconds)		
30.0 psf (positive)	0.01"	0.386" max.
30.0 psf (negative)	0.05"	0.386" max.

Detailed drawing, representative samples 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. This report may not be reproduced except in full without the approval of Architectural Testing Inc.

ARCHITECTURAL TESTING, INC.

Eric J. Schoenthaler
Technician

ARCHITECTURAL TESTING, INC.

Daniel A. Johnson
Regional Manager

EJS/jb
02-49821.01

Title	Summary of Results
Air Infiltration	<0.01 cfm/ft^2
Water Resistance Test Pressure	12.00 psf
Uniform Load Deflection Test Pressure	± 20.0 psf
Uniform Load Structural Test Pressure	± 30.0 psf
Forced Entry Resistance	Pass