

STRUCTURAL TEST REPORT

Rendered to:

CMI ARCHITECTURAL PRODUCTS INC.
608 Fourth Street S.E.
DeSmet, South Dakota 57231-0475

Report No: ATI-12317-N
Test Date: 11/11/93
Report Date: 12/09/93

Series/Model: 200T Project-In (Hopper)

Type: Aluminum Thermally Broken Project In Window

Test Procedure:

The test specimen was evaluated in accordance with AAMA 101-93, *"Voluntary Specification for Aluminum Prime Windows and Sliding Glass Doors,"* for conformance to the P-HC40 performance requirements.

Test Methods:

Air Infiltration, ASTM E 283-84, *"Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors."*

Water Resistance, ASTM E 331-86, *"Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."*

Uniform Structural Load, ASTM E 330-90, *"Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."*

Test Specimen Description:

Overall Size: 5' 0-1/2" wide by 1' 5-1/4" high

Sash Size: 5' 0" wide by 1' 4" high

Sash Crack: 12.54 In ft

Glazing: Nominal 1" insulating glass comprised of two nominal 1/4" clear annealed sheets with a desiccant-filled spacer was set from the interior against pre-shimmed 1/2" by 1/8" butyl glazing tape. Interior aluminum glass stops and an EPDM wedge gasket formed the interior glazing seal.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
EPDM bulb gasket	2 rows	Interior and exterior sash perimeter

Test Specimen Description: 200T Project-In (Continued)

Frame Construction: All frame members utilized a poured and debridged polyurethane thermal break system. Frame corners were mitered and secured with aluminum corner blocks crimped at two locations per side (four per corner). All frame corners were sealed with small joint sealant during assembly. A 1/2" by 3/8" extruded aluminum weep dam was positioned at the sill and sealed into place.

Sash Construction: All sash members utilized a poured and debridged polyurethane thermal break system. Sash corners were mitered and secured with aluminum corner blocks crimped at two locations per side (four per corner).

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Anderberg 4-bar hinges	2	Lower corners
Cam handles	2	Top sash rail at 1/4" points
Keepers	2	Adjacent to locks at head
3-1/2" long anti-bow clip	1	Bottom sash rail at center

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1/4" diameter weephole baffled with open cell foam to the interior	2	1/4 points

Test Results:

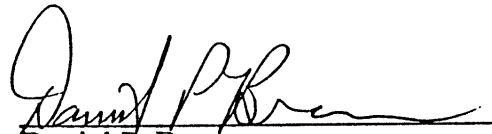
<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.1.2	Air Infiltration @ 1.56 psf @ 6.24 psf @ 8.0 psf @ 10.0 psf	0.016 cfm/ft 0.02 cfm/ft 0.02 cfm/ft 0.04 cfm/ft	-- 0.37 cfm/ft -- --
2.1.3	Water Resistance @ 6.0 psf	No entry	No entry @ 6.0 psf
2.1.4.2	Uniform Load Structural @ 60 psf (exterior) @ 60 psf (interior)	0.004" 0.001"	0.4% L = 0.124" 0.4% L = 0.124"
2.2.5.5.3	Torsion Test	0.753"	0.812"
2.2.5.5.4	Horizontal Concentrated Load Test on the Latch Rail 30 lbf (interior) 30 lbf (exterior)	0.060" 0.060"	0.062" 0.062"

Test Results (Continued)

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.5.5.5	Vertical Concentrated Load Test on the Latch Rail 30 lbf (down) 30 lbf (up)	0.060" 0.060"	0.062" 0.062"
2.2.5.5.8	Balance Arm Load Test	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.

ARCHITECTURAL TESTING, INC.



Daniel P. Braun
Regional Manager

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