



AAMA/NWDA 101/I.S.2-97
TEST REPORT SUMMARY

Rendered to:

SIMONTON WINDOWS

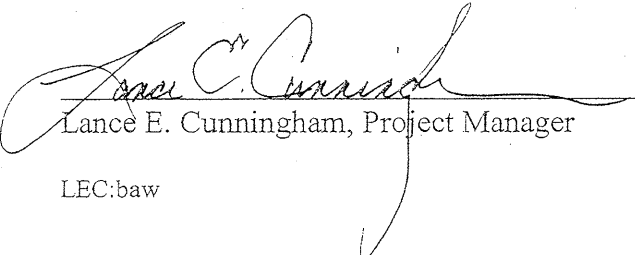
SERIES/MODEL: 08-09

TYPE: PVC Casement With Integral "T" Mullions

Title of Test	Results
Rating	C-R50 105 x 51
Overall Design Pressure	50 psf
Air Infiltration	0.09 cfm/ft ²
Water Resistance	7.50 psf
Structural Test Pressure	75.0 psf
Forced Entry Resistance	Passed

Reference should be made to Report No. 01-41006.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.


Lance E. Cunningham, Project Manager

LEC:baw



Architectural Testing

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

Rendered to:

SIMONTON WINDOWS
One Cochrane Avenue
Pennsboro, West Virginia 26415

Report No: 01-41006.01
Test Date: 02/14/02
Report Date: 03/13/02
Expiration Date: 02/14/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Simonton Windows to witness performance tests on one Series/Model 08-09, PVC casement window with integral "T" mullions at their test facility in Pennsboro, West Virginia. The sample tested successfully met the performance requirements for a C-R50 105 x 51 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: 08-09

Type: Triple PVC Casement Window With Integral "T" Mullions

Overall Size: 8' 9" wide by 4' 3" high

Vent Size: 2' 9-5/8" wide by 4' 1-3/16" high

Glazing Type: 3/4" thick sealed insulating glass fabricated with two sheets of 0.088" thick annealed glass with a steel spacer system.

Finish: All finish was white.

Glazing Details: The vents were exterior glazed with 3/4" thick sealed insulating glass fabricated with two sheets of 0.088" thick annealed glass with a steel spacer system. The glass was set against 1/2" wide by 3/32" thick glazing tape and secured with snap-in dual durometer vinyl glazing beads.

Test Specimen Description: (Continued)**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1/4" diameter co-extruded hollow vinyl bulb	1 Row	Perimeter of vents
1/4" long co-extruded flexible vinyl leaf	1 Row	Interior perimeter of vents
0.187" backed 7/32" high vinyl jacket foam-filled dual leaf bulb	1 Row	Exterior perimeter of vents

Frame Construction: The PVC frame was assembled using mitered and welded corner construction. The integral "T" mullions were coped, butted and secured with four screws per end through head and sill. Two #8 x 2-1/2" long screws per end were used to secure the interior side of the "T" mullions, and two #8 x 1-3/4" long screws per ends were used to secure the exterior side of the "T" mullions.

Vent Construction: The PVC vents were assembled using mitered and welded corner construction.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Rotary operator	3	12" in from each hinge jamb
Two bar hinge	6	Head/top rails and sill/bottom rails
Multi-point lock system	3	One on each integral "T" mullion and one on left jamb (interior view)
Plastic lock keepers	9	Three per vent opposite multi-point lock system
Steel snubbers	6	Hinge stiles/jambs and "T" mullions on exterior leg
2" steel snubbers	6	Hinge stiles/jambs and "T" mullions on interior leg

Test Specimen Description: (Continued)**Drainage:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
3/16" diameter weephole	6	1-7/16" from each end of bottom rail glazing pocket
3/16" diameter weephole	6	1-3/8" from each exterior corner of vent

Reinforcement: The integral "T" mullions were reinforced with custom shaped, hollow extruded aluminum measuring 1.765" x 1.285" x 0.062". Reference drawing casement mullion rebar (die number 59457) for details.

Installation: The window was installed into a 2" x 10" wood buck fabricated from Spruce-Pine-Fir construction lumber. This unit was fastened to the buck with three #8 screws in the head, sill and each jamb. The screws were embedded into the test buck approximately 1-1/2".

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 (ASTM E 283) @ 1.57 psf (25 mph)	0.09 cfm/ft ²	0.30 cfm/ft ² max.
<i>Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.</i>			
2.1.3	Water Resistance (ASTM E 547) (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the right vertical "T" mullion) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.225" 0.242"	See Note #2 See Note #2

Note #2: The Uniform Load Deflection test is not an AAMA/NWWDA 101/I.S.2-97 requirement for this product designation. The data is recorded in this report for information only.

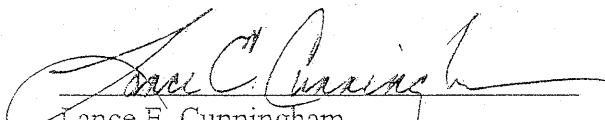
**Test Results: (Continued)**

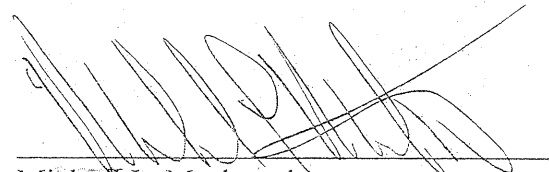
<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right vertical "T" mullion) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.021" 0.013"	0.199" max. 0.199" max.
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 588-97 Type: B Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Test B1	No entry	No entry
	Test B2	No entry	No entry
	Test B3	No entry	No entry
	Lock Manipulation Test	No entry	No entry
2.2.5.61	Vertical Deflection Test	0.07"	0.70" max.
2.2.5.62	Hardware Load Test @ 5.0 lb/ft ²	No deformation	No deformation
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.50 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the right vertical "T" mullion) @ 75.0 psf (positive) @ 75.0 psf (negative)	0.715" 0.895"	See Note #2 See Note #2
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right vertical "T" mullion) @ 75.0 psf (positive) @ 75.0 psf (negative)	0.019" 0.035"	0.199" max. 0.199" 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 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:


Lance E. Cunningham
Project Manager


Michael L. Mackereth
Director - Operations

LEC:baw
01-41006.01