



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

Rendered to:

SIMONTON WINDOWS

SERIES/MODEL: 07-70

TYPE: PVC Horizontal Sliding Window (XOX)
with E2 Reinforcement

Title of Test	Results
Rating	HS-R50 105 x 51
Overall Design Pressure	50 psf
Operating Force	7 lbs max.
Air Infiltration	0.09 cfm/ft ²
Water Resistance	7.5 psf
Structural Test Pressure	±75.0 psf
Deglazing	Passed
Forced Entry Resistance	Passed

Reference should be made to Report No. 05-30358.01 dated 04/02/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Digitally signed by Lynn George

Lynn George, Project Manager

LG:nb



AAMA/NWWDA 101/LS.2-97 TEST REPORT

Rendered to:

SIMONTON WINDOWS
One Cochrane Avenue
Pennsboro, West Virginia 26415-9403

Report No: 05-30358.01
Test Date: 03/06/02
Report Date: 04/02/02
Expiration Date: 03/06/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Simonton Windows to witness performance tests on a Series/Model 07-70, PVC horizontal sliding window at their test facility located in Pennsboro, West Virginia. The sample tested successfully met the performance requirements for an HS-R50 105 x 51 rating. Test specimen description and results are reported herein.

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

Test Specimen Description:

Series/Model: 07-70

Type: PVC Horizontal Sliding Window (XOX with E2 reinforcement)

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

Operable Sash Size (2): 2' 1-5/8" wide by 3' 10-3/4" high

Fixed Sash Size: 4' 6-1/2" wide by 3' 10-3/4" high

Screen Size (2): 1' 11-3/4" wide by 3' 10-3/4" high

Finish: All vinyl was white.

Test Specimen Description: (Continued)

Glazing Details: The sash and fixed lite were glazed with 1" thick sealed insulating glass fabricated with two 1/8" clear annealed sheets separated by a steel spacer system. The insulating glass was set from the exterior against a double-sided adhesive tape and secured with single leaf, dual durometer vinyl glazing beads.

Frame Construction: The PVC frame was assembled using mitered and welded corner construction. Rigid PVC roller tracks were applied to the sill. The center fixed sash was fastened to the head and sill using four molded plastic blocks, one at each sash corner. Each block was fastened with one screw into the sash and two screws into the frame.

Sash Construction: The PVC sash were assembled using mitered and welded corner construction.

Screen Construction: The screen was constructed from extruded aluminum. The corners were square cut and secured with plastic corner keys. Fiberglass screen cloth was held-in-place with a flexible spline.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.187" backed by 0.460" high pile with center fin	1 Row	Interior meeting stiles
0.187" backed by 0.250" high pile with center fin	2 Rows	Top and bottom rails, jamb stiles
0.187" backed by 0.340" high pile with center fin	1 Row	Exterior side of exterior meeting stiles
0.187" backed by 0.300" high pile with center fin	1 Row	Interior side of exterior meeting stiles

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock and keeper	4	Meeting stiles, 12" from each end
Plastic dual roller assembly	4	Bottom sash rail, one at each end

Test Specimen Description: (Continued)

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-1/16" by 3/16" weepslot (with flap)	2	Exterior sill face, 4" from each end
1" by 3/16" weepslot	4	Interior sill track, 4" from each end, Intermediate sill wall, one at each end
1/4" diameter weephole	2	Exterior sill track, 4" from each end
3/16" diameter weephole	8	Bottom rails, one at each end, Sill screen track, one at each end

Reinforcement: (E2 reinforcement) The exterior meeting stiles contained a rectangular shaped, formed steel reinforcement measuring 0.980" x 0.650" x 0.036" (reference drawing #SIMRECT1). The interior meeting stiles contained a rectangular shaped, formed steel reinforcement measuring 0.980" x 0.747" x 0.036" (reference drawing #SIMRECT2).

Installation: The window was installed into a wood buck constructed of Spruce-Pine-Fir construction lumber. The unit was sealed with silicone caulking at the exterior and interior perimeter with the exception of an approximate 6" void at each interior sill corner. The unit was secured to the buck using four #8 wood screws, one at the top and bottom of each jamb (embedded 1-1/2" into the wooden test buck).

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.5.1	Operating Force		
	<u>Left Sash</u>		
	Open	7 lbs	20 lbs max.
	Close	5 lbs	20 lbs max.
	<u>Right Sash</u>		
	Open	4 lbs	20 lbs max.
	Close	4 lbs	20 lbs max.

Test Results: (Continued)

<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 @ 1.56 psf (25 mph)	0.09 cfm/ft ²	0.3 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 per ASTM E 547 (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right meeting stile) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.052" 0.016"	0.187" max. 0.187" max.
2.2.1.6.2	Deglazing Test per ASTM E 987		
	<u>Left Sash</u>		
	In operating direction at 70 lbs		
	Handle stile	0.060"/12%	0.500"/100%
	Meeting stile	0.060"/12%	0.500"/100%
	In remaining direction at 50 lbs		
	Top rail	0.030"/6%	0.500"/100%
	Bottom rail	0.060"/12%	0.500"/100%
	<u>Right Sash</u>		
	In operating direction at 70 lbs		
	Handle stile	0.060"/12%	0.500"/100%
	Meeting stile	0.060"/12%	0.500"/100%
	In remaining direction at 50 lbs		
	Top rail	0.030"/6%	0.500"/100%
	Bottom rail	0.030"/6%	0.500"/100%



Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 588-97		
	Type: A		
	Grade: 10		
	Hand and Tool Manipulation	No entry	No entry
	Test A1 through A7	No entry	No entry
	Hand and Tool Manipulation	No entry	No entry

Optional Performance

4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.5 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right meeting stile)		
	@ 75.0 psf (positive)	0.180"	0.187" max.
	@ 75.0 psf (negative)	0.136"	0.187" 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:

Digitally signed by Lynn George

Lynn George
Project Manager

Steven M. Urich
Senior Project Engineer

LG:nlb
05-30358.01