



**AAMA/NWDA 101/LS.2-97
TEST REPORT SUMMARY**

Rendered to:

SIMONTON WINDOWS

**SERIES/MODEL: 07-70
TYPE: PVC Horizontal Sliding Window (XX)
with E2 Reinforcement**

Title of Test	Results
Rating	HS-R50 73 x 51
Overall Design Pressure	50 psf
Operating Force	8 lb max.
Air Infiltration	0.11 cfm/ft ²
Water Resistance	7.5 psf
Structural Test Pressure	±75.0 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 05-30347.02 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:nlb



Architectural Testing

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

Rendered to:

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

Report No: 05-30347.02
Test Date: 02/07/02
And: 03/06/02
Report Date: 04/02/02
Expiration Date: 02/07/06

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 Pensboro, West Virginia. The sample tested successfully met the performance requirements for an HS -R50 73 x 51 rating. Test specimen descriptions and results are reported herein.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWDA 101/I.S.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 (Type XX with E2 Reinforcement)

Overall Size: 6' 1" wide by 4' 3" high

Sash Size (2): 2' 11-13/16" wide by 3' 10-13/16" high

Screen Size: 2' 10-7/8" wide by 3' 10-11/16" high

Finish: All vinyl was white.

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

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Test Specimen Description: (Continued)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.187" backed by 0.460" high pile with center fin	1 Row	Lock stile
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 keeper stile
0.187" backed by 0.300" high pile with center fin	1 Row	Interior side of keeper stile

Frame Construction: The PVC frame was assembled using mitered and welded corner construction. Rigid PVC roller tracks were applied to the sill.

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.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock and keeper	2	Meeting stiles, 12" from each end
Plastic dual roller assembly	4	Bottom sash rails, one at each end
PVC sash anti-lift	2	Head, one in each track



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	6	Bottom rails, one at each end, Sill screen track, one at each end

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

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	8 lbs	20 lbs max.
	<u>Right Sash</u>		
	Open	8 lbs	20 lbs max.
	Close	7 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)	0.11 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 exterior meeting stile) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.035" 0.024"	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	0.060"/12%	0.500"/100%
	Bottom rail	0.060"/12%	0.500"/100%
	<u>Right Sash</u>		
	In operating direction at 70 lbs		
	Handle stile	0.030"/6%	0.500"/100%
	Meeting stile	0.060"/12%	0.500"/100%
	In remaining direction at 50 lbs		
	Top rail	0.090"/18%	0.500"/100%
	Bottom rail	0.030"/6%	0.500"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated



Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
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 exterior meeting stile)		
	@ 75.0 psf (positive)	0.132"	0.187" max.
	@ 75.0 psf (negative)	0.171"	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.

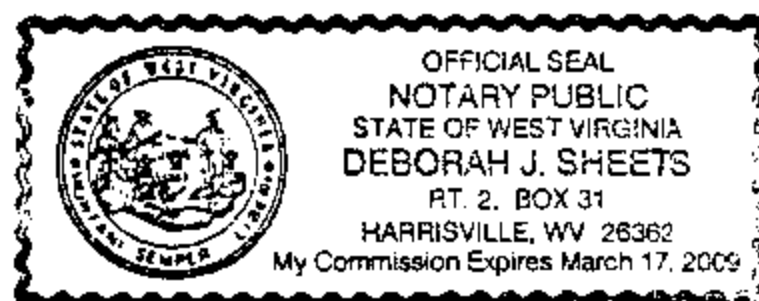
For ARCHITECTURAL TESTING, INC:

Lynn George

Digitally signed by Lynn George

Lynn George
Project Manager

LG:nlb
05-30347.02



Steven M. Urich

Steven M. Urich, P.E.
Senior Project Engineer

The foregoing instrument was
Acknowledged before me, this
The 10th day of April 2002
Deborah Sheets
Notary Public
My Commission Expires
3-17-09