ARCHITECTURAL TESTING INC.

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

Rendered to:

SIMONTON WINDOWS

SERIES/MODEL: 07-07 Patio Door

Type: Poly Vinyl Chloride (PVC) Sliding Glass Door (XO)

Rating: SGD-R50 72 x 80

SUMMARY OF RESULTS

Title of Test	Result
Overall Design Pressure	50 psf
Operating Force	13 lbf max.
Air Infiltration	0.12 cfm/ft²
Water Resistance	7.50 psf
Structural Test Pressure	75.0 psf
Deglazing	Passed
Foced Entry Resistance	Grade 10

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
KRISTY S LAMP
319 Walnut Street
Pennsboro, West Virginia 26415
My Commission Expires March 15, 2010

Kristy S. Lamp

Report No: 01-32968.01
Report Date: 10/06/98
Expiration Date: 09/25/02

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STRUCTURAL TEST REPORT

Rendered to:

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

Report No:	01-32968.01
Test Date:	09/25/98
Report Date:	10/06/98
Expiration Date:	09/25/02

Series/Model: 07-07 Patio Door

Type: Poly Vinyl Chloride (PVC) Sliding Glass Patio Door (XO)

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Simonton Windows to witness performance testing on their Series 07-07 Poly Vinyl Chloride (PVC) sliding glass patio door (XO) at their facility in Pennsboro, West Virginia. The door was tested in accordance with AAMA/NWWDA 101/I.S.2-97 and met the performance requirements for an SGD-R50 72 x 80 rating.

Test Procedure: 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:

Overall Size: 6' 0" wide by 6' 8" high

Active Panel Size: 2' 11-3/4" wide by 6' 4" high

Fixed Panel Size: 3' 1-5/16" wide by 6' 5-5/16" high

Screen Size: 2' 8-1/16" wide by 6' 6-1/4" high

Finish: All vinyl and screen frame finish was white.

Installation: The door was installed into a 2x10 wood buck. The sill was set in a bed of silicone. The frame exterior perimeter was sealed with silicone. The frame interior perimeter was sealed with silicone with the exception of a 6" gap at each sill corner. Four #8 by 2-1/2" screws were installed, two per jamb six inches off each end. The screw holes were concealed with installation hole covers.

Glazing: Both panels were exterior glazed against 1/2" wide by 1/16" thick foam glazing tape and secured with snap-fit dual durometer vinyl glazing bead. The glass overall thickness was 1", comprised of two 1/8" thick tempered sheets separated by a 3/4" intercept spacer system.

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
0.187" backed by 0.300" high pile with center fin	2 Rows	Active panel, both rails and locking stile
0.187" backed by 0.300" high pile with center fin	2 Rows	Sill, head, and both jambs
0.187" backed by 0.300" high pile with center fin	2 Rows	Fixed interlock, interior face
0.187" backed by 0.300" high pile with center fin	1 Row	Fixed panel, both rails and jamb stile

Frame Construction: Frame corners were coped and butted, foam corner pads were utilized and each corner was fastened through the jambs with four #8 x 2-1/2" screws per corner. An aluminum "J" clip was inserted into the head and sill fixed panel slot. The fixed panel slides onto these clips and they are secured using #8 x 1-1/4" screws, four per rail. The fixed panel was then fastened to the jamb from the interior with a custom aluminum dead lite clip. Three #6 x 1-1/4" screws secured the clip to the jamb and three #6 x 1-1/4" secured the fixed panel to the clip. A snap fit vinyl cover conceals the clip.

Panel Construction: Both panels were assembled using mitered and welded corner construction. All vertical stiles contained a roll formed steel reinforcement which measured 5' 7-13/16" in length and was centered in the stiles. The locking stile reinforcement was prepunched to accept the handle and lock hardware.

Screen Construction: The screen was constructed using roll formed aluminum square cut at the ends and secured using plastic corner keys which contain spring loaded adjustable rollers.

Hardware:

Description	Quantity	Location
Lock handle set with multi point reachout adjustable latches	1	Center of locking stile
Multi point lock keeper	1	Center of locking jamb
Bumper stop	1	Active panel track at fixed jamb

Test Specimen Description:

Hardware: (Continued)

Description	Quantity	Location
Stainless steel roller track cap	1	Sill, center of interior panel track
Steel roller assembly	2	Active panel bottom rail, 6" off ends
Open cell foam baffle	2	One each, exterior sill weephole

Drainage:

Description	Quantity	Location
1" wide by 3/16" high weephole	2	Sill exterior face, 3" off each end
1" wide by 3/16" high weephole	2	One at each end of sill, penetrating all interior vertical web walls
1" wide by 3/16" high weephole	2	Interior sill pocket, each end, 2" from jamb
1/2" wide by 3/16" high weephole	2	Sill pocket, 2" off each end located 1-3/4" from sill interior
3/16" diameter weephole	2	Active panel glass track to hollow below, 1-1/2" from each end

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test	Results	Allowed
2.2.19.5.1	Operating Force		
	Breakaway	13 lbs	30 lbs max.
	In motion	7 lbs	20 lbs max.
2.1.2	Air Infiltration (See Note #1) @ 1.56 psf (25 mph)	0.12 cfm/ft²	0.3 cfm/ft² max.
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		
	@ 22.5 psf (exterior)	0.011"	0.304" max.
	@ 22.5 psf (interior)	0.012"	0.304" max.

Note #1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/NWWDA 101/I.S.2-97 for air infiltration.

Test Results: (Continued)

Paragraph	Title of Test	Results	Allowed
2.2.19.5.2	Deglazing Test In operating direction at 70 lbs		
	Meeting stile	0.063"/12.5%	0.500"/100%
	Handle stile	0.063"/12.5%	0.500"/100%
	In remaining direction at 50 lbs		
	Top rail	0.063"/12.5%	0.500"/100%
	Bottom rail	0.063"/12.5%	0.500"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 842-97		
	Hand and Tool Manipulation	No entry	No entry
	Tests A1 through A6	No entry	No entry
	Hand and Tool Manipulation	No entry	No entry
	Load Identification: 10 for Type A		
Optional Performance:			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.50 psf	No leakage	No leakage
4.4.2	Uniform Load Structural		
	@ 75.0 psf (exterior)	0.155"	0.304" max.
	@ 75.0 psf (interior)	0.165"	0.304" 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:

David A. Kranz
Technician

Bruce W. Croak
Project Manager

DAK:ksk
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