



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

Rendered to:

**SILVER LINE BUILDING PRODUCTS
CORPORATION**

**SERIES/MODEL: 2700
TYPE: PVC Single Hung Window**

Title of Test	Results	
	Test Specimen #1	Test Specimen #2
Rating	H-C40 54 x 90	H-C60* 52 x 73
Overall Design Pressure	40 psf	60 psf
Operating Force	33 lb max.	N/A
Air Infiltration	0.19 cfm/ft ²	N/A
Water Resistance	7.5 psf	9.0 psf
Structural Test Pressure	±60.0 psf	±90.0 psf
Deglazing	Passed	N/A
Forced Entry Resistance	Grade 10	N/A

Reference should be made to Report No. 01-40430.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Adam Fodor, Senior Technician



Architectural Testing

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

Rendered to:

SILVER LINE BUILDING PRODUCTS CORPORATION
One Silver Line Drive
North Brunswick, New Jersey 08902

Report No: 01-40430.01
Test Date: 11/15/01
Report Date: 11/29/01
Expiration Date: 11/15/05

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Silver Line Building Products Corporation to witness tests on two Series/Model 2700, PVC single hung windows at Silver Line's in-plant test facility located in North Brunswick, New Jersey. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1 H-C40 54 x 90; Test Specimen #2 H-C60* 52 x 73.

General Note: An asterisk () next to the performance grade indicates that the size tested for optional performance was smaller than the Gateway test size for the product type and class.*

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: 2700

Type: PVC Single Hung Window



Test Specimen Description:

Test Specimen #1: H-C40 54 x 90

Overall Size: 4' 6" wide by 7' 6" high

Sash Size: 4' 4" wide by 3' 8-3/4" high

Fixed Daylight Opening Size: 4' 4-3/4" wide by 3' 6" high

Screen Size: 4' 1-3/4" wide by 3' 6-1/2" high

Glazing Type: Two sheets of 1/8" clear annealed glass.

Test Specimen #2: H-C60* 52 x 73

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

Sash Size: 4' 1-3/4" wide by 3' 0-1/4" high

Fixed Daylight Opening Size: 3' 10-7/8" wide by 2' 9-1/2" high

Screen Size: 4' 0-1/4" wide by 2' 10-1/2" high

Glazing Type: Two sheets of 4mm (0.158") thick clear annealed glass in the sash and two sheets of 1/8" clear annealed glass in the fixed lite.

The following descriptions apply to all specimens.

Finish: All PVC was white, all aluminum was painted.

Glazing Details: The window utilized two 5/8" thick sealed insulating glass units fabricated from two sheets of clear annealed glass and a spacer system. The fixed lite was interior glazed against silicone bedding and secured with PVC glazing beads. The sash was exterior glazed against silicone bedding and secured with PVC glazing beads.



Test Specimen Description: (Continued)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.500" high by 0.187" backed polypile with center fin	1 Row	Stiles of sash
0.280" high by 0.187" backed polypile with center fin	1 Row	Sill and active meeting rail

Frame Construction: The frame was constructed of extruded PVC members with mitered and welded corners. The fixed meeting rail was constructed of extruded aluminum with a PVC cap. The fixed meeting rail was butted, sealed, and secured to each jamb with two screws.

Sash Construction: The sash was constructed of extruded PVC members with mitered and welded corners.

Screen Construction: The screen was constructed of roll-formed aluminum members with plastic keyed corners. The fiberglass mesh was secured with a flexible vinyl spline.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal lock and keeper	2	One 10" from each end of active/fixed meeting rail
Balance assembly	2	One in each jamb

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1" wide by 1-1/2" deep weepslot	2	One in each end of the sill draining the sill into the sill hollow
1-1/4" wide by 1/4" high weep flap	2 on #1 3 on #2	2" from each end and midspan of the sill face, draining the sill hollow



Test Specimen Description: (Continued)

Reinforcement: The active meeting rail utilized a 0.055" thick roll-formed steel tube.

Installation: The test unit was installed into a wood test buck with the integral nailing fin. The nail fin was bedded in silicone and secured with 2" drywall screws at each corner and 12" on center around the perimeter.

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<u>Test Specimen #1:</u> H-C40 54 x 90			
2.2.1.6.1	Operating Force	33 lbs	45 lbs max.
2.1.2	Air Infiltration per ASTM E 283 (See Note #1) @ 1.57 psf (25 mph)	0.19 cfm/ft ²	0.3 cfm/ft ² max.
<i>Note #1: The tested specimen meets (or exceeds) 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 (See Note #2)		
<i>Note #2: The client opted to begin at a test pressure higher than the minimum required. Those results are listed under "Optional Performance".</i>			
2.1.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the fixed meeting rail) @ 30.0 psf (positive) @ 30.0 psf (negative)	0.27" 0.28"	N/A N/A
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail) @ 45.0 psf (positive) @ 45.0 psf (negative)	0.01" 0.01"	0.20" max. 0.20" max.



Test Results:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<u>Test Specimen #1:</u> H-C40 54 x 90 (Continued)			
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Active meeting rail	0.07"/14%	0.50"/100%
	Bottom rail	0.07"/14%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.05"/10%	0.50"/100%
	Right stile	0.05"/10%	0.50"/100%
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		
	Lock Manipulation Test	No entry	No entry
	Test A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 and ASTM E 331 (with and without screen) WTP = 7.5 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the fixed meeting rail @ 40.0 psf (positive) @ 40.0 psf (negative)	0.44" 0.41"	N/A N/A
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail) @ 60.0 psf (positive) @ 60.0 psf (negative)	0.01" 0.02"	0.20" max. 0.20" max.



Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<u>Test Specimen #2: H-C60* 52 x 73</u>			
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 and ASTM E 331 (with and without screen) WTP = 9.0 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the fixed meeting rail)		
	@ 60.0 psf (positive)	0.46"	N/A
	@ 60.0 psf (negative)	0.39"	N/A
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail)		
	@ 90.0 psf (positive)	0.01"	0.19" max.
	@ 90.0 psf (negative)	0.01"	0.19" 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:

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