



130 Derry Court • York, PA 17402-9405
web www.testati.com • Facsimile 717-764-4129 • Telephone 717-764-7700

STRUCTURAL TEST REPORT

Rendered to:

SILVERLINE BUILDING PRODUCTS CORPORATION
One SilverLine Drive
North Brunswick, New Jersey 08902

Report No: 01-31522.01
Test Date: 03/27/98
Report Date: 04/02/98
Expiration Date: 03/27/02

Series/Model: 8500

Type: PVC Double Hung Window

Project Summary: Architectural Testing, Inc. (ATT) was contracted by SilverLine Building Products Corporation to witness testing at their facility in North Brunswick, New Jersey on a SilverLine 8500 Series PVC double hung window. The sample tested successfully met all of the performance requirements for an H-R45 44x60 rating in accordance with AAMA/NWWDA 101/I.S.2-97. The following report includes a detailed test specimen description, test data, and results.

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: 3' 8-1/16" wide by 5' 0" high

Interior Sash Size: 3' 4-9/16" wide by 2' 5-9/16" high

Exterior Sash Size: 3' 4-3/16" wide by 2' 5-1/16" high

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

Finish: All PVC was white.

Glazing: Both sash utilized 15/16" thick insulating glass comprised of two sheets of 1/8" thick, clear annealed glass and a desiccant-filled metal spacer system. The insulating glass was exterior drop-in glazed, back bedded with silicone and held in place with PVC snap-in-place glazing beads with a co-extruded single leaf gasket.

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

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.270" backed by 0.290" high poly pile with side and center fins	2 Rows	Length of all sash stiles
0.270" backed by 0.190" high poly pile with center fin	1 Row	Length of top rail
0.270" backed by 0.290" high poly pile with center fin	1 Row	Length of interior and exterior meeting rails
0.270" backed by 0.360" diameter co-extruded foam filled vinyl gasket	1 Row	Length of bottom rail
0.270" backed by 0.270" high poly pile with center fin	1 Row	Length of interior vertical sill leg
0.270" backed by 0.210" high poly pile with center fin	1 Row	Length of exterior head track

Frame Construction: The frame was constructed of extruded PVC members. All corners were mitered and welded.

Sash Construction: The sash were constructed of extruded PVC members with mitered and welded corners. A steel reinforcement was located in the interior meeting rail hollow.

Screen Construction: The screen was constructed of extruded aluminum members. All corners were keyed and the screen mesh was held in place with a flexible spline gasket.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Tilt latch assembly	4	Ends of top rail and interior meeting rail
Metal sweep lock with keeper	2	13" from ends of the interior meeting rail with keepers aligned on exterior meeting rail
Metal pivot bars	4	Bottom corners of sash
Spiral balances	4	Two per jamb
Custom PVC safety clip	2	5-1/2" from bottom of exterior sash located on interior stile face

Test Specimen Description: (Continued)

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1/4" diameter weephole	2	3" from ends of the bottom rail and exterior meeting rail draining through glazing channel

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force	27 lbs	30 lbs max.
2.1.2	Air Infiltration (See Note #1) @ 1.56 psf (25 mph)	0.1 cfm/ft ²	0.3 cfm/ft ² max.

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

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 (See Note #2) @ 67.5 psf (exterior) @ 67.5 psf (interior)	0.061" 0.080"	0.163" max. 0.163" max.

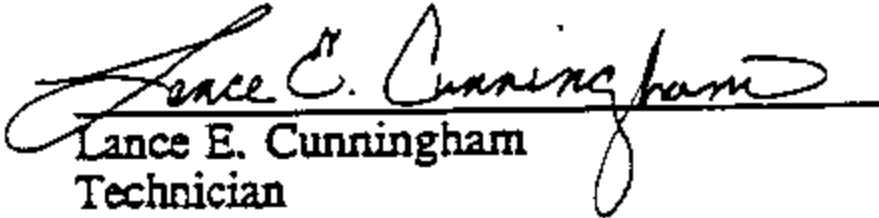
Note #2: Per client's request, testing started at 67.5 psf.


2.2.1.6.2	Deglazing Test In operating direction at 70 lbs		
	Interior Sash Bottom Rail	0.015"/3%	0.500"/100%
	Interior Sash Meeting Rail	0.020"/4%	0.500"/100%
	Exterior Sash Top Rail	0.030"/6%	0.500"/100%
	Exterior Sash Meeting Rail	0.010"/2%	0.500"/100%
	In remaining direction at 50 lbs		
	Interior Sash Left Stile	0.010"/2%	0.500"/100%
	Interior Sash Right Stile	0.010"/2%	0.500"/100%
	Exterior Sash Left Stile	0.010"/2%	0.500"/100%
	Exterior Sash Right Stile	0.015"/3%	0.500"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 588-85		

Installation: The window was blind stopped to the 2 x 6 wood test frame at both exterior and interior of the main window frame. The perimeter was sealed with silicone. The window frame was secured to the wood test frame using wood screws.

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
Technician


Richard E. Merkert
Project Manager

LEC:cat
01-31522.01