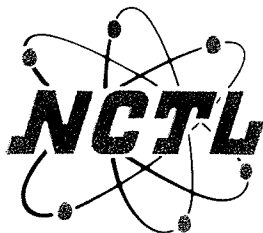


**SUPERSEAL MANUFACTURING CO.**

STRUCTURAL TEST REPORT

Series "1850" Type XX Horizontal  
Sliding Vinyl Prime Window

NCTL-110-8458-1



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# NATIONAL CERTIFIED TESTING LABORATORIES

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## STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-110-8458-1  
Test Date: 12/02/02  
Report Date: 02/22/03  
Expiration Date: 12/30/06

**Client:** *Superseal Manufacturing Company  
125 Helen Street, P.O. Box 795  
South Plainfield, NJ 07080*

**Test Specimen:** *Superseal Manufacturing Company's Series "1850" Type XX Horizontal Sliding Vinyl Prime Window (HS-R25 69x48).*

**Test Method:** *AAMA/NWWDA 101/I.S.2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC), and Wood Windows and Glass Doors."*

### TEST SPECIMEN DESCRIPTION

**General:** *The test specimen was a type XX horizontal sliding vinyl prime window measuring 69" wide by 48" high overall. The interior panel measured 33-3/8" wide by 44-1/4" high. The exterior/ removable panel measured 33-3/8" wide by 44-3/8" high. Frame and panel members were not thermally broken. One (1) metal cam-type sweep lock was located at 8" from each end of the interior meeting stile. The metal keepers were located on the exterior meeting stile at the lock positions. A rigid vinyl cover was snap-fitted at the interior and exterior sill tracks and the interior track of the right jamb. A metal roller/ plastic housing was located at each end of both panel bottom rails. One (1) steel contour shaped bar 1/2" x 1" filled the length of both panel top and bottom rails and the interior panel jamb stile hollow. One (1) steel contour shaped reinforcement bar 15/16" x 1/2" filled the length of the interior and exterior meeting stile. The frame and panels were of welded mitered corner construction.*

**Glazing:** *Both panels were exterior glazed using sealed insulating glass with a foam tape back-bedding and a snap-in rigid vinyl glazing bead. The overall insulating glass thickness was 3/4" consisting of two (2) lites of double strength annealed glass and one (1) space created by a desiccant matrix steel spacer system.*

**Weatherseals:** *Two (2) strips of center fin weatherstrip (0.250" high) were located at the sill, head and both jambs. One (1) strip of center fin weatherstrip (0.250" high) was located at both panels, top rail, bottom rail and jamb stile. One (1) strip of center fin weatherstrip (0.400" high) was located at the interior and exterior meeting stile.*

**Weeps:** One (1) weep hole measuring 3/8" x 1/4" was located at each end of the interior sill track. One (1) weep hole measuring 1/2" x 1/4" was located at each end of the exterior sill track. Two (2) weep holes measuring 1/2" x 3/16" were located at 1" from each end of the exterior sill face. One (1) weep hole measuring 3/8" x 1/4" was located at 3-3/4" from each end of both panel bottom rails.

**Interior & Exterior Surface Finish:** White vinyl (PVC).

**Sealant:** The glazing bead was sealed to the glass with a silicone sealant.

**Screen:** An insect screen measuring 65-3/4" wide by 44-3/4" high was of butt type corner construction with pressure fitted nylon corner keys. The screen employed fiberglass mesh cloth with a solid vinyl spline, five (5) jamb retainer clips and a vertical intermediate stile located at the midpoint of the screen.

### TEST RESULTS

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.2.5.1	Operating Force - ASTM E2068		
	Interior Panel Left	12 lbf	20 lbf
	Right	14 lbf	20 lbf
	Exterior Panel Left	12 lbf	20 lbf
	Right	11 lbf	20 lbf
2.2.2.5.2	Deglazing - ASTM E987		
	Interior Panel		
	Top Rail (50 lbf)	3.4 % (0.017")	<100%
	Bottom Rail (50 lbf)	5.8 % (0.029")	<100%
	Jamb Stile (70 lbf)	7.0 % (0.035")	<100%
	Meeting Stile (70 lbf)	7.4 % (0.037")	<100%
	Exterior Panel		
	Top Rail (50 lbf)	5.2 % (0.026")	<100%
	Bottom Rail (50 lbf)	3.2 % (0.016")	<100%
	Jamb Stile (70 lbf)	7.4 % (0.037")	<100%
	Meeting Stile (70 lbf)	4.4 % (0.022")	<100%
2.1.2	Air Infiltration - ASTM E283		
	1.57 psf (25 mph)	0.1 cfm/ft <sup>2</sup> (0.09 cfm/ft <sup>2</sup> )	0.3 cfm/ft <sup>2</sup>
2.1.3	* Water Resistance - ASTM E547		
	5.0 gph/ft <sup>2</sup>		
	WTP= 2.86 psf	No Leakage	No Leakage
2.1.4.2	** Uniform Load Structural - ASTM E330		
	22.5 psf Exterior	0.003"	0.173"
	22.5 psf Interior	0.003"	0.173"
2.1.7	Welded Corner	Meets As Stated	

**TEST RESULTS (Cont.)**

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
2.1.8	Forced Entry Resistance - ASTM F588 Level 10 (See Appendix A for test results)		Meets As Stated

**OPTIONAL PERFORMANCE**

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
4.3	* Water Resistance - ASTM E547 5.0 gph/ft <sup>2</sup> WTP= 6.75 psf	No Leakage	No Leakage
4.4.2	** Uniform Load Structural - ASTM E330 37.5 psf Exterior 37.5 psf Interior	0.005" 0.006"	0.173" 0.173"
	* Tested with and without screen		
	** No glass breakage or permanent damage causing the unit to be inoperable		

**TEST COMPLETED 12/02/02**

The tested specimen meets (or exceeds) the performance levels specified in Table 2.1 of AAMA/NWWDA 101/I.S.2-97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the HS-R25 69x48 product designation.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

**NATIONAL CERTIFIED TESTING LABORATORIES**

  
JUSTIN L. BUPP  
Technician

  
SCOTT R. HANLON  
Manager of Testing Services

**APPENDIX A**  
*Forced Entry Resistance Test Results*

**Test Method:** *ASTM F588-97, "Standard Test Method for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact".*

**TEST RESULTS**

<u>Paragraph No.</u>	<u>Loads</u>	<u>Duration</u>	<u>Measured</u>	<u>Allowed</u>
10.1-Lock Manipulation		5 Minutes	No Entry	No Entry
10.2.1.1-Test A1	L1=150 lbf	1 Minute	No Entry	No Entry
10.2.1.2-Test A2	L1=150 lbf L2= 75 lbf interior	1 Minute	No Entry	No Entry
10.2.1.3-Test A3	L1=150 lbf L2= 75 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.4-Test A4	L1=150 lbf L2= 75 lbf interior	1 Minute	No Entry	No Entry
10.2.1.5-Test A5	L1= 150 lbf L2= 75 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.7-Test A7	L1=150 lbf L2= 75 lbf interior L3= 25 lbf interior	1 Minute	No Entry	No Entry
10.2.1.8 Lock Manipulation		5 Minutes	No Entry	No Entry