



**SUPERSEAL MANUFACTURING CO.**

**STRUCTURAL PERFORMANCE TEST REPORT**

Series "850"  
Type XO Vinyl Sliding Glass Door

NCTL-110-9971-1

**NATIONAL CERTIFIED TESTING LABORATORIES**



# NATIONAL CERTIFIED TESTING LABORATORIES

5 LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200  
FAX (717) 767-4100  
www.nctlinc.com

## STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-110-9971-1  
Test Date: 04/06/06  
Report Date: 04/18/06  
Expiration Date: 04/30/10  
Revision Date: 05/11/10

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

**Test Specimen:** Superseal Manufacturing Co.'s Series "850" Type XO Vinyl Sliding Glass Door (SGD-R45 71x80).

**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 XO vinyl sliding glass door measuring 71-3/8" wide by 79-1/2" high overall. The active panel measured 36-1/2" wide by 77-1/4" high. The fixed lite was glazed to the frame members with a viewing area of 32-1/8" wide by 72-3/4" high. One (1) C-shaped galvanized steel reinforcement channel measuring 0.052" thick filled the length of the active jamb stile hollow. One (1) C-shaped steel reinforcement channel measuring 0.100" thick filled the length of the active meeting stile and intermediate jamb hollows. A 3/16" diameter pressure equalization port was located in the center head leg at 2" left of the intermediate jamb. A rigid vinyl screen track was snap-fitted at the sill. A rigid vinyl fixed lite glazing adapter was snap-fitted at the head and sill. A rigid vinyl track liner with steel roller track was located at the interior sill track. A rigid vinyl cover/ weatherstrip holder was snap-fitted at the active exterior sill track. An intermediate jamb was fastened to the frame with three (3) screws through the head and sill. One (1) claw-type door lock was located at 39" from the bottom rail of the active panel with the keeper fastened and secured to the active jamb at the lock position. One (1) adjustable metal double roller assembly was used at each end of the active bottom rail. A pull handle was fastened to the jamb stile at midspan. Frame and panel corners were of welded mitered corner construction.

**Glazing:** The active panel and fixed lite were exterior glazed using sealed insulating glass with an adhesive tape back-bedding and a snap-in rigid vinyl glazing bead. The overall insulating glass thickness was 1" consisting of two (2) lites of double strength tempered glass and one (1) air space created by a coated steel U-shaped spacer system (CU-D).

**Weatherseals:** One (1) strip of center fin weatherstrip (0.230" high) was located at the sill, head and active jamb. One (1) strip of center fin weatherstrip (0.250" high) was located at the intermediate jamb. One (1) strip of bulb-vinyl weatherstrip was located at the exterior sill track cover.

**Weeps:** One (1) weep hole measuring 3/4" by 1/4" was located at 5/16" from each end of the interior sill track liner horizontal surface. One (1) weep hole measuring 3/4" by 1/4" was located at 20-1/2" and 44-1/2" from the fixed side end of the interior sill track liner horizontal surface. One (1) weep notch measuring 3/4" long was located at 5/16" from each end of the interior sill track liner vertical roller track leg. One (1) weep hole measuring 1-1/4" by 3/16" was located at each end of the center vertical sill leg. One (1) weep hole measuring 3/4" by 3/16" was located at 11" and 23" from each end of the center vertical sill leg. One (1) weep hole measuring 1/2" by 1/8" was located at 1" and 2-1/4" from each end of the fixed lite sill glazing channel. One (1) weep hole measuring 1/4" by 1/8" was located at 5/8" from each end of the active panel bottom rail glazing channel. One (1) weep hole measuring 5/16" in diameter was located at 9-3/4" from the left end and 11-1/4" from the right end of the active bottom rail glazing channel. One (1) weep hole measuring 1" by 3/16" was located at 3" and 4-1/8" from each end of the exterior vertical sill face. One (1) weep hole measuring 1/2" by 1/8" was located at 3-1/8" from the active jamb on the exterior sill track under the exterior sill track cover.

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

**Sealant:** The ends of the fixed lite head and sill glazing adapters were sealed with a PVC cement.

**Screen:** An insect screen measuring 36-3/8" wide by 77-1/2" high was of butt type corner construction with plastic corner keys. The screen employed fiberglass mesh cloth with a solid vinyl spline. One (1) metal roller was located at each end of the top and bottom rail. One (1) strip of 0.430" high center fin weatherstrip was located at the screen meeting stile. A pull handle was located at midspan of the jamb stile.

**TEST RESULTS**

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>		
2.2.19.5.1	Operating Force Active Panel	left	4 lbf	20 lbf	
		right	5 lbf	20 lbf	
		breakaway	14 lbf	30 lbf	
2.2.2.5.2	Deglazing - ASTM E987 Active Panel - Interior Side	Top Rail (50 lbf)	4.6 % (0.023")	<100%	
		Bottom Rail (50 lbf)	5.0 % (0.025")	<100%	
		Jamb Stile (70 lbf)	5.4 % (0.027")	<100%	
		Meeting Stile (70 lbf)	6.0 % (0.030")	<100%	
		Active Panel - Exterior Side	Top Rail (50 lbf)	5.0 % (0.025")	<100%
			Bottom Rail (50 lbf)	4.0 % (0.020")	<100%
			Jamb Stile (70 lbf)	6.2 % (0.031")	<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> (0.13 cfm/ft <sup>2</sup> )

**TEST RESULTS (Cont.)**

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
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 22.5 psf Interior	0.005" 0.005"	0.309" 0.309"
2.1.7	Welded Corner	Meets As Stated	
2.1.8	Forced Entry Resistance - ASTM F842 Level 10 (See Appendix A for test results)	Meets As Stated	

**OPTIONAL PERFORMANCE**

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 67.5 psf Exterior 67.5 psf Interior	0.037" 0.060"	0.309" 0.309"
	* Tested with and without screen		
	** No glass breakage or permanent damage causing the unit to be inoperable		

TEST COMPLETED 04/06/06

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 SGD-R45 71x80 product designation.

*Detailed drawings were available for laboratory records and comparison 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



ROBERT H. ZEIDERS, P.E.  
Vice-President Engineering & Quality