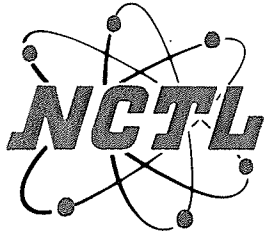


**SUPERSEAL MANUFACTURING CO.**

**STRUCTURAL PERFORMANCE TEST REPORT**

**Series "1250" Tilt Single Hung Vinyl Prime Window**

**NCTL-110-8158-1**



# NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17402 • TELEPHONE (717) 846-1200  
FAX (717) 767-4100  
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## STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-110-8158-1  
Test Date: 05/07/02  
Report Date: 07/29/02  
Expiration Date: 05/31/06

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

**Test Specimen:** Superseal Manufacturing Co.'s Series "1250" Tilt Single Hung Vinyl Prime Window (H-C30 54x90).

**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 one-over-one tilt single hung vinyl prime window measuring 54" wide by 90" high overall. The fixed lite was glazed to the frame members, providing a viewing area of 49-1/2" wide by 41-1/2" high. The active sash measured 51-7/8" wide by 43-13/16" high. The active sash was removable via a single spiral balance with locking tilt shoe located in each interior jamb track. One (1) metal cam-type sweep lock was located at 9-1/2" from each end of the active meeting rail. The metal keepers were located on the fixed meeting rail at the lock positions. One (1) metal tilt latch was located at each end of the active meeting rail. One (1) stamped metal pivot bar was fastened with two (2) screws at each end of the bottom rail. A rigid vinyl sash stop was snap-fitted at the top of each interior jamb track. A rigid vinyl balance cover was snap-fitted into the interior jamb tracks. A rigid vinyl combination cover/interior vertical sill leg was snap-fitted and sealed to the sill with an adhesive foam tape. One (1) extruded aluminum reinforcement channel (0.125" thick) filled the length of all sash member hollows. One (1) contour-shaped steel reinforcement bar measuring 1" wide by 0.560" thick filled the length of the fixed meeting rail hollow. One (1) extruded aluminum U-shaped reinforcement channel (0.093" thick) filled the length of the exterior-most hollow of each jamb. The frame and active sash were of welded mitered corner construction. The fixed meeting rail was fastened to the jambs at mid-span with two (2) screws through a die-cast metal mounting bracket. The bracket was fastened to the fixed meeting rail at each end with four (4) screws.

**Glazing:** The fixed lite was interior glazed using sealed insulating glass with an adhesive foam tape back-bedding and a snap-in two (2) leaf dual durometer glazing bead. The active sash was exterior glazed using sealed insulating glass with an adhesive foam tape back-bedding and a snap-in two (2) leaf dual durometer 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:** A single strip of center fin weatherstrip (0.230" high) was located at the fixed and active meeting rails and the sill. Double strips of center fin weatherstrip (0.230" high) were located at the active sash stiles. A single strip of bulb-vinyl weatherstrip was located at the bottom rail. Two (2) adhesive backed polypile dust pads (0.270" high) each measuring 1/2" x 11/16" were located on the jambs at each end of the fixed meeting rail. An open cell foam air baffle measuring 1" x 2-1/4" x 3/8" was located at each jamb/ sill corner.

**Weeps:** One (1) weep hole measuring 5/8" x 3/16" was located at each end of the center sill leg. One (1) weep hole measuring 1/2" x 1/8" was located at 11/16" from each end of the exterior sill track. One (1) weep hole measuring 1-15/16" x 1/4" and employing a plastic weep cover was located at 3" from each end of the exterior sill face. One (1) weep hole measuring 7/32" in diameter was located at 2-1/4" from each end of the fixed meeting rail glazing channel and through the exterior horizontal rail surface. One (1) weep hole measuring 1/4" x 1/8" was located at 1-7/8" from each end of the bottom rail glazing channel and through the exterior horizontal rail surface.

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

**Sealant:** The ends of the interior sill leg were sealed with a small-joint sealant.

**Screen:** An insect screen measuring 50-1/2" wide by 42-3/4" high was of butt type corner construction with pressure-fitted plastic corner keys. The screen employed fiberglass mesh cloth with a solid vinyl spline, two (2) pull tabs, and two (2) meeting rail retainer springs. A rigid vinyl screen spacer measuring 2" long was snap-fitted at each end of the sill.

### TEST RESULTS

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force - ASTM E2068 Active Sash Up Down	44 lbf 23 lbf	45 lbf 45 lbf
2.2.1.6.2	Deglazing - ASTM E987 Active Sash Meeting Rail (70 lbf) Bottom Rail (70 lbf) Left Stile (50 lbf) Right Stile (50 lbf)	10.4 % (0.052") 11.0 % (0.055") 6.2 % (0.031") 8.6 % (0.043")	<100% <100% <100% <100%
2.1.2	Air Infiltration - ASTM E283 1.57 psf (25 mph)	0.1 cfm/ft <sup>2</sup> (0.10 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= 4.50 psf	No Leakage	No Leakage

**TEST RESULTS (Cont.)**

2.1.4.2	** Uniform Load Structural - ASTM E330		
	45.0 psf Exterior	0.007"	0.198"
	45.0 psf Interior	0.001"	0.198"
2.1.7	Welded Corner		Meets As Stated
2.1.8	Forced Entry Resistance - ASTM F588		
	Level 10		Meets As Stated
	(See Appendix A for test results)		

**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 & E331		
	5.0 gph/ft <sup>2</sup>		
	WTP = 9.0 psf	No Leakage	No Leakage
	* Tested with and without screen		
	** No glass breakage or permanent damage causing the unit to be inoperable		

TEST COMPLETED 05/07/02

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 H-C30 54x90 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



MARC A. CRAMER  
Technician



SCOTT R. HANLON  
Manager of Testing Services

MAC/amb

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

**Test Method:** ASTM F588-97, "Standard Test Methods 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
10.2.4.2 Fixed Lite Glazing/Panel Manipulation		5 Minutes	No Entry	No Entry