

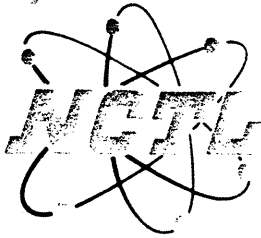
STANEK VINYL WINDOWS

STRUCTURAL PERFORMANCE TEST REPORT

Model "Ultra Series 2000 1 Lite Awning"
Project-Out-At-Bottom Awning Vinyl Prime Window

NCTL-110-7012-5

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8/19/02



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STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-110-7012-5
Test Date: 11/10/99
Report Date: 11/19/99
Expiration Date: 11/30/03
Revised Date: 01/11/00

Client: Stanek Vinyl Windows
4528 Willow Parkway
Cuyahoga Heights, OH 44125

Test Specimen: Stanek Vinyl Windows' Model "Ultra Series 2000 1 Lite Awning" Project-
Out-At-Bottom Awning Vinyl Prime Window (AP-R65 48x36).

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 project-out-at-bottom awning vinyl prime window measuring 48" wide by 36" high overall. The vent measured 46-1/4" wide by 34-1/4" high. A two (2) bar with plastic and metal slide shoe system was fastened with seven screws into each jamb and four screws into each stile. A roto-operator/single bar with slide shoe system was located at 6" from the left end of the sill. The roto-operator slide track fastened with two (2) screws was located at 9-3/4" from the left end of the bottom rail. A single locking lever employing two (2) locking points fastened with four screws was located at each jamb. The metal keepers fastened with three (3) screws were located on each stile at the locking positions. One (1) metal snubber fastened with two (2) screws was located at 10-1/4" from each end and at midspan of the head and top rail. One (1) plastic screen retainer fastened with one (1) pop-rievet was located at 14" from each end of the head and sill interior surface. One (1) galvanized steel rectangular reinforcement tube (0.049" thick) filled the length of all frame and vent main hollows. All reinforcement tubes were fastened to all hollows with two (2) evenly spaced screws. The frame and vent were of welded mitered corner construction.

Glazing: The vent was interior glazed using Southwall Technologies "SC 75" heat mirror film suspended between two lites of clear double strength annealed glass, a dual leaf dual durometer back-bedding and two air spaces created by Bayform's "7mm Warm Edge" spacer system with a dual leaf dual durometer snap-in glazing bead. The overall glass thickness was 7/8" consisting of a heat mirror film suspended between two lites of double strength annealed glass and two air spaces created by Bayform's "7mm Warm Edge" spacer system.

Weatherseals: A double strip of dual durometer bulb weatherstrip was located at the frame perimeter. A double strip of single leaf dual durometer weatherstrip was located at the vent perimeter.

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11/19/99

Weeps: One (1) weep hole measuring 1/2" by 1/8" was located at each end of the vent bottom rail glazing channel. One (1) weep hole measuring 1" by 1/8" was located at 1" from each end of the vent bottom rail exterior horizontal surface between the single leaf dual durometer weatherstrip.

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

Sealant: The exterior glazing corners were sealed with a silicone sealant.

Insect Screen: An insect screen measuring 43-3/4" wide by 31-5/8" high was of mitered type corner construction with staked-in-place die cast aluminum corner keys. The screen employed fiberglass mesh cloth with a hollow vinyl spline.

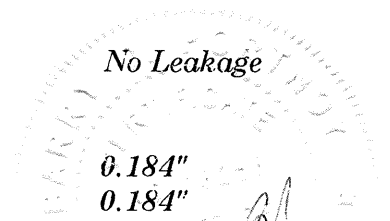
TEST RESULTS

<u>Par. No.</u>	<u>Title Of Test</u>	<u>Measured</u>	<u>Allowed</u>
2.1.2	Air Infiltration - ASTM E283 0.57 psf (15 mph)	0.1 cfm/ft ² (< 0.01 cfm/ft ²)	-----
	1.57 psf (25 mph)	0.1 cfm/ft ² (0.02 cfm/ft ²)	0.3 cfm/ft ²
2.1.3	Water Resistance - ASTM E547 5.0 gph/ft ² 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	0.002" 0.005"	0.184" 0.184"
2.1.7	Welded Corner	Meets as Stated	
2.1.8	Forced Entry Resistance - ASTM F588 Level 10 (See Appendix A for test results)	Meets as Stated	
2.2.4.5.1	Hardware load - 17 lbf	1.00"	3.50"

OPTIONAL PERFORMANCE

4.3	Water Resistance - ASTM E547 5.0 gph/ft ² WTP = 11.25 psf	No Leakage	No Leakage
4.4.2 **	Uniform Load Structural - ASTM E330 97.5 psf Exterior 97.5 psf Interior	0.028" 0.110"	0.184" 0.184"

** No glass breakage or permanent damage causing the unit to be inoperable



Handwritten signature and date: 2/19/02

TEST COMPLETED 11/10/99

This test 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 AP-R65 48x16 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.

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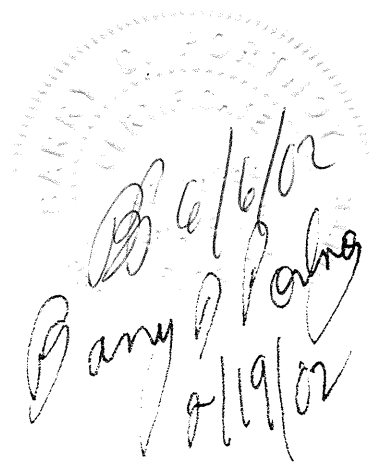
APPENDIX A

Forced Entry Resistance Test Results

Test Method: *ASTM F588-85 (94), "Standard Test Method for Resistance of Window Assemblies to Forced Entry, Excluding Glazing."*

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
10.2.2.1 - Test B1	L2= 75 lbf	1 Minute	No Entry	No Entry
10.2.2.2 - Test B2	L1=150 lbf L2= 75 lbf	1 Minute	No Entry	No Entry
10.2.2.3 - Test B3	L1=150 lbf L2= 75 lbf	1 Minute	No Entry	No Entry
10.2.2.4 - Lock Manipulation		5 Minutes	No Entry	No Entry



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