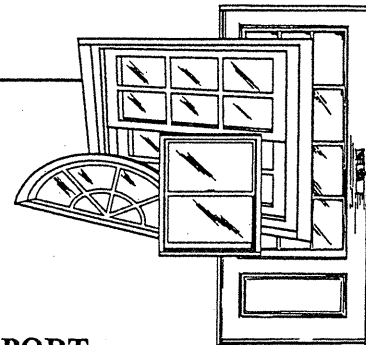


CERTIFIED TESTING LABORATORIES

Architectural Division • 7252 Narcoossee Rd. • Orlando, FL 32822
(407)-384-7744 • Fax (407)-384-7751



Report Number: CTLA-440W
Report Date: August 16, 1999

STRUCTURAL PERFORMANCE TEST REPORT

Client: Specialty Window of Florida
690 Heinberg Street
Pensacola, Florida 32501

Product Type and Series: Series 200 Aluminum Flange Frame Picture Window F-HC 80 (84" x 84")

Test Specifications: AAMA/NWWDA 101/1.S. 2-97 "Voluntary Specification for Aluminum Vinyl (PVC) and Wood Window and Glass Door".

Test Specimen

Frame: The aluminum flange frame measured 84" x 84" overall. Coped corner construction. Each corner secured with two (2) #8 x 1" P.H., S.M.S. fasteners.

Clear-lite Opening: 81" x 81"

Panels: Fixed lite

Weather Stripping: N/A

Hardware & Location: N/A

Glazing: 1/4" Tempered glass, exterior glazed with 1/8" x 3/8" Butyl tape on glazing leg. 1/16" x 3/8" foam tape between the glass and extruded aluminum "U" channel. Silicone cap bead between "U" channel and aluminum main frame vinyl set blocks.

Sealant: N/A

Weepholes: N/A

Reinforcement: N/A

Additional Description: "U" channel glazing bead was secured to the main frame with thirty two (32) #6 x 1" P.H., S.M.S. fasteners. Eight (8) in each head, sill and jambs. Located 4" from each corner 10" on center.

Installation: Thirty two (32) #10 x 2-1/2" P.H., P.H., stainless steel S.M.S. fasteners were used to secure the flange frame to the test buck. Eight (8) in each frame member 6" from each corner nominally 12" o.c.

Surface Finish: White

Performance Test Results

<u>Paragraph No</u>	<u>Title of Test</u>	<u>Method</u>	<u>Measured</u>	<u>Allowed</u>
2.1.2	Air Infiltration @ 6.24 psf The tested specimen exceeds the performance levels specified in AAMA/NWWDA 101/1.S. 2-97. for Air Infiltration.	ASTM E283-91	.0 cfm/ft ²	.3 cfm/ft ²
2.1.3	Water Resistance 5.0 gph/ft ² WTP=15 psf	ASTM E547-93 Four (4), five minute cycles ASTM E331-93 Fifteen (15)minute duration	No Entry No Entry	No Entry No Entry
2.1.4.2/3.4.2	Uniform Load Structural Permanent Deformation @ 120 psf Positive @ 120 psf Negative	ASTM E330-90 Ten (10) seconds load duration	Negligible Negligible	.366" .366"
2.1.8	Forced Entry Resistance T ₁ = 10 minutes Tools used: A Spatula (10.1.1.1) and a piece of stiff wire (10.1.1.2) The test specimen meets the performance Grade 40.	ASTM E588-97		

Test Date: August 16, 1999

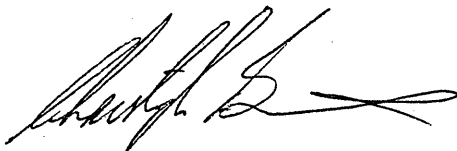
Test Completion Date: August 16, 1999

Remarks: 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 CTL for a period of four (4) years. The results obtained apply only to the specimen tested.

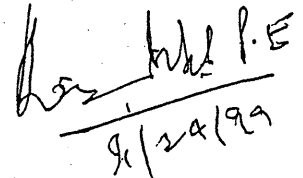
This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

Certified Testing Laboratories assumes that all information provided by the clients is accurate and that the physical and chemical properties of the components as stated by the manufacture.

Certified Testing Laboratories, Inc.



Christopher Bennett
Lab Manager
Architectural Division



cc Specialty (2)
NAMI (2)
Ramesh Patel P.E.