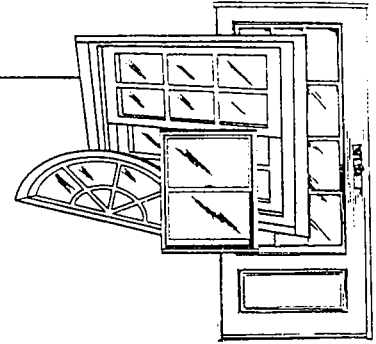


CERTIFIED TESTING LABORATORIES

Architectural Division • 7252 Narcoossee Rd. • Orlando, FL 32822
(407) 384-7744 • Fax (407) 384-7751
Web Site: www.ctlarch.com
E-mail: ctlarch.com



Report Number: CTLA-785W
Report Date: November 8, 2001

STRUCTURAL PERFORMANCE TEST REPORT

Client: SEASONSIELD INCORPORATED
355 CENTER COURT
VENICE, FLORIDA 34292

Product Type and Series: 7600 Vinyl Fin Frame Picture Window F-R60 (75" x 77")

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

Test Specimen

Frame: Extruded vinyl fin frame measured 75" x 77" tip to tip. Mitered corner construction. Each corner secured by vinyl weld. Clear lite opening 67" x 69"

Ventilator: N/A

Weather Stripping: N/A

Glazing: 3/16" Tempered glass. Glazed with silicone back bedding compound and a vinyl snap in glazing stop.

Sealant: N/A

Weep System: N/A

Reinforcement: N/A

Additional Description: N/A

Screen: N/A

Installation: Fifteen (15) 6D x 1.25" fasteners were used to secure the specimen to the wooden test buck. Five (5) located on head face measuring from left jamb to right jamb 6.5", 25.5", 43.5", 55.25" and 68". Five (5) located on each jamb face measuring from head to sill 6", 24", 37", 55" and 72". Wooden stops measuring 1" x .5" was used on the interior of frame secured in place with 8D x 2" finish fasteners. A silicone type sealant was used as back bedding and to secure the main frame to the wooden test buck.

Surface finish: White

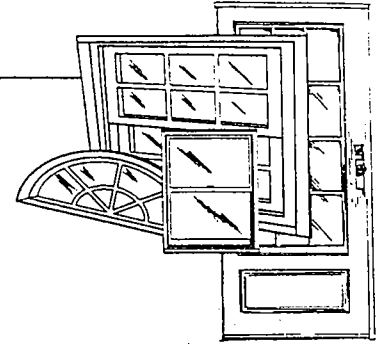
Comment: Nominal 2 mil polyethylene film was used to seal against air leakage during structural loads. The film was used in a manner that did not influence the test results.

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 @1.57 psf The tested specimen meets or exceeds the performance levels specified in AAMA/NWDA 101/I.S.2-97.	ASTM E283-91	0.0 cfm/ft ²	0.34 cfm/ft ²
2.1.3	Water Resistance 5.0 gph/ft ² WTP= 12 psf	ASTM E547-93 Four (4) five minute cycles ASTM E 331-93 One (1) fifteen (15) minute cycle	No Entry No Entry	No Entry No entry
2.1.4.2/4.4.2	Uniform Load Structural Permanent Deformation @ 90 psf positive @ 90 psf negative	ASTM E330-90 Ten (10) second loading	Passed Neg Neg	 .308" .308
2.1.7	Weld Corner test	AAMA 101/I.S. 2-97	Passed	
2.1.8	Forced Entry Resistance T ¹ = 5 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 10	ASTM F588-97 Test D Window Assemblies	Passed	

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Report Number: CTLA-785W-1
Report Date: November 8, 2001

STRUCTURAL PERFORMANCE TEST REPORT

Client: SEASONSIELD INCORPORATED
355 CENTER COURT
VENICE, FLORIDA 34292

Product Type and Series: 7600 Vinyl Fin Frame Picture Window F-R35 (56" x 75")

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

Test Specimen

Frame: Extruded vinyl fin frame measured 55.5" x 75.25" tip to tip. Mitered corner construction. Each corner secured by vinyl weld. Clear lite opening 47.25" x 67".

Ventilator: N/A

Weather Stripping: N/A

Glazing: 1/4" annealed glass. Glazed with silicone back bedding compound and a vinyl snap in glazing bead.

Sealant: N/A

Weep System: N/A

Reinforcement: N/A

Additional Description: N/A

Screen: N/A

Installation: Sixteen (16) 6D x 1.25" fasteners were used to secure the specimen to the wooden test buck. Four (4) located on head face measuring from left jamb to right jamb 7", 21.5", 35" and 47". Six (6) located on each jamb face measuring from head to sill 7", 20", 33.5", 46", 55" and 68.5". Wooden stops measuring 1" x .5" was used on the interior of frame secured in place with 8D x 2" finish fasteners. A silicone type sealant was used to secure the main frame to the wooden test buck.

Surface finish: White

Comment: Nominal 2 mil polyethylene film was used to seal against air leakage during structural loads. The film was used in a manner that did not influence the test results.

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 @1.57 psf	ASTM E283-91	0.0 cfm/ft ²	0.34 cfm/ft ²
<p>The tested specimen meets or exceeds the performance levels specified in AAMA/NWWDA 101/I.S.2-97. Results recorded in two (2)decimals at the clients request.</p>				
2.1.3	Water Resistance 5.0 gph/ft ² WTP= 12 psf	ASTM E547-93 Four (4) five minute cycles	No Entry	No Entry
		ASTM E 331-93 One (1) fifteen (15) minute cycle	No Entry	No Entry
2.1.4.2/4.4.2	Uniform Load Structural Permanent Deformation @ 52.5 psf positive @ 52.5 psf negative Unit tested with reinforced sashes	ASTM E330-90 Ten (10) second loading	Passed Neg Neg	 .301" .301"
2.1.7.	Weld Corner test	AAMA 101/I.S. 2-97	Passed	
2.1.8	Forced Entry Resistance T ¹ = 5 minutes.	ASTM F588-97 Test D Window Assemblies	Passed	

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 10

Test Date: October 15, 2001

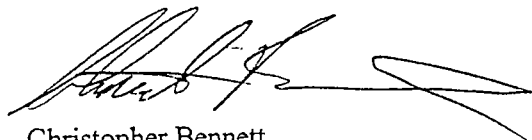
Test Completion Date: October 15, 2001

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.

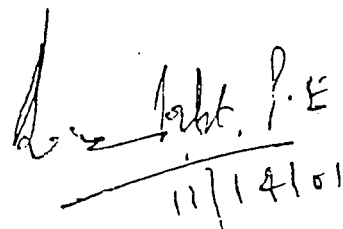
This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

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

Certified Testing Laboratories, Inc.



Christopher Bennett
Lab Manager
Architectural Division



cc: Seasonshield Incorporated (2)
 ALI (2)
 Ramesh Patel P.E. (1)
 File (1)