

PROJECT NUMBER:99-6073

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**STORK® TWIN CITY TESTING
723 S. 72nd AVE STE B
Wausau, WI 54401**

**LABORATORY TESTING OF
VINYL SLIDING PATIO DOOR TRANSOM WINDOW
MANUFACTURED BY
HURD MILLWORK COMPANY**

**Prepared for:
HURD MILLWORK COMPANY
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Client Purchase Order Number: Verbal

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The test results contained in this report pertain only to the specimens tested and not necessarily to all similar products.

LABORATORY TESTING OF 60 X 60 VSLPP WINDOW

INTRODUCTION:

This report presents the results of laboratory testing conducted on a vinyl sliding patio door transom window manufactured by Hurd Millwork Company. This work was requested and authorized by Mr. Bob Fales of Hurd Millwork with testing conducted on December 21, 1999.

The purpose of the testing was to determine the performance of the window for air infiltration, water resistance, and structural integrity when tested in accordance with ASTM procedures included in ANSI/AAMA/WDMA 101/I.S.2-97 "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors".

TEST RESULTS SUMMARY:

The window described herein meets performance specifications for ANSI/AAMA/WDMA 101/I.S.2-97 F-LC30 60 x 60.

Design Pressure Rating: For use in locations adhering to the S.B.C.C.I., S.F.B.C., S.F.B.C. Broward Edition and were the pressure requirements as determined by ASCE 7 minimum design loads for buildings and other structures does not exceed design pressure ratings listed above.

SAMPLE DESCRIPTION:

Overall Size: 59.50" wide by 59.50" high
Unit Area: 24.59 ft²
Finish: White vinyl

SAMPLE DESCRIPTION (CON'T):

Glazing: The window utilized nominal 1" insulating glass comprised of two nominal 4mm thick double strength clear annealed sheets. The glass was set on closed cell foam tape against the sash on the interior and vinyl glazing beads on the exterior. Silicone was applied at the corners.

Frame Construction: Frame corners were miter cut and welded.

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
3/8" by 1/4" weep hole	2	Sill exterior and inner cavity leg, 1 1/2" from each end
1/2" by 1/4" weep hole	2	Sill to hollow below, 2 1/2" from each jamb

Installation: The test specimen was installed within a 1 1/2" by 6" wood buck. The window frame was secured to the wood buck by utilizing the vinyl nailing fin with 2" galvanized roofing nails spaced 4" on center and sealed with a quality silicone sealant.

TEST RESULTS:

	<u>ACTUAL</u>	<u>PERFORMANCE REQUIREMENTS</u>
<u>Air Infiltration</u>		
Chamber Pressure, psf	+1.57	+1.57
Unit Area, ft ²	24.59	
Air Infiltration, cfm	0.50	
cfm/ft ²	0.02	0.30 maximum
Chamber Pressure, psf	+6.24	
Unit Area, ft ²	24.59	
Air Infiltration, cfm	3.13	
cfm/ft ²	0.13	
<u>Static Water Penetration</u>		
Chamber Pressure, psf	7.5	4.5
Water Flow Rate, gal/hr/ft ²	5.00	5.00 minimum
Pressurized Duration, min.	5.0	5.0
Unpressurized Duration, min.	1.0	1.0
Cycles	4	4
Water Penetration	NONE	No water shall flow over the interior face.

TEST RESULTS (CON'T):

	<u>ACTUAL</u>	<u>PERFORMANCE REQUIREMENTS</u>
<u>Structural Load Test</u>		
Chamber Pressure, psf	+75.00	+45.00
Duration, sec.	10.00	10.00
Permanent Set, in.	Negligible	<0.4%L = 0.238 maximum
Chamber Pressure, psf	-45.00	-45.00
Duration, sec.	10.00	10.00
Permanent Set, in.	Negligible	<0.4%L = 0.238 maximum
<u>Corner Weld Test</u>		
Break corners of test unit	Pass	Breakage not to extend along entire weld line

TEST PROCEDURE:

The tests were conducted in accordance with ASTM and ANSI/AMMA/WDMA 101/I.S.2-97 test procedures and the results were compared to the performance requirements.

Air Infiltration

ASTM:E283-91, Standard Test Methods for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors. Testing was conducted at 1.57psf and 6.24 psf test chamber static pressure.

Water Penetration

ASTM:E547-96, Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Difference. Testing was conducted at 7.5 psf, test chamber static pressure while water was applied continuously to the entire window at a rate greater than or equal to 5 gal/hr/sq ft for four cycles consisting of 5 minutes pressurized and 1 minute unpressurized.

Physical Load Testing

ASTM:E330-96, Standard Test Methods for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Differences. Permanent set measurements were recorded at positive 75.00 psf / negative 45.00 psf test chamber pressure.

Corner Weld Test

ANSI/AAMA/WDMA 101/I.S.2.97, Section 2.1,7 and APPENDIX A

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REMARKS:

The tested window remained in the custody of the Twin City Testing after testing was completed. Twin City Testing will retain detailed drawings and a copy of this report. The above results were obtained by using the designated test methods and they indicate compliance with the performance requirements of the above referenced guidelines. Certification of this product may only be granted by a certification administrator.