

**PROJECT NUMBER:99-6050**

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

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

**Prepared for:  
HURD MILLWORK COMPANY  
Attn: Mr. Art Kuss  
520 South Whelen Street  
Medford, WI 54451**

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Client Purchase Order Number: Verbal

Prepared By:

Reviewed By:

*Mark R. Meyer*

*John R. Bordagaray*

Mark R. Meyer  
Project Manager  
Product Testing Department  
Telephone: (715) 848-3935

John R. Bordagaray  
Engineering Technician  
Product Testing Department  
Telephone: (715) 848-3935

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

**LABORATORY TESTING OF 96 X 30 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 September 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-LC50\* 96 x 30.

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 where 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:	95.50" wide by 29.50" high
Unit Area:	19.56 ft <sup>2</sup>
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>
<b><u>Air Infiltration</u></b>		
Chamber Pressure, psf	+1.57	+1.57
Unit Area, ft <sup>2</sup>	19.56	
Air Infiltration, cfm	0.25	
cfm/ft <sup>2</sup>	0.01	0.30 maximum
Chamber Pressure, psf	+6.24	
Unit Area, ft <sup>2</sup>	19.56	
Air Infiltration, cfm	0.25	
cfm/ft <sup>2</sup>	0.01	
<b><u>Static Water Penetration</u></b>		
Chamber Pressure, psf	12.0	7.5
Water Flow Rate, gal/hr/ft <sup>2</sup>	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):**

	<b><u>ACTUAL</u></b>	<b><u>PERFORMANCE REQUIREMENTS</u></b>
<b><u>Structural Load Test</u></b>		
Chamber Pressure, psf	+75.00	+75.00
Duration, sec.	10.00	10.00
Permanent Set, in.	Negligible	<0.4%L = 0.380 maximum
Chamber Pressure, psf	-75.00	-75.00
Duration, sec.	10.00	10.00
Permanent Set, in.	Negligible	<0.4%L = 0.380 maximum
<b><u>Corner Weld Test</u></b>		
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 12.0 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/ negative 75.00 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 manufacturer 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.