

**AAMA/NWWDA 101/I.S.2-97
TEST REPORT**

Rendered to:

NEWTOWN MANUFACTURING

SERIES/MODEL: 2300/2500 HS (SLD)

TYPE: PVC Horizontal Sliding Window (XX)

Title of Test	Summary of Results	
	Test Specimen #1	Test Specimen #2
AAMA Rating	HS-R30 69 x 48	HS- R40 69 x 48
Overall Design Pressure	30 psf	40 psf
Operating Force	14 lb. max.	N/A
Air Infiltration	0.20 cfm/ft ²	N/A
Water Resistance	7.5 psf	N/A
Uniform Load Deflection Test Pressure	±30.0 psf	±40.0 psf
Uniform Load Structural Test Pressure	±45.0 psf	±60.0 psf
Deglazing	Passed	N/A
Forced Entry Resistance	Passed	N/A

Reference should be made to ATI Report No. 07-30083.02 for complete test specimen description and data.



Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

NEWTOWN MANUFACTURING
55 Thayer Street
Wilkes-Barre, Pennsylvania 18702

Report No: 07-30083.02
Test Date: 08/14/00
Report Date: 06/24/03
Expiration Date: 08/14/04

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Dayton Technologies, LLC to witness tests on two Series/Model 8100 HS, PVC horizontal sliding windows (XX) at their test facility in Monroe, Ohio. The samples tested successfully met the performance requirements for the following ratings. Test Specimen #1: HS-R30 (69 x 48), Test Specimen #2: HS-R40 (69 x 48). This test report is a reissue of the original report 07-30083.01. This report is issued in the name of Newtown Manufacturing through written authorization of Dayton Technologies, LLC. Test specimen descriptions and results are reported herein.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors*.

Test Specimen Description:

Series/Model: 2300/2500 HS (SLD)

Type: PVC Horizontal Sliding Window (XX)

Test Specimen #1: HS-R30 (69 x 48)

Overall Size: 5' 8-3/4" wide by 4' 0" high

Right Sash Size: 2' 10-1/2" wide by 3' 9" high

Left Sash Size: 2' 10-1/2" wide by 3' 9" high

Screen Size: 5' 5-3/4" wide by 3' 8-5/16" high

Reinforcement: No reinforcement was utilized.

Test Specimen Description: (Continued)

Test Specimen #2: HS-R40 (69 x 48)

Overall Size: 5' 8-3/4" wide by 4' 0" high

Right Sash Size: 2' 10-1/2" wide by 3' 9" high

Left Sash Size: 2' 10-1/2" wide by 3' 9" high

Screen Size: 5' 4-3/4" wide by 3' 8-5/16" high

Reinforcement: A custom shaped aluminum reinforcement with typical thickness of 0.08" was utilized in meeting stiles only.

The following applies to all specimens

Finish: All PVC was white.

Glazing Details: Both sash utilized nominal 7/8" thick sealed insulating glass units fabricated from two nominal 1/8" clear annealed sheets and an aluminum box spacer system filled with desiccant beads, (5/8" x 5/16" x 1/64"). The sash were interior wet glazed and secured with PVC snap-in glazing beads on the exterior.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.250" high by 0.187" backed polypile with center fin	1 Row	Head, sill and jambs
Leaf seal	1 Row	Keeper stile
0.300" high by 0.187" backed polypile with center fin	2 Rows	Stiles
300" high by 0.187" backed polypile with center fin	1 Row	Lock stiles and rails

Test Specimen Description: (Continued)

Frame Construction: The frame was constructed of extruded PVC members with mitered and welded corners. The sill utilized extruded PVC inserts.

Sash Construction: The sash were constructed of extruded PVC members with mitered and welded corners.

Screen Construction: The screen was constructed of rolled aluminum members with plastic keyed corners. The fiberglass mesh was secured with a flexible spline

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock with keeper	2	5-1/2" from each end of interior/exterior meeting stile (34" apart)
Roller assembly	4	One 2" from each end of bottom rails

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-1/8" wide by 1/8" deep weepslot	4	One in each end of exterior and interior sill tracks.
1-1/2" wide by 1/4" deep weepslot	2	One in each end of sill face draining interior sill hollow
1-1/2" wide by 1/4" tall weepslot with cover	2	One in each end of sill face, draining exterior sill hollow (4" from jambs)
1/4" wide by 1/8" high weepslot	2	One in each end of screen track, draining the track
1-1/4" wide by 3/4" high weepslot	4	Two in each bottom sash rail

Installation: The test unit was installed into the 2" x 10" yellow pine wood test buck with #10 by 1-1/2" steel screws (4" up from sill and 4" down from head) on jambs (total 4). The exterior perimeter was sealed with silicone.

Test Results:

The results are tabulated as follows:

Test Specimen #1: HS-R30 69 x 48

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.2.2.5.1	Operating Force	15 lbs	20 lbs max.
2.1.2	Air Infiltration per ASTM E 283 @ 1.57 psf (25 mph)	0.20 cfm/ft ²	0.3 cfm/ft ² max.
<i>Note: The tested specimen meets the performance levels specified in AAMA/NWDA 101/I.S. 2-97 for air infiltration.</i>			
2.1.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330 (Permanent sets reported were taken on the exterior meeting stile) (Loads were held for 10 seconds) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.03" 0.02"	0.176" max. 0.176" max.
2.2.2.5.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Interior pull stile	0.06"/12%	0.50"/100%
	Interior meeting stile	0.06"/12%	0.50"/100%
	Exterior meeting stile	0.06"/12%	0.50"/100%
	Exterior pull stile	0.06"/12%	0.50"/100%
	In remaining direction at 50 lbs		
	Interior top rail	0.12"/18%	0.50"/100%
	Exterior top rail	0.12"/18%	0.50"/100%
	Interior bottom rail	0.12"/18%	0.50"/100%
	Exterior bottom rail	0.12"/18%	0.50"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated

Test Results: (Continued)

Test Specimen #1: HS-R30 69 x 48

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
2.1.8	Forced Entry Resistance per ASTM F 588-97		
	Lock Test	No entry	No entry
	Test A1 through A7	No entry	No entry
	Lock Test	No entry	No entry

Optional Performance:

4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.50 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Permanent sets reported were taken on the exterior meeting stile) (Loads were held for 10 seconds)		
	@ 45.0 psf (positive)	0.05"	0.176" max.
	@ 45.0 psf (negative)	0.02"	0.176" max.

Test Specimen #2: HS-R40 69 x 48

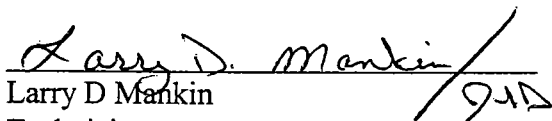
Optional Performance:

<u>Paragraph</u>	<u>Title of Test-Test Method</u>	<u>Results</u>	<u>Allowed</u>
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.50 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Permanent sets reported were taken on the exterior meeting stile) (Loads were held for 10 seconds)		
	@ 60.0 psf (positive)	0.02"	0.176" max.
	@ 60.0 psf (negative)	0.01"	0.176" max.

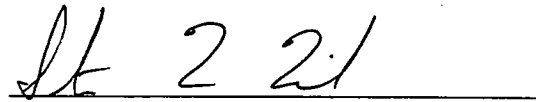
This report is reissued in the name of Newtown Manufacturing through written authorization of Acro Extrusions Company to whom the original report was rendered. The original Acro Extrusion Company Report No. is 07-30083.01.


Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:


Larry D Mankin
Technician

LDM:jb/nlb
07-30083.02


Steven M. Urich, P.E.
Senior Project Engineer
JUNE 24, 2003


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DOCUMENT CONTROL ADDENDUM #07-30083.00

Current Issue Date: 06/24/03

Report No.: 07-30083.01

Requested by: Skip Walker, Acro Extrusion Company

Purpose: AAMA/NWWDA 101/I.S.2-97 testing of Series/Model 8100 HS, PVC horizontal sliding window (XX).

Issued Date: 08/21/00

Comments:

Report No.: 07-30083.02

Requested by: Dennis Cox, Dayton Technologies, LLC and Carl Slocomb, Newtown Manufacturing

Purpose: Reissue Report No. 07-30083.01 in the name of Newtown Manufacturing

Issued Date: 06/24/03

Comments: Certification copy of report to Tanya Wix at NAMI.
Florida P.E. seal required on report.