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EASTMAN PERFORMANCE FILMS, LLC
TEST REPORT

SCOPE OF WORK
ASTM E283, ASTM E331 AND ASTM E330/E330M TESTING
ON DR25 SR PS9 FILM, FIXED WINDOW

REPORT NUMBER
J3553.02-109-44

TEST DATE(S)
06/18/19

ISSUE DATE
07/01/19

RECORD RETENTION END DATE
06/18/23

PAGES
13

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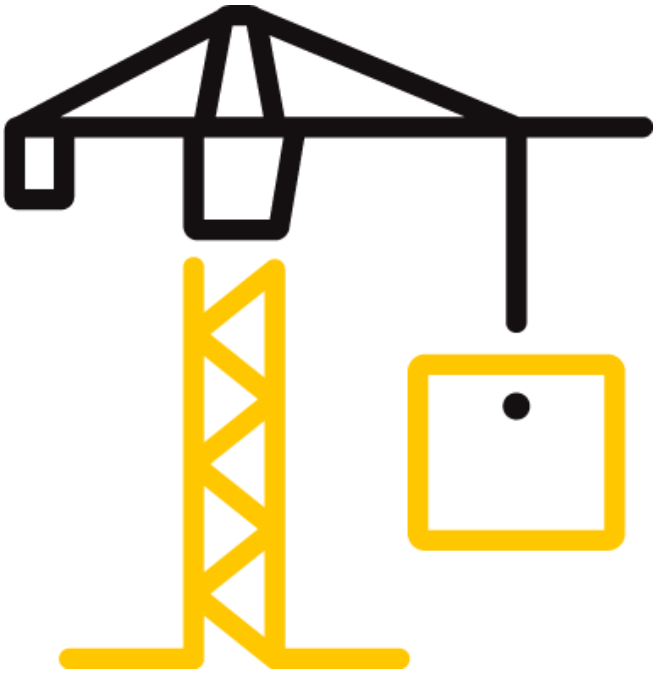

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TEST REPORT FOR EASTMAN PERFORMANCE FILMS, LLC
Report No.: J3553.02-109-44
Date: 07/01/19

REPORT ISSUED TO

EASTMAN PERFORMANCE FILMS, LLC
4210 The Great Road
Fieldale, Virginia 24089

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Eastman Performance Films, LLC to perform testing in accordance with ASTM E283, ASTM E331, and ASTM E330/E330M, on their DR25 SR PS9 Film, fixed window. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek B&C test facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
Design Pressure	±2400 Pa (±50.13 psf)
Air Infiltration 300 pa (6.27 psf)	<0.1 L/s/m^2 (<0.01 cfm/ft^2)
Air Exfiltration 300 pa (6.27 psf)	<0.1 L/s/m^2 (<0.01 cfm/ft^2)
Water Penetration Resistance	Failure
Uniform Load Structural Test Pressure	±3600 Pa (±75.19 psf)

For INTERTEK B&C:

COMPLETED BY:	John A. Shanabrook	**REVIEWED BY:**	Timothy J. McGill
TITLE:	Technician – Product Testing	**TITLE:**	Manager – Product Testing
SIGNATURE:	John A. Shanabrook Digitally Signed by: John Shanabrook	**SIGNATURE:**	Timothy J. McGill Digitally Signed for: Timothy J. McGill by Vicki L. McElwain
DATE:	07/01/19	**DATE:**	07/01/19

JAS:wnl

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SECTION 3
TEST METHOD(S)

The specimen was evaluated in accordance with the following:

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for no shim space. The exterior perimeter of the window was sealed with tape.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Head, sill, and jambs	1" x 1" wood blindstops at the interior of the specimen with #8 x 3" flat head screws	The anchors were located at the head, sill, and jambs. The screws were located 3" from each corner and spaced 8" on center.
	2x4 wood blindstops at the exterior of the specimen with #8 x 3" flat head screws	The anchors were located at the head, sill, and jambs. Two screws were located at each end of the head and sill blindstops and then one screw was spaced 8" on center. The jamb blindstops had one screw at each end and then spaced 8" on center.

Tape and film were not used to seal against air leakage during structural testing.

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SECTION 5
EQUIPMENT

Tape Measure Verification: 63788
Control Panel: 005644
Weather Station: 63316
Spray Rack: 003956D
Linear Transducers: INT00142, INT00141, INT00153

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Steve DeBusk	Eastman Performance Films LLC
Andrew P. Mehalick	Intertek B&C
Timothy J. McGill	Intertek B&C
John A. Shanabrook	Intertek B&C

SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: Fixed Window
Series/Model: DR25 SR PS9 Film

OVERALL AREA:	WIDTH		HEIGHT	
2.2 m² (24.0 ft²)	millimeters	inches	millimeters	inches
Overall size	1219	48	1829	72

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Head, sill, and jambs	Aluminum	Extruded, thermally improved, poured and debridged

	JOINERY TYPE	DETAIL
All corners	Butted	The corners were secured together using two #12 x 1" pan head screws through the head and sill and into the jamb screw bosses. Silicone was used to seal the gap at the glazing pocket.

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Reinforcement: No reinforcement was utilized.

Weatherstripping: No weatherstripping was utilized.

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	Desiccant-filled aluminum spacer	1/4" clear annealed glass with a 0.009" laminate layer on the interior	1/4" clear annealed glass	Exterior glazed against a bead of Dow Corning 995 structural silicone and secured in place using a snap-in aluminum glazing bead at the sill with a rubber glazing strip against the glazing. A rubber glazing wedge was used at the exterior of the head, sill, and jambs.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Fixed daylight opening	1	1080 x 1695	42-1/2 x 66-3/4	3/8"

Drainage: No drainage was utilized.

Hardware: No hardware was utilized.

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SECTION 8
TEST RESULTS

The temperature during testing was 25°C - 26°C (77°F - 78°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Air Leakage, Infiltration per ASTM E283 at 300 Pa (6.27 psf)	 <0.1 L/s/m^2 (<0.01 cfm/ft^2)	 Report Only	 1
Air Leakage, Exfiltration per ASTM E283 at 300 Pa (6.27 psf)	 <0.1 L/s/m^2 (<0.01 cfm/ft^2)	 Report Only	 1
Water Penetration, per ASTM E547 at 140 Pa (2.92 psf)	 Failure	 No leakage	 2
Uniform Load Deflection, per ASTM E330 Deflections taken at midspan of jamb +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	 2.0 mm (0.08") 0.8 mm (0.03")	 Report Only	 3,4
Uniform Load Structural, per ASTM E330 Permanent set taken at midspan of jamb +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	 <0.3 mm (<0.01") 0.8 mm (0.03")	 Report Only	 3, 4

***General Note**: All testing was performed in accordance with the referenced standard(s).*

Note 1: Test Date 06/18/19 / Time: 8:45 AM (Air Note Only)

Note 2: Water leakage through sill and jamb joinery 7 minutes into test

Note 3: Loads were held for 10 seconds.

Note 4: Tape and film were not used to seal against air leakage during structural testing.

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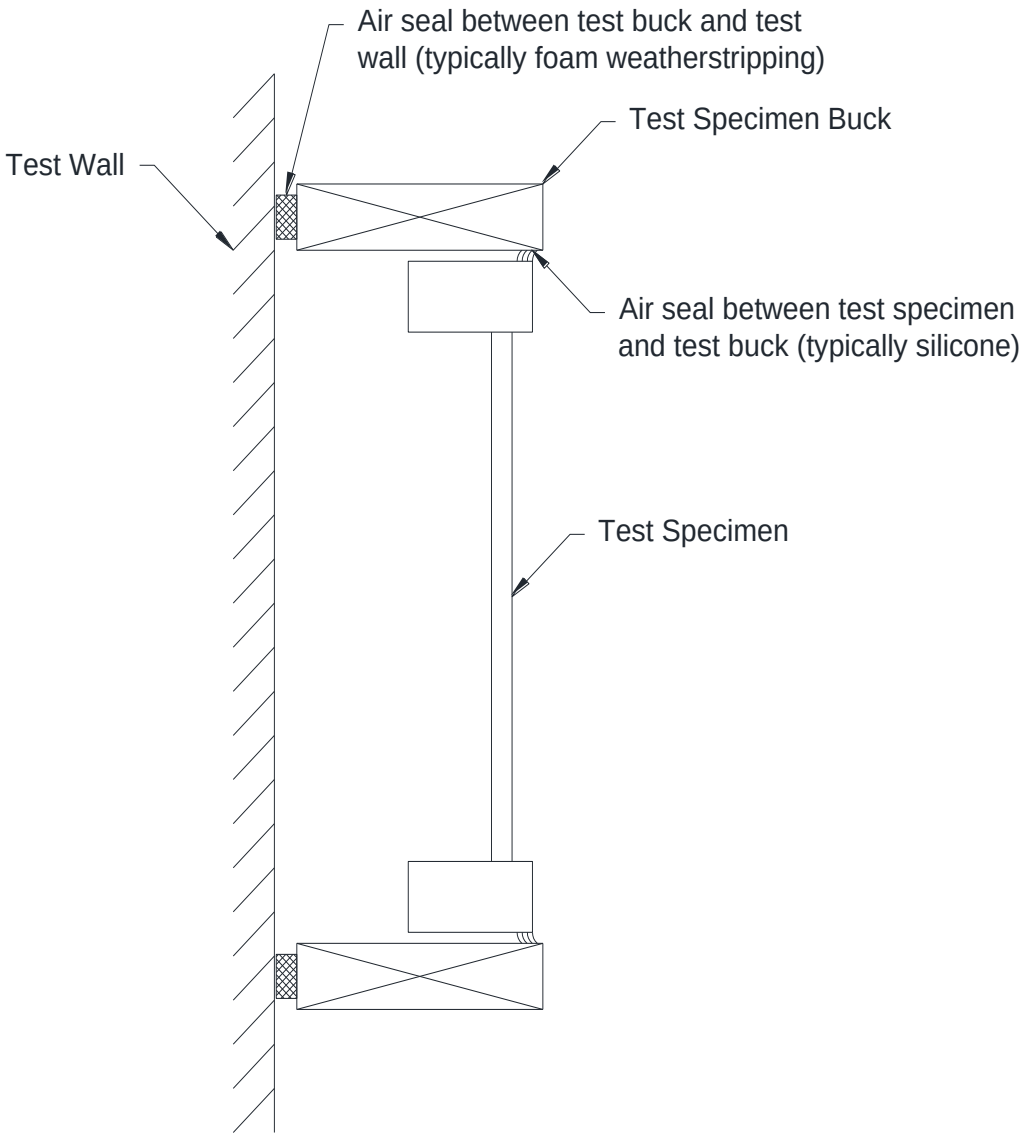
SECTION 9
LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



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SECTION 10
PHOTOGRAPHS

Photo No. 1
Specimen Prior to Testing

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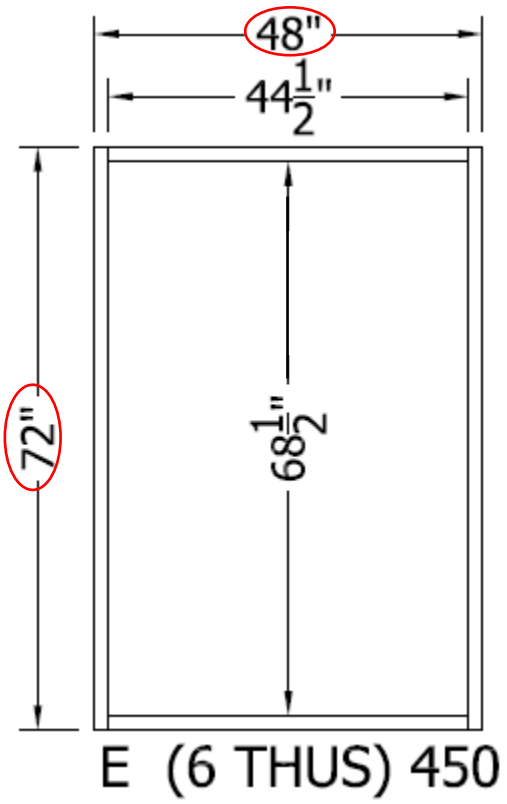
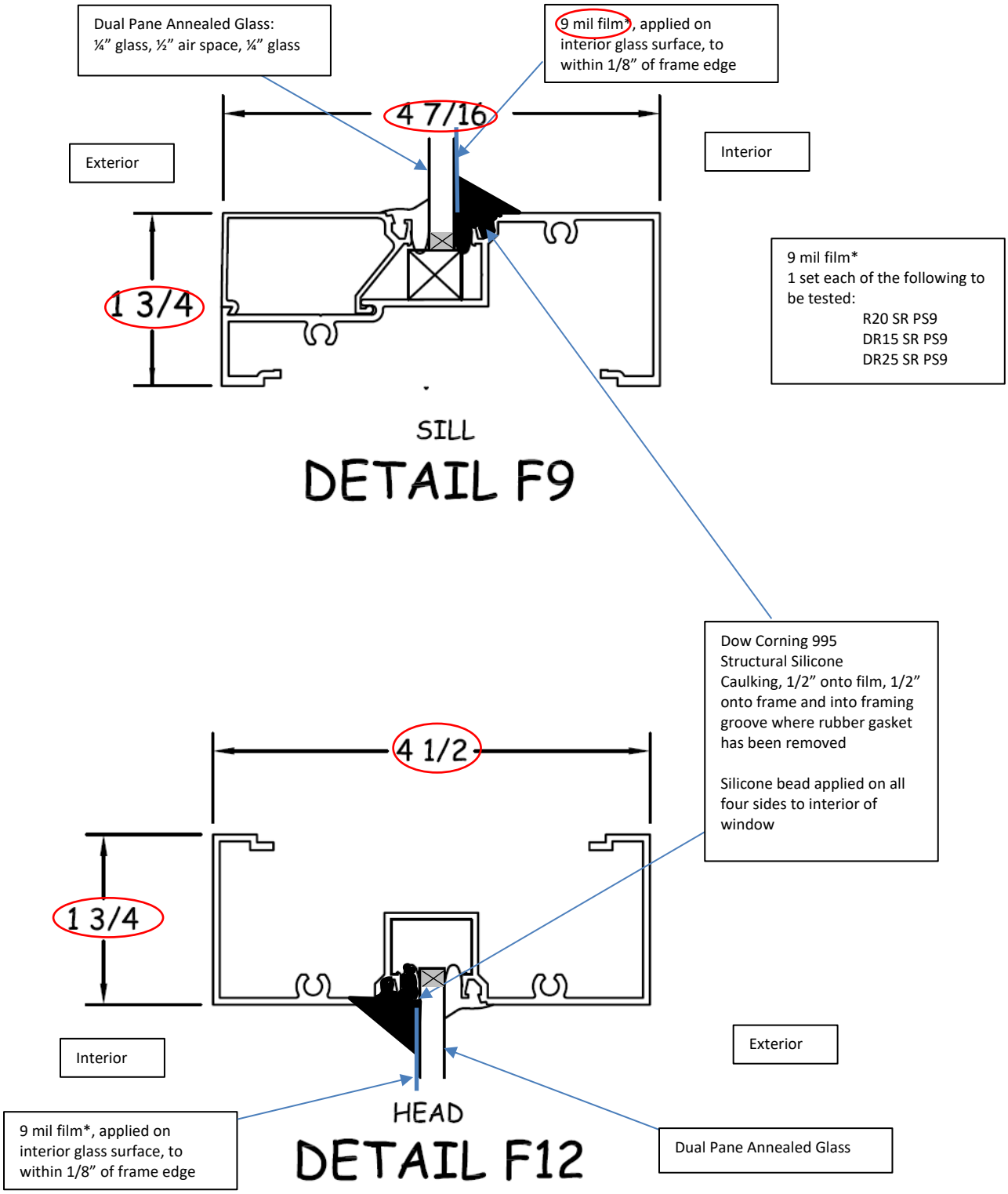
SECTION 11
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Eastman Performance Films, LLC
Intertek Quote 210800R0 Windstorm Testing
Test Sample Details

Kawneer 450 Aluminum Framing





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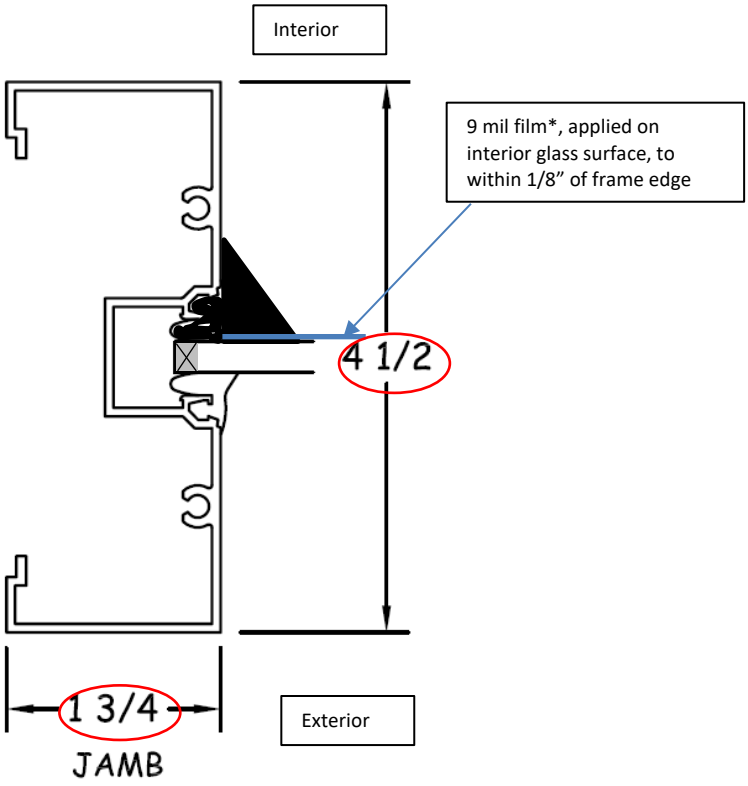
Report #: J3553.02
Date: 6/25/2019
Verified by: John A. Shanabrook


Interior
9 mil film*, applied on interior glass surface, to within 1/8" of frame edge
4 1/2
1 3/4
Exterior
JAMB

DETAIL F10

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SECTION 12
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	07/01/19	N/A	Original Report Issue