

EASTMAN PERFORMANCE FILMS, LLC TEST REPORT

SCOPE OF WORK

SAFETY GLAZING MATERIAL TESTING OF DR 25, 5 MIL FILM ON 1/4" GLASS

REPORT NUMBER J3629.08-119-37

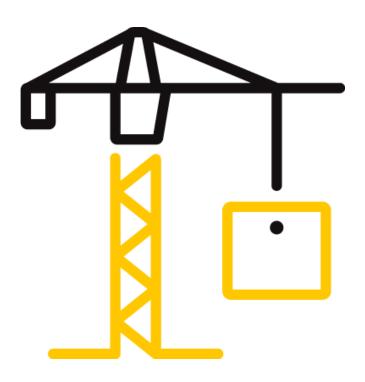
TEST DATE 06/04/19

ISSUE DATE 06/28/19

RECORD RETENTION END DATE 06/04/23

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DOCUMENT CONTROL NUMBER ATI 00854 (08/07/17) RT-R-AMER-Test-2889 © 2017 INTERTEK





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TEST REPORT FOR EASTMAN PERFORMANCE FILMS, LLC

Report No.: J3629.08-119-37 Date: 06/28/19

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 - Fieldale, Virginia to perform safety glazing material performance testing in accordance with ANSI 297.1 and CPSC 16 CFR 1201 of their DR 25, 5 mil film on 1/4" thick annealed glass. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the 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

| Film : DR 25, 5 mil |
|------------------------------------|
| Glass: 1/4" annealed glass |
| Glazing Type: Organic Coated Glass |

| IMPACT TEST RESULTS | | | |
|---------------------|----------------|-----------------|---------------------|
| STANDARD | CLASSIFICATION | DROP HEIGHT | RESULT ¹ |
| ANSI | Class B | 18 in. (457 mm) | Pass |
| CPSC | Category I | 18 in. (457 mm) | Pass |

¹The performance evaluation of the product identified in this test report was isolated to impact testing only, accelerated weathering/aging and thermal tests were not performed.

For INTERTEK B&C: **REVIEWED BY:** Todd M. Wilt Virgal T. Mickley, Jr., P.E. COMPLETED BY: Senior Staff Engineer TITLE: Lead Technician TITLE: **SIGNATURE: SIGNATURE:** DATE: 06/28/19 DATE: 06/28/19 TMW:vtm/aas

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Testing Laboratory



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SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ANSI Z97.1-2015, For safety glazing materials used in buildings - safety performance specifications and methods of test, American National Standard

CPSC 16 CFR 1201, *Safety Standard for Architectural Glazing Materials*, Consumer Product Safety Commission (16 CFR Ch. II, 1-1-03 Edition)

SECTION 4

MATERIAL SOURCE

Eastman Performance Films, LLC - Fieldale, Virginia applied DR 25, 5 mil film to 1/4" clear annealed glass at Intertek in York, Pennsylvania between 04/02/19 and 04/04/19. The specimens were conditioned before and during testing between 65° to 85°F.

SECTION 5

SAMPLE RETENTION

All test specimens were destroyed by test or by personnel and have been disposed of as trash.

SECTION 6

EQUIPMENT

| ASSET # | DESCRIPTION | CAL DUE DATE |
|----------|--------------------------|--------------|
| 63303 | Impact Frame | 09/11/19 |
| 65882 | Impactor (100lb.) | 11/15/19 |
| 65852 | Calipers/Thickness Gauge | 09/11/19 |
| INT00433 | Thermometer | 01/17/20 |
| 62039 | Weight Scale | 09/11/19 |



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SECTION 7

LIST OF OFFICIAL OBSERVERS

| NAME | COMPANY |
|-----------------|--------------------------------|
| Charles Adiasor | Eastman Performance Films, LLC |
| Todd M. Wilt | Intertek B&C |
| Robert G. Spayd | Intertek B&C |

SECTION 8

TEST PROCEDURE

Specimens were clamped into a steel frame and impacted with a 100 Lb. impactor from a drop height of 18 inches. Two specimens where impacted on the film side and two were impacted on the glass side. Specimens were examined for openings and glass loss after impact in accordance with the interpretation of results per the referenced standards.

SECTION 9

TEST SPECIMEN DESCRIPTION

Product: DR 25, 5 mil Glazing Type: Organic Coated Glass Glass Type: Clear Annealed Glass Size Classification: Unlimited (U) Glass Manufacturer: Unknown Film/Organic Coating Manufacturer: Eastman Performance Films, LLC - Fieldale, Virginia Film/Organic Coating Brand Name: DR 25 Film Thicknesses: 5 mil Nominal Glass Thickness: 1/4" Sample Dimensions: 34" wide x 76" high (Impact)

Glazing Composition Details

| THICKNESS (in.) | | | |
|-----------------|-------|-------|--|
| Overall | Glass | Film | |
| 0.230 | 0.225 | 0.005 | |

Method of Film Measurement: The overall glazing thickness was measured, then the film was separated and removed and the glass thickness, exclusive of the film, was measured. The film thickness was calculated by subtracting the measured glass thickness from the measured overall thickness.



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SECTION 10

TEST RESULTS

Test Date: 06/04/19 Lab Temperature: 70°F Impact Drop Height: 18 inches

| SPECIMEN NUMBER | THICKNESS (IN.) | IMPACT SIDE (G / F) ¹ | OBSERVATIONS | LARGEST FRAGMENT | TOTAL FRAGMENTS | PASS /FAIL |
|--------------------|--------------------|--|-----------------------|---------------------|--------------------|---------------|
| 1 | 0.230 | F | No openings | N/A | N/A | Pass |
| 2 | 0.230 | G | 1/4" x 7-3/4" opening | N/A | N/A | Pass |
| 3 | 0.230 | F | Did not break | N/A | N/A | Pass |
| 4 | 0.231 | G | 1/2" x 9-3/4" opening | N/A | N/A | Pass |
| 3 4 | | G | | • | • | |

¹Impact Side: G = Glass Side Impacted F = Film/Organic Coated Side Impacted

| Acceptance Criterion: | Limit |
|--|--------------|
| No detached fragments over 1 in ² . | 8.86 grams |
| No single detached particle shall weigh more than 6.82 in ² . | 60.42 grams |
| Total weight of detached particles >1 in ² shall not weigh more than 15.5 in ² . | 137.31 grams |
| No shear or opening through which a 3" sphere can freely pass with 4 lbs. force. | |

Note 1: Acceptance criteria limits were calculated using the nominal glass thickness identified in the '*Glazing Composition Details*' section.

Note 2: The '*Limit*' presented for each item in the '*Impact Test Acceptance Criteria*' identifies the allowable weight of the particle/fragment size for the specified item in the '*Criterion*' section.

SECTION 11

CONCLUSION

The specimens meet the impact performance requirements set forth in the referenced test procedures.

SECTION 12

REVISION LOG

| REVISION # | DATE | PAGES | REVISION |
|------------|----------|-------|-----------------------|
| 0 | 06/28/19 | N/A | Original Report Issue |