

TEST REPORT

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EVALUATION CENTER
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RENDERED TO

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PRODUCT EVALUATED:
Endureed Synthetic Thatch, Regions Series

EVALUATION PROPERTY:
ASTM E108, 2011 Edition, "*Standard Test Methods for Fire Tests of Roof Coverings*"
For R&D purposes

Report of Testing Global Innovations LLC's Endureed synthetic thatch for compliance with the applicable requirements of ASTM E108 2011 Edition "*Standard Test Methods for Fire Tests of Roof Coverings*".

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2 Introduction

Intertek Testing Services NA (Intertek) Fire Testing Laboratory in Middleton, Wisconsin conducted an investigation of the external fire resistance characteristics of Global Innovations LLC's Endureed synthetic thatch, for class "A" application. The samples were received at the laboratory May 12th, 2017 in good condition.

The tests were conducted using the test methods of ASTM E108 2011 Edition "*Standard Test Methods for Fire Tests of Roof Coverings*".

This testing was conducted for R&D purposes. The test specimens were not sampled. This report is not to be used for certification purposes.

3 Test Samples

The plywood decks were constructed by Intertek technicians according to the specifications of test standard ASTM E108 2011 Edition "*Standard Test Methods for Fire Tests of Roof Coverings*".

- 1. The test material was not sampled by a representative of Intertek.**
2. The test material was submitted by the client.
3. The lumber used to construct the test decks was tested and verified to have a moisture content between 8% and 12%.

Deck#	Deck Type	Deck material	System
1	Spread of Flame Class 'A'	15/32" A/C plywood	1 layer 1/4" DensDeck, Endureed synthetic thatch w/ 7" reveal.
2	Spread of Flame Class 'A'	15/32" A/C plywood	1 layer 1/4" DensDeck, Endureed synthetic thatch w/ 7" reveal.

Product Description: Endureed Synthetic Thatch, Regions Series
42" shingles, stainless steel bound reeds, 1/2" thick.

4 Testing and Evaluation Methods

The tests were conducted following the test methods of ASTM E108 2011 Edition “*Standard Test Methods for Fire Tests of Roof Coverings*”. This product is being evaluated for application over a non-combustible surface only, therefore only the Spread of Flames tests were conducted.

The following test equipment was used to conduct the test.

<u>Roofing Lab Equipment</u>	<u>Inventory Number</u>	<u>Measurement Uncertainty</u>	<u>Calibration Due Date</u>
ASTM E108 Test Apparatus (Shop)	204	N/A	Daily
Davis Anemometer (A/2-4 BB)	442	±2% of max reading	07/20/2017
Accusplit Timer	1313	±0.001% (over 3hr. period)	10/10/2017
Moisture Meter	1110	N/A	Daily
Moisture Meter Calibration Block	1380	±0.134%	10/28/2017
Thermocouple Probe	1317	±3.96°F	10/10/2017
K-Meter	1355	±1.0°F	07/12/2017

5 Test Results

5.1. Calibration

Test Conditions (Class A)

Test Date	05/15/2017
Air Velocity	1065.3 average fpm
Slope of Cal. Deck	5:12
Average flame temp	1411°F
Ambient air temp.	75°F

5.2. Results and Observations

Spread of Flames Tests

Test Observations Deck: 1

Test Date	05/15/2017
Slope of Test Deck	5:12
Ambient Temperature	77°F

Time (min:sec)	Distance (feet-inches)	Observations/Comments
00:00		Burner ignited.
00:07	1'	Surface ignition.
00:17	2'	
00:24	3'	
00:35	4'	
01:42	5'	
05:36		Flame retreating.
10:00		Test stop.

Acceptance Level: Class 'A', maximum spread of flames is 5'8".

Test Observations Deck: 2

Test Date	05/15/2017
Slope of Test Deck	5:12
Ambient Temperature	78°F

Time (min:sec)	Distance (feet-inches)	Observations/Comments
00:00		Burner ignited.
00:07		Surface ignition.
00:19	1'	
00:36	2'	
00:46	3'	
01:03	4'	
01:33	5'	
05:01		Flame retreating.
10:00		Test stop.

Acceptance Level: Class 'A', maximum spread of flames is 5'10".

6 Conclusion

The tests were conducted in accordance with ASTM E108 (2011) "*Standard Test Methods for Fire Tests of Roof Coverings*". Below is a summary of the test results.

Sample #	Test	Slope	Rating
1	Spread of Flames on Endureed thatch.	5:12	Class 'A'
2	Spread of Flames on Endureed thatch.	5:12	Class 'A'

This testing was conducted for R&D purposes. The test specimens were not sampled. This report is not to be used for certification purposes.

This report does not automatically imply product certification. Products must be under a certification program and bear the Warnock Hersey registered certification mark to demonstrate compliance.

INTERTEK TESTING SERVICES NA

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7 Appendix A

PHOTOGRAPHS

Test #1



Test #2





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REVISION SUMMARY

DATE	SUMMARY
May 16, 2017	Initial report