

FLMECHECK INTERNATIONAL LLC FIRE TEST REPORT

SCOPE OF WORK

ASTM E84 TESTING ON M-111PA 112018.1

REPORT NUMBER

103751607SAT-001

TEST DATE

12/11/18

ISSUE DATE

12/12/18

PAGES

11

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2780 (5/24/18)

© 2017 INTERTEK



TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

REPORT ISSUED TO

Flamecheck International LLC

616 South Cynthia Avenue

Tucson, AZ 85710

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Flamecheck International LLC, 616 South Cynthia Avenue, Tucson, AZ 85710, to evaluate the flame spread and smoke developed properties of M-111PA 112018.1. Testing was conducted at the Intertek B&C test facility in Elmendorf, Texas. Results obtained are tested values and were secured by using the designated test method(s). A summary of test results and the complete graphical test data is reported herein.

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

SECTION 2

SUMMARY OF TEST RESULTS

Specimen I.D.: M-111PA 112018.1

ASTM E84 Test Results

FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
0	0

*See Section 8 for additional information and commentary

For INTERTEK B&C:

COMPLETED BY:	Joseph Martinez	REVIEWED BY:	Servando Romo
TITLE:	Technician	TITLE:	Project Engineer
SIGNATURE:		SIGNATURE:	
DATE:	12/12/18	DATE:	12/14/18

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 3

TEST METHOD

The specimen was evaluated in accordance with the following:

ASTM E84-18a, *Standard Test Method for Surface Burning Characteristics of Building Materials*

SECTION 4

MATERIAL SOURCE/INSTALLATION

The test specimen was submitted to Intertek directly from the client. Samples were not independently selected for testing. Intertek has not verified the composition, manufacturing techniques or quality assurance procedures. The specimen, identified as M-111PA 112018.1, was received in good order at the Evaluation Center on 12/3/18 and given identification number SAT1812031752-001.

SECTION 5

LIST OF OBSERVERS

NAME	COMPANY
Joseph Martinez	Intertek B&C
Samuel Barron	Intertek B&C

SECTION 6

TEST PROCEDURE

This report describes the results of testing conducted in accordance with ASTM E84-18a; Standard Test Method for Surface Burning Characteristics of Building Materials. The test method is for comparative surface burning behavior of building materials by determining a flame spread index (FSI) and a smoke developed index (SDI). This test is generally applicable to exposed surfaces, such as finish materials for ceilings or walls, provided that the material or assembly of materials, by its own structural quality or the manner in which it is tested and intended for use, is capable of supporting itself in position or being supported during the test period.

“The use of supporting materials on the underside of the test specimen may lower the flame spread index from that which might be obtained if the specimen could be tested without such support. This method may not be appropriate for obtaining comparative surface burning behavior of some cellular plastic materials. Testing of materials that melt, drip, or delaminate to such a degree that the continuity of the flame front is destroyed, results in low flame spread

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

indices that do not relate directly to indices obtained by testing materials that remain in place.” – ASTM E84-18a Section 1.3

The purpose of the method is to determine the relative burning behaviour of the material by observing the flame spread along the specimen. Flame spread and smoke density developed are reported, however, there is not necessarily a relationship between these two measurements.

SECTION 6 (Continued)

TEST PROCEDURE

It is the expressed intent of the test method to provide only comparative measurements of surface flame spread and smoke density of the tested material against measurements for select grade red oak flooring and fiber-cement board when tested under specific fire exposure conditions. The test method exposes a nominal 24-ft (7.32-m) long by 20-in. (508-mm) wide test specimen to a controlled air flow and flaming fire exposure adjusted to produce a specific flame spread distance vs time calibration using select grade red oak flooring.

The test method does not provide information regarding heat transmission through the tested surface, the effect of aggravated flame spread behavior resulting from the proximity of combustible walls and ceilings, or the classification or definition of materials as noncombustible using flame spread index alone.

This standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.

There were no deviations from the requirements prescribed in ASTM E84.

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 7

TEST SPECIMEN DESCRIPTION

MANUFACTURER*	Flamecheck International LLC
SPECIMEN DESCRIPTION*	Test sample consists of 8 oz. of Flamecheck M-111 blended into 1 gallon of pink latex paint. Two coats were then applied onto GRC board with a roller as per manufacturer's recommendations.
CONDITIONING TIME	8 days
SPECIMEN LENGTH	24 ft. (Four 5 ft. long and one 4 ft. long coated cement boards)
SPECIMEN WIDTH	24 in.
THICKNESS	0.26 in. (coating & substrate)
TOTAL WEIGHT	77 lbs.
COLOR	Pink
ADHESIVE/COVERAGE RATE	N/A
SIDE TO FLAME*	Coated Side
SUPPORT USED*	Self
MOUNTING METHOD	Standard
SUBSTRATE USED*	1/4 in. thick cement board
CEMENT BOARD	1/4 in. thick fiber cement board was placed on top of the sample.

*From the client's material description and/or instructions

Note: Specimens were conditioned as per the requirements of Section 6.4 of ASTM E84.

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 8

TEST RESULTS

TEST RESULTS	
Test Date	12/11/18
Test Operator	Joseph Martinez
Flame Spread Index (FSI)	0
Smoke Developed Index (SDI)	0
Red Oak Calibration (% * Min)	74.2

TEST DATA	
FSI (unrounded)	0.6
SDI (unrounded)	1.07
FS * Time Area (Ft * Min)	1.1
Smoke Area (% * Min)	0.8
Total Fuel Burned (Cubic Ft.)	44.89
Max Flame Front Advance (Ft.)	0.2
Time to Max Flame Front (sec)	493
Max Temp At Exposed T/C (°F)	543
Time To Max Temp (sec)	589

TEST OBSERVATIONS	
Transient Ignition Time	0:23
Cracking Observed	2:36
Ignition Time	5:26
Observations After the Test:	
0 – 3 ft.	The coating was consumed.
3 – 5 ft.	The coating heavily charred and cracked.
5 – 24 ft.	The coating was discolored.

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 8 (Continued)**TEST RESULTS****COMMENTARY ON CLASSIFICATION**

Neither ASTM E84 nor UL 723 include classification criteria for the results obtained from testing. The International Building Code® (IBC), NFPA 101: Life Safety Code® (NFPA 101), and NFPA 5000: Building Construction and Safety Code® (NFPA 5000) all describe a set of classification criteria required for interior wall and ceiling finish materials based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. The classification criteria for all three model codes is the same:

Class	Flame Spread Index	Smoke Developed Index
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

Note that classification under this scheme for interior wall and ceiling finishes does not strictly apply to all products or materials tested in accordance with ASTM E84 or UL 723 because not all products or materials are recommended or suitable for use as interior wall or ceiling finish materials in buildings, regardless of the surface burning characteristics. Consult with the product manufacturer and the local authority having jurisdiction (AHJ) regarding specific applications of a given product or material.

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 9 PHOTOGRAPHS

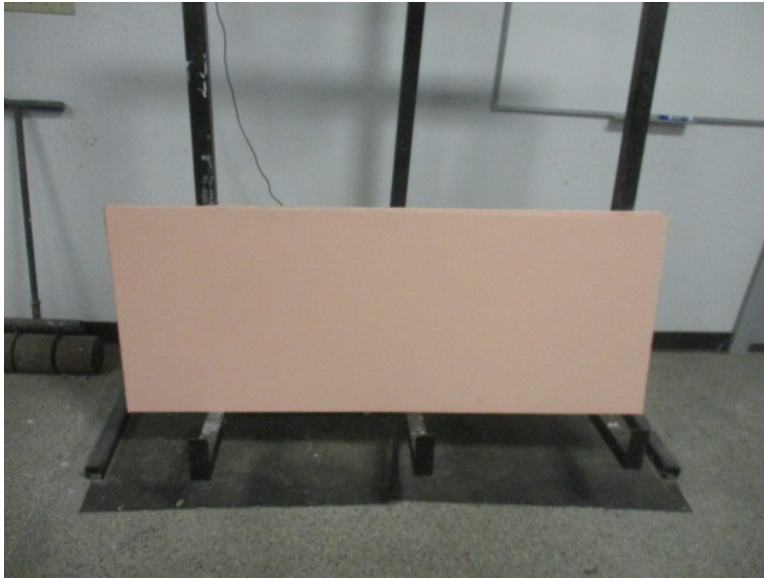


Photo No. 1
Exposed Surface of the Test Specimen (Pre-test)



Photo No. 2
Unexposed Surface of the Test Specimen (Pre-test)

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 9 (Continued) PHOTOGRAPHS



Photo No. 3
Unexposed Surface of the Test Specimen (Post-test)

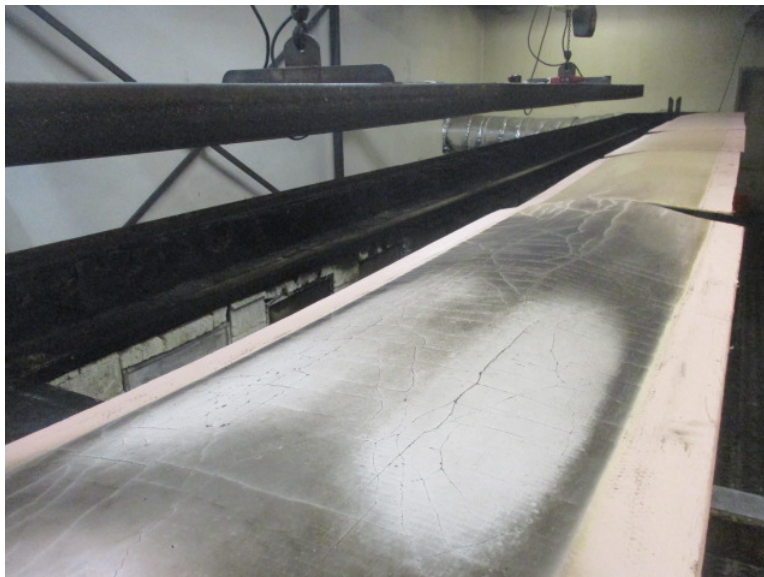


Photo No. 4
Exposed Surface of the Test Specimen (Post-test)

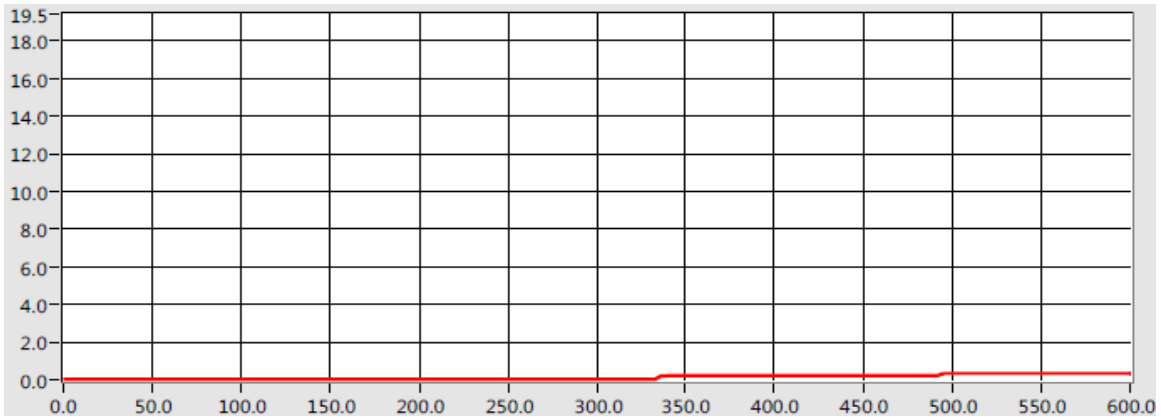
TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

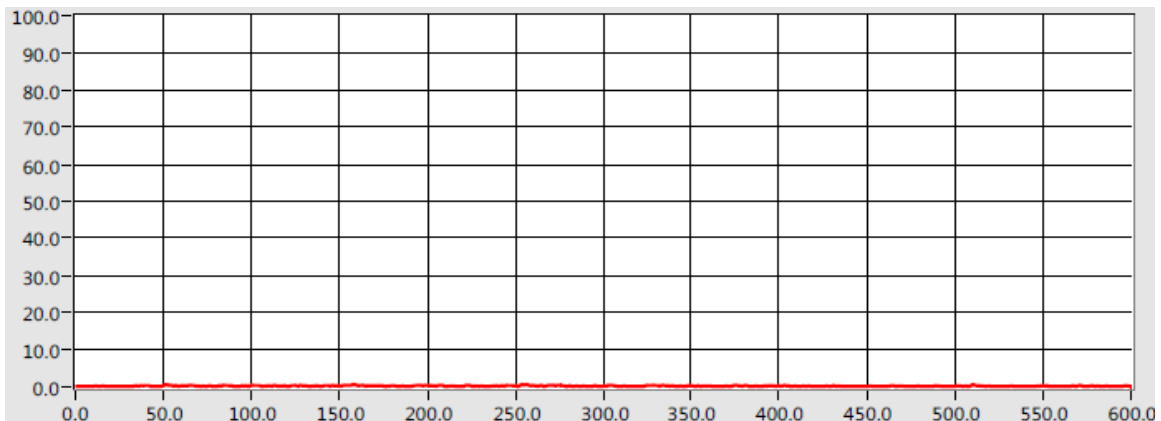
Date: 12/12/18

SECTION 10

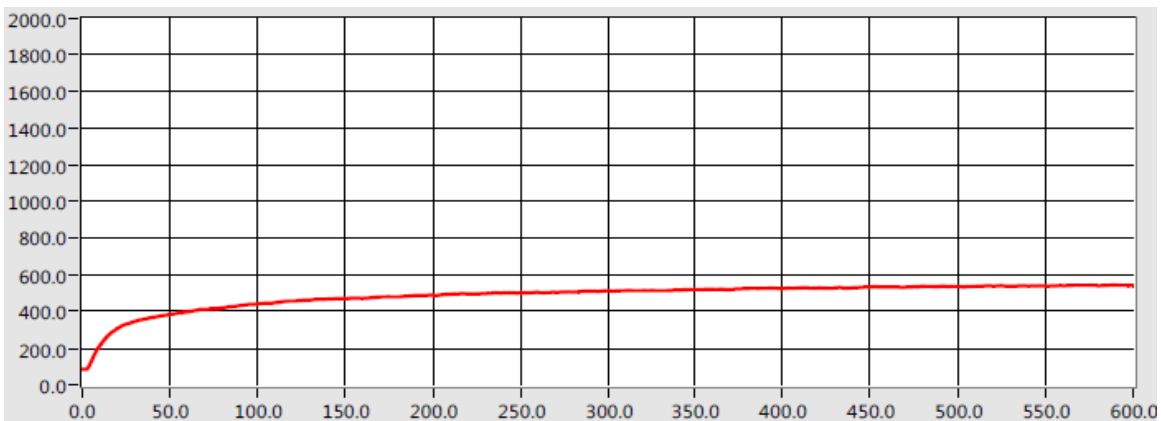
GRAPHS



Graph No. 1 - Flame Spread Distance Versus Time



Graph No. 2 - Light Obscuration Versus Time



Graph No. 3 - Tunnel Air Temperature Versus Time



Total Quality. Assured.

16015 Shady Falls
Elmendorf, Texas 78112

Telephone: 210-635-8100
Facsimile: 210-635-8101
www.intertek.com/building

TEST REPORT FOR FLAMECHECK INTERNATIONAL LLC

Report No.: 103751607SAT-001

Date: 12/12/18

SECTION 11

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	12/12/18	11	Original Report Issue