

HALLMARK BUILDING SUPPLIES, INC. FIRE TEST REPORT

SCOPE OF WORK

ASTM E84 TESTING ON SELF-MATING PANELS, MODEL LSM-419

REPORT NUMBER

103953780SAT-001C

TEST DATE

5/29/19

ISSUE DATE

5/30/19

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TEST REPORT FOR HALLMARK BUILDING SUPPLIES, INC.

Report No.: 103953780SAT-001C

Date: 5/30/19

REPORT ISSUED TO

Hallmark Building Supplies, Inc.

901 Northview Road
Waukesha, WI 53188

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Hallmark Building Supplies, Inc., 901 Northview Road, Waukesha, WI 53188, to evaluate the flame spread and smoke developed properties of Self-mating panels, Model LSM-419. 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. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

SECTION 2

SUMMARY OF TEST RESULTS

Specimen I.D.: Self-mating panels, Model LSM-419

ASTM E84 Test Results

FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
0	45

*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:	5/30/19	DATE:	5/31/19

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SECTION 3

TEST METHOD

The specimen was evaluated in accordance with the following:

ASTM E84-19a, *Standard Test Method for Surface Burning Characteristics of Building Materials*

SECTION 4

MATERIAL SOURCE/INSTALLATION

The samples were randomly selected from production stock on 4/1/19 by Intertek representative, Sondra Malone, at the Hallmark Building Supplies manufacturing facility, located at 5121 Frye Road, Suite 100, Irving, TX 75061. Details regarding the composition and traceability of the selected material are included in Intertek Inspection Report [J3219.02-103-15-R0]. The sample, identified as Self-mating panels, Model LSM-419, was received in good order at the Evaluation Center on 5/8/19 and given identification number SAT1905080818-002.

The subject test specimen is a traceable sample selected from the manufacturer's facility. Intertek selected the specimen and has verified the composition, manufacturing techniques and quality assurance procedures. Details regarding the composition and traceability of the selected material are included in Intertek Inspection Report [J3219.02-103-15-R0].

SECTION 5

LIST OF OBSERVERS

NAME	COMPANY
Joseph Martinez	Intertek B&C

SECTION 6

TEST PROCEDURE

This report describes the results of testing conducted in accordance with ASTM E84-19a; 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.

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“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 indices that do not relate directly to indices obtained by testing materials that remain in place.” – ASTM E84-19a Section 1.4 – 1.5

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.

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TEST SPECIMEN DESCRIPTION

MANUFACTURER*	Hallmark Building Supplies, Inc.
SPECIMEN DESCRIPTION*	Self-mating panels (Drift)
CONDITIONING TIME	21 days
SPECIMEN LENGTH	24 ft. 1.5 in. (Three 96.5 in. long coated aluminum siding panels)
SPECIMEN WIDTH	20 in. (Five 4 in. wide pieces)
THICKNESS	0.07 in.
DEPTH	0.57 in.
TOTAL WEIGHT	41 lbs.
COLOR	Grey
ADHESIVE/COVERAGE RATE	N/A
SIDE TO FLAME*	Finished Side
SUPPORT USED*	Rods
MOUNTING METHOD	Standard
SUBSTRATE USED*	None
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 E84-19a.

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SECTION 8

TEST RESULTS

TEST RESULTS	
Test Date	5/29/19
Test Operator	Joseph Martinez
Flame Spread Index (FSI)	0
Smoke Developed Index (SDI)	45
Heptane Calibration (% * Min)	76.8

TEST DATA	
FSI (unrounded)	0.9
SDI (unrounded)	44.01
FS * Time Area (Ft * Min)	1.7
Smoke Area (% * Min)	33.8
Total Fuel Burned (Cubic Ft.)	43.11
Max Flame Front Advance (Ft.)	0.1
Time to Max Flame Front (sec)	139
Max Temp At Exposed T/C (°F)	544
Time To Max Temp (sec)	592

TEST OBSERVATIONS	
Ignition Time	1:08
Observations After the Test:	
0 – 4 ft.	The coating was heavily charred, cracked, and bleached.
4 – 6 ft.	The coating was heavily discolored.
6 – 9 ft.	The coating was discolored.
9 – 24 ft.	No visible damage.

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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.

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SECTION 9 PHOTOGRAPHS

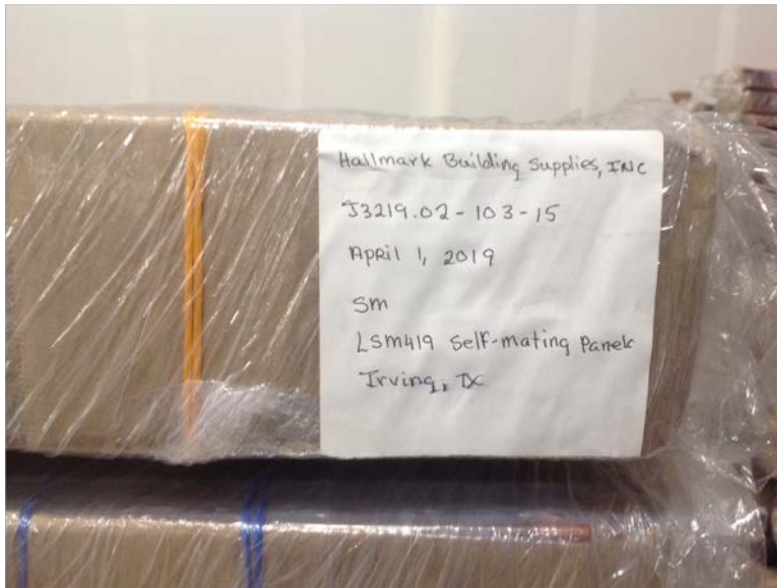


Photo No. 1
Inspector's Initials



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

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SECTION 9 (Continued) PHOTOGRAPHS

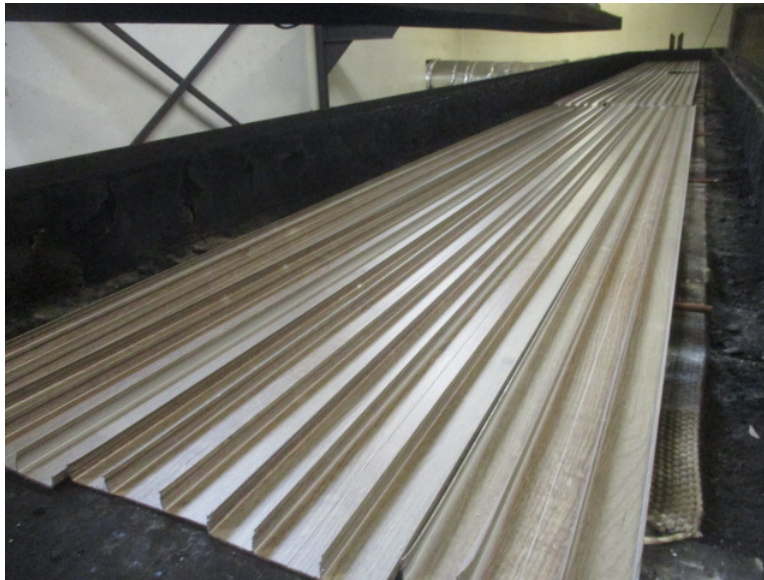


Photo No. 3

Unexposed Surface of the Test Specimen (Pre-test)



Photo No. 4

Unexposed Surface of the Test Specimen (Post-test)

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SECTION 9 (Continued)

PHOTOGRAPHS

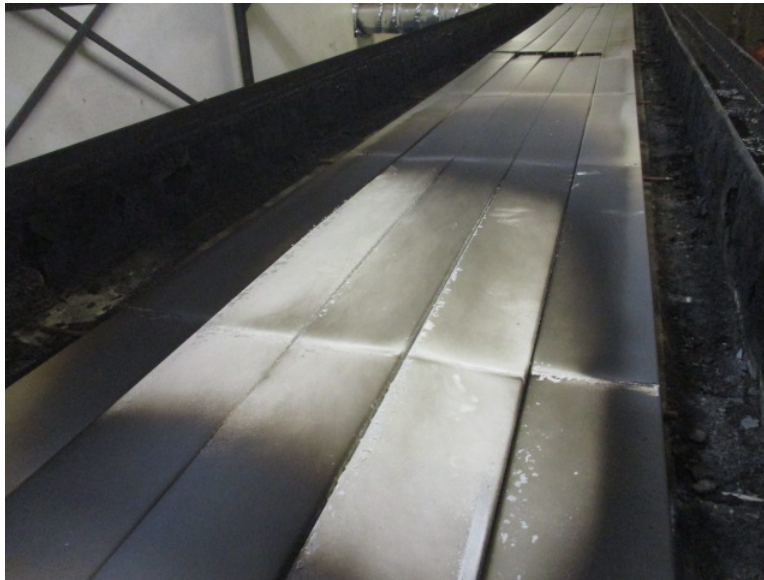


Photo No. 5

Exposed Surface of the Test Specimen (Post-test)

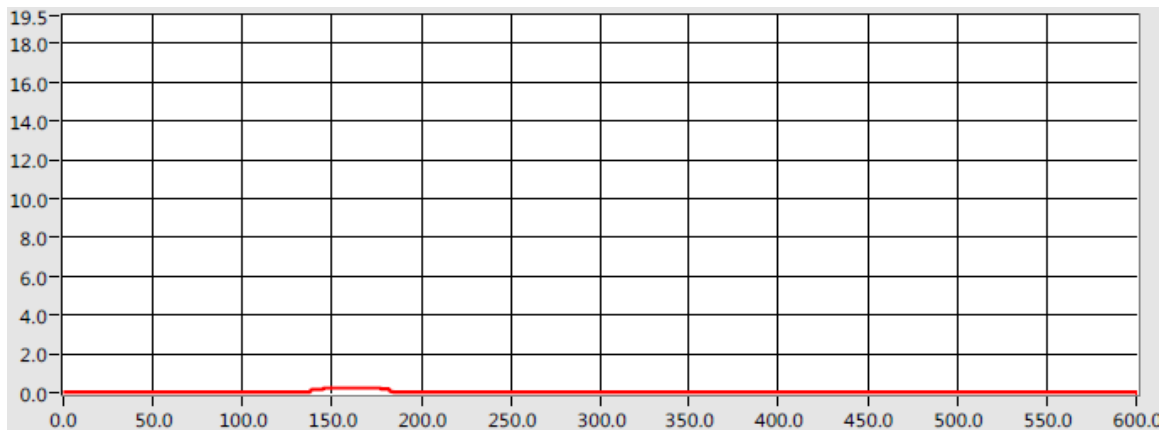
TEST REPORT FOR HALLMARK BUILDING SUPPLIES, INC.

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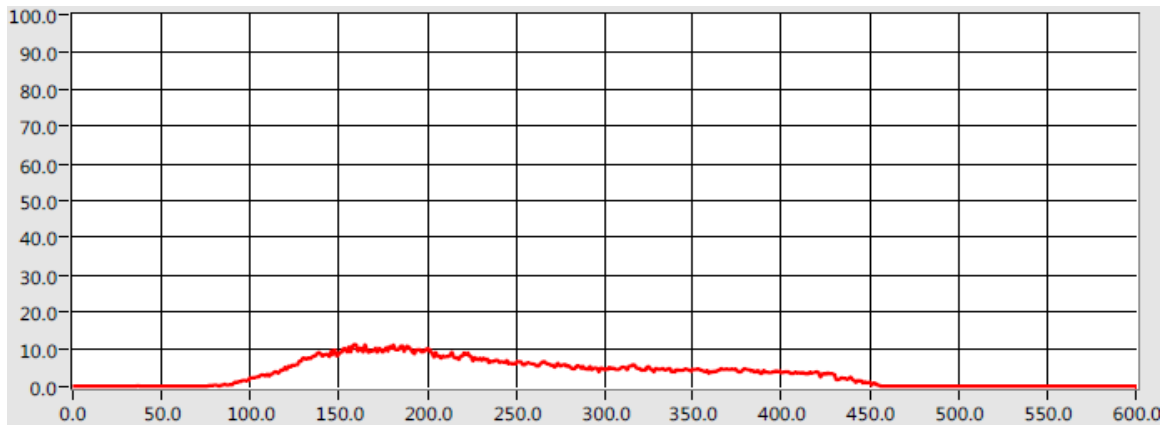
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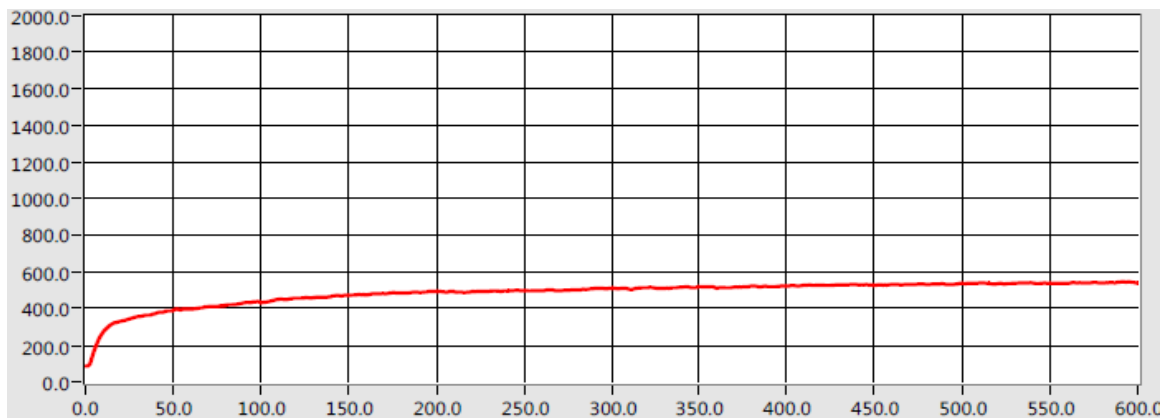
GRAPHS



Graph No. 1 - Flame Spread Distance Versus Time



Graph No. 2 - Light Obscuration Versus Time



Graph No. 3 - Tunnel Air Temperature Versus Time



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SECTION 11

REVISION LOG

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