

SIGMADEK, LTD.

FIRE TEST REPORT

SCOPE OF WORK

ASTM E84 TESTING ON ALUMINUM EXTRUSION DECK BOARD C/W PORCELAIN TILE INSERT

REPORT NUMBER

H5331.01-121-24

TEST DATE

09/13/17

ISSUE DATE

10/03/17

RECORD RETENTION END DATE

09/13/21

PAGES

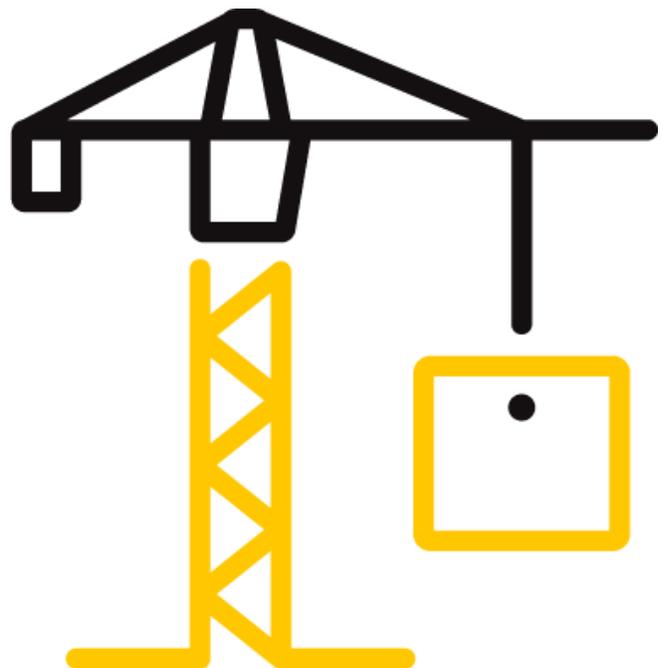
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TEST REPORT FOR SIGMADEK, LTD.

Report No.: H5331.01-121-24

Date: 10/03/17

REPORT ISSUED TO

SigmaDek, Ltd.

PO BOX 47092

Calgary, Alberta T3P 0B9

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by SigmaDek, Ltd., Calgary, Alberta to evaluate the flame spread and smoke developed properties of aluminum extrusion deck board c/w porcelain tile insert. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania. 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 certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

Product Type: Aluminum Extrusion Deck Board C/W Porcelain Tile Insert

Series/Model: N/A

ASTM E84 Test Results

FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
0	5

For INTERTEK B&C:

COMPLETED BY:	Ben Samson	REVIEWED BY:	Ethan Grove
TITLE:	Technician – Fire Testing	TITLE:	Manager – Fire Testing
SIGNATURE:		SIGNATURE:	
DATE:	10/03/17	DATE:	10/03/17

BTS::ddr

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SECTION 3

TEST METHOD

The specimens were evaluated in accordance with the following:

ASTM E84-16, *Standard Test Method for Surface Burning Characteristics of Building Materials*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test samples were provided by the client.

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Ben Samson	Intertek B&C
Scott Gingrich	Intertek B&C

SECTION 6

TEST PROCEDURE

The Steiner Tunnel test apparatus is used to evaluate the surface burning characteristics and smoke development of building materials. The apparatus is considered to be under calibrated conditions when the flame front reaches the end of the tunnel within 5 minutes and 30 seconds (plus or minus 15 seconds) during a red oak test. An initial preheat of the tunnel is performed and the test specimen is installed when the tunnel temperature drops to $105^{\circ}\text{F} \pm 5^{\circ}\text{F}$. When the test is initiated, the 88 KW dual burner and 240 feet per minute air current creates a flame that extends 4.5 feet down the tunnel. The flame progression is tracked from this point to the exhaust end of the tunnel which is 19.5 feet downstream. An observer simultaneously notes any test specimen anomalies such as melting, dripping, sagging, delamination, fall-out, etc. The smoke that is generated during the test is measured by a photometer. The flame spread and smoke developed data are automatically logged and graphed versus time by a data acquisition and computer system. The Flame Spread Index (FSI) and the Smoke Developed Index (SDI) are based on an area under the curve calculation and the red oak flooring calibration data.

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SECTION 7

TEST SPECIMEN DESCRIPTION

MANUFACTURER*	SigmaDek Ltd.
PRODUCT TYPE*	Aluminum Extrusion Deck Board C/W Porcelain Tile Insert
SERIES/MODEL*	N/A
COMPOSITION*	Aluminum, Porcelain
CONDITIONING TIME	72+ hr.
SPECIMEN SIZE	9-1/8 in. wide x 94-1/2 in. long
THICKNESS	1 in.
SPECIMEN SECTIONS	6
TOTAL WEIGHT	38.7 lbs.
COLOR	Gray / White
SIDE TO FLAME*	Porcelain Face
SUPPORT USED*	1/4 in. diameter steel rods spaced every 24 in. on center
MOUNTING METHOD	ASTM E84 Appendix X1.1.2.2
SUBSTRATE USED*	No substrate was utilized
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.

SECTION 8

CODES AND REGULATIONS

The 2015 International Building Code[®] (Chapter 8 Interior Finishes, Section 803 Wall and Ceiling Finishes) and NFPA 5000, (Chapter 10 Interior Wall or Ceiling Finish Testing and Classification) classify materials based on their Flame Spread and Smoke Developed indices. The classification criteria are listed below:

CLASSIFICATION	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

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SECTION 9

TEST RESULTS

TEST RESULTS	
Test Date	09/12/17
Test Operator	Ben Samson
Flame Spread Index (FSI)	0
Smoke Developed Index (SDI)	5
Red Oak Calibration (% * Min)	101.62

TEST DATA	
FSI (unrounded)	0.3
SDI (unrounded)	2.7
FS * Time Area (Ft * Min)	0.5
Smoke Area (% * Min)	2.7
Fuel Area (°F * Min)	4318.5

OBSERVATIONS	
Ignition Time	07:04 (Min:Sec)
Max Flame Front Advance	0.9 Feet
Time to Max Flame Front	09:35 (Min:Sec)
Max Temp At Exposed T/C	517.7°F
Time To Max Temp	09:57 (Min:Sec)
Dripping Observed	None
Flaming On Floor Observed	None
After Flame Top Observed	10:05 (Min:Sec)
After Flame Floor Observed	None
Sagging Observed	None
Delamination Observed	None
Shrinkage Observed	None
Fallout Observed	05:42 (Min:Sec)
Cracking Observed	01:43 (Min:Sec)
Observations After the Test	None

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SECTION 10 PHOTOGRAPHS



Photo No. 1

Exposed Surface of the Test Specimen (Pre-test)

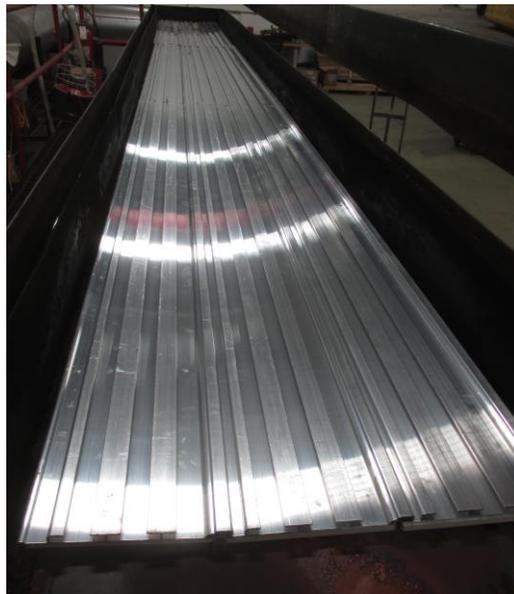


Photo No. 2

Unexposed Surface of the Test Specimen (Pre-test)

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SECTION 10 (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 SIGMADEK, LTD.

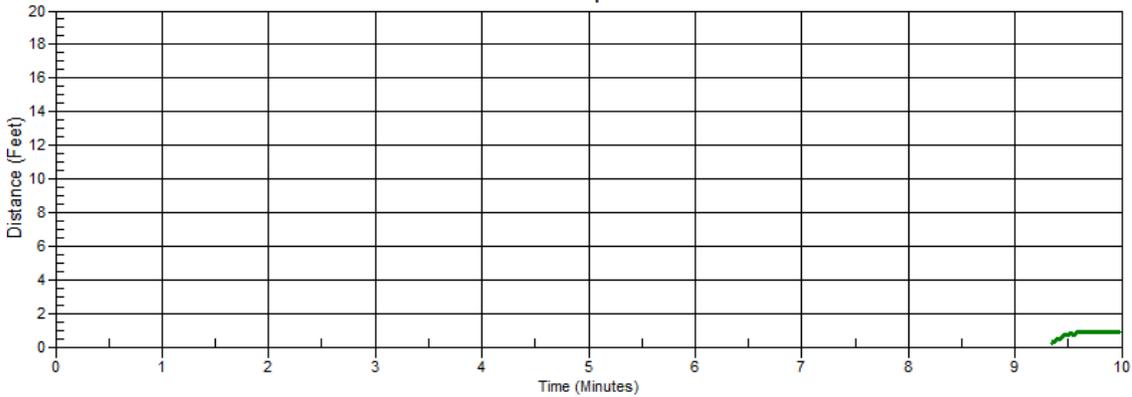
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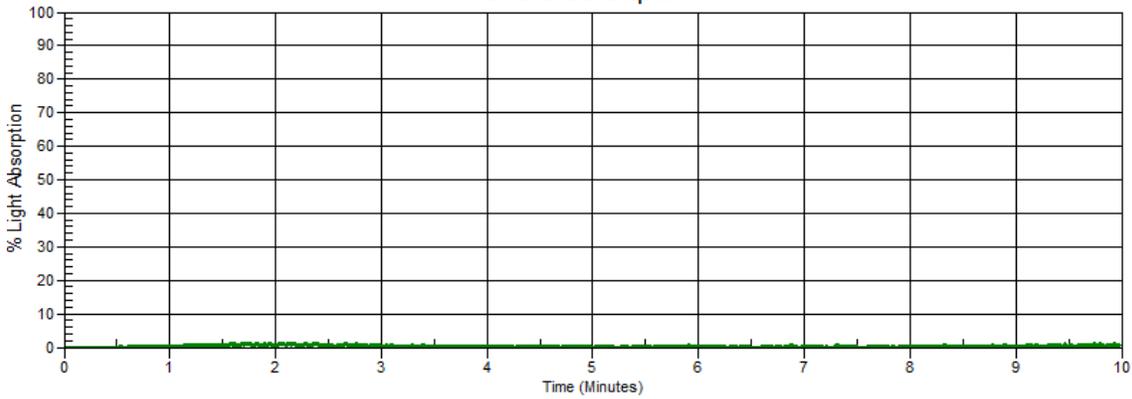
SECTION 11

GRAPHS

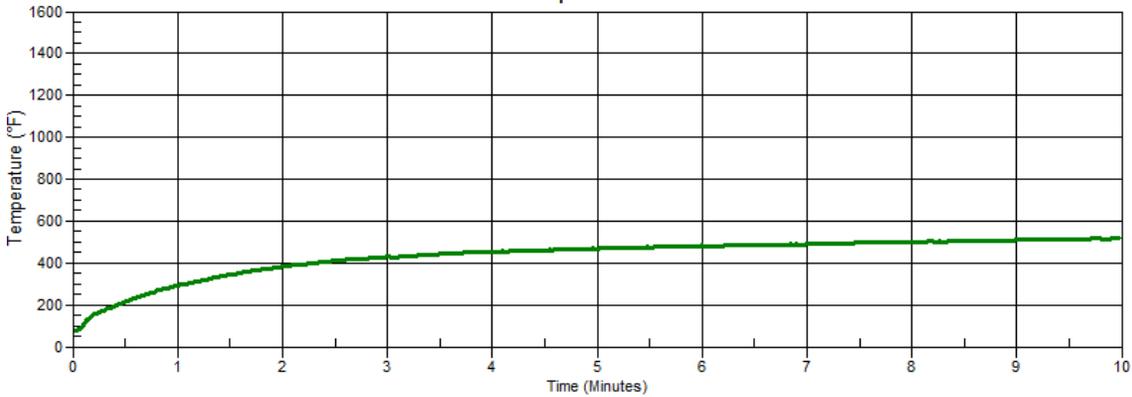
Flame Spread



Smoke Developed



Temperature





Total Quality. Assured.

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www.intertek.com/building

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SECTION 12

REVISION LOG

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