

**CLIENT:** **SMOOTH-ON**  
5600 Lower Macungie Road  
Macungie, PA 18062

<b>Test Report No: TJ4503-Rev.1</b>	<b>Date: February 10, 2017</b>
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**SAMPLE ID:** The client identified the following test material as **“Habitat Cast N Coat”**

**SAMPLING DETAIL:** Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.

**DATE OF RECEIPT:** Samples were received at QAI facilities on January 1, 2017

**TESTING PERIOD:** February 9, 2017

**AUTHORIZATION:** Signed work order 17SP020303 Ed. 2 signed by Rahul Amin

**TEST REQUESTED:** Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-15, "Standard Method of Test for Surface Burning Characteristics of Building Materials". The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

<b>TEST RESULTS:</b>	<b><u>Flame Spread</u></b>	<b><u>Smoke Developed</u></b>
	25	165

**CLASSIFICATION:** The material results in a class “A” rating. Detailed test results are presented in the subsequent pages of this report.

**Prepared By**



Daniel Barnett  
Project Engineer

**Signed for and on behalf of  
QAI Laboratories, Inc.**



J. Brian McDonald  
Operations Manager

**PREPARATION AND CONDITIONING:** The sample was submitted in six 4 foot long concrete board samples measuring 24 inches wide and approximately 0.25 inches thick. The sample material was placed into conditioning at 73°F ( $\pm 5^\circ\text{F}$ ) and 50% ( $\pm 5\%$ ) relative humidity until day of testing.

**E 84 TEST DATA SHEET:**

**MOUNTING METHOD:** The sample was self-supporting with the face side exposed to the burner flames. The samples were butted end to end in the test chamber, with cement board place between the lid and sample.

**CLIENT:** Smooth-On    **DATE:** February 9, 2017

**SAMPLE:** Habitat Cast N Coat

**IGNITION:** 2 minutes, 40 seconds

**FLAME FRONT:** 16 feet maximum

**TIME TO MAXIMUM SPREAD:** 10 minutes, 00 seconds

**TEST DURATION:** 10 minutes, 00 seconds

**SUMMARY: FLAME SPREAD:** 25 (23.2 unrounded)      **SMOKE DEVELOPED:** 165 (164 unrounded)

**OBSERVATIONS:**

The sample began to discolor at 30 seconds. Audible crackling could be heard at 1 minute 20 seconds followed by the surface of the material blistering at 1 minute 30 seconds. At 1 minute 40 seconds, small pieces of the sample began to fall to the tunnel floor. The material sustained ignition at 2 minutes 40 seconds. Large flakes of material began to fall to the tunnel floor at 8 minutes 50 seconds. Afterburn was present on the material and tunnel floor at the end of the test. The flames were extinguished by the technician.

**CALIBRATION DATA:**

Time to Ignition of Last Red Oak (sec):	34
Red Oak Smoke Area (%A*Min):	117.2
Total Fuel Burned (ft <sup>3</sup> )	55.0

**SUMMARY OF ASTM E84 RESULTS:**

Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5. Smoke Density values over 200 are rounded to the nearest figure divisible by 50.

In order to obtain the Flame Spread Classification, the above results should be compared to the following table:

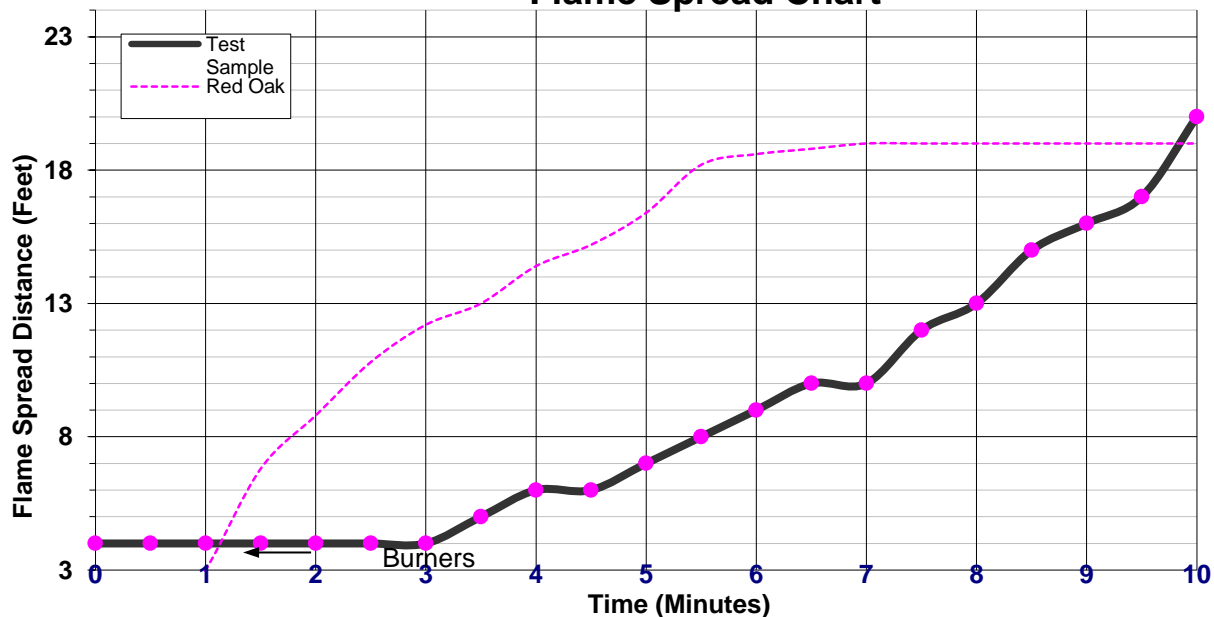
<b><u>NFPA CLASS</u></b>	<b><u>IBC CLASS</u></b>	<b><u>FLAME SPREAD</u></b>	<b><u>SMOKE DEVELOPED</u></b>
A	A	0 through 25	Less than or equal to 450
B	B	26 through 75	Less than or equal to 450
C	C	76 through 200	Less than or equal to 450

**BUILDING CODES CITED:**

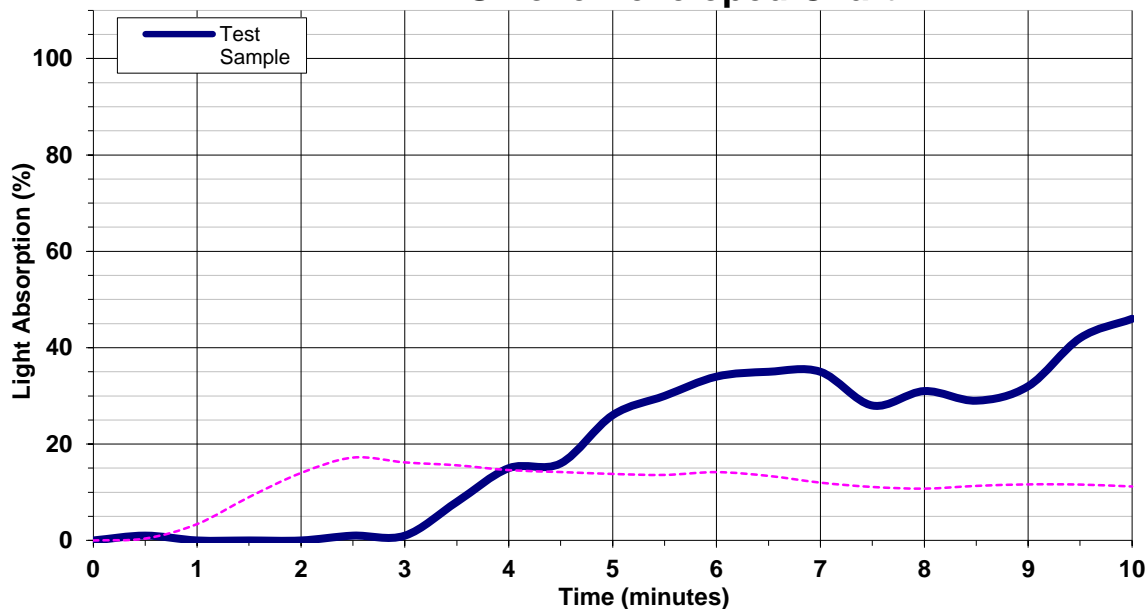
1. National Fire Protection Association, ANSI/NFPA No. 101, "Life Safety Code", 2006 Edition.
2. International Building Code, 2006 Edition, Chapter 8, Interior Finishes, Section 803.

Graphical Data

**Flame Spread Chart**

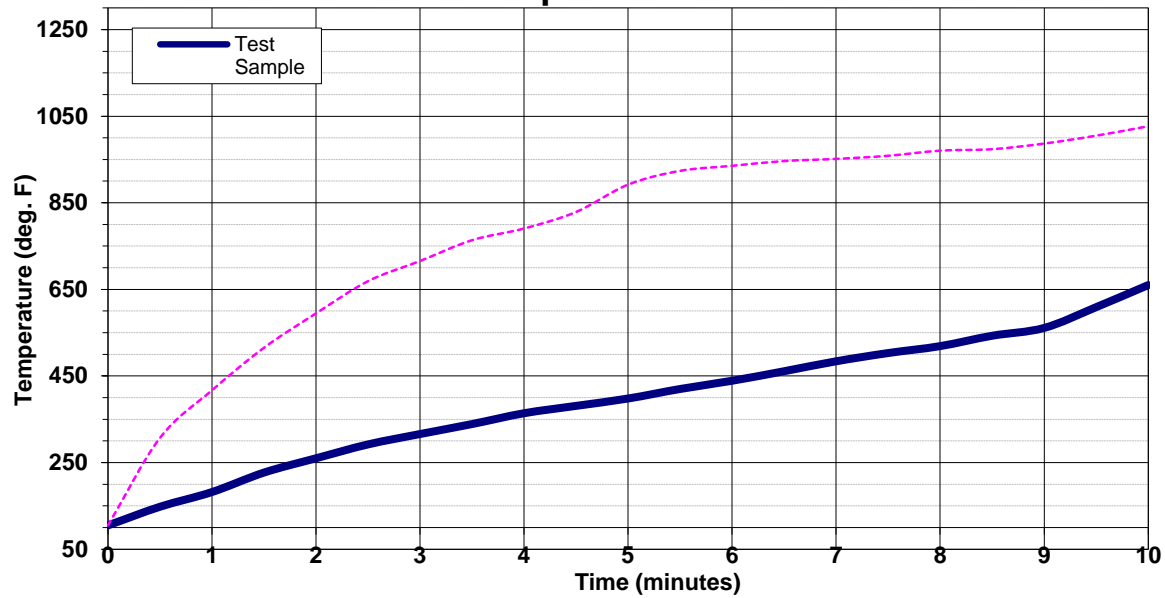


**Smoke Developed Chart**



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### Temperature - Time Curve



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Post Test Images



Revision History

Revision Date: February 10, 2017

In the "Client" section on Page 1, the address was changed to "5600 Lower Macungie Road, Macungie, PA 18062".

The client name on page 2 was corrected to "Smooth-On".

This report TJ4503-Rev.1 supersedes and replaces any previous reports under the name TJ4503.

**\*\*\*END OF TEST REPORT\*\*\***

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