

CLIENT: CRANE COMPOSITES
Attn: Mike Buhr
23525 W. Eames Street
Channahon, IL 60410

Test Report No: TJ1706

Date: November 19, 2013

SAMPLE ID: The Client submitted and identified the following test material as "Glasbord FM 09".

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 October 15, 2013

TESTING PERIOD: November 8, 2013

AUTHORIZATION: Proposal FB050213-1 R1 approved on October 10, 2013

TEST REQUESTED: Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-12, "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.

TEST RESULTS:	<u>Flame Spread</u>	<u>Smoke Developed</u>
	20	170

CLASSIFICATION: The material tested resulted in a Class A. Detailed test results are presented in the subsequent pages of this report

Prepared By

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



Christopher Clark
Fire Test Technician



J. Brian McDonald
Operations Manager



PREPARATION AND CONDITIONING: The sample was submitted in six 4 foot long panels measuring 24 inches wide and approximately 1/8 of an inch thick. The sample material was placed into conditioning at 73°F (±5°F) and 50% (±5%) relative humidity until day of testing.

E 84 TEST DATA SHEET:

MOUNTING METHOD: The sample was self-supporting and placed along the ledges of the tunnel during testing. No additional mounting method was used

CLIENT: Crane Composites **DATE:** November 8, 2013

SAMPLE: Glasbord FM 09

IGNITION: 0 minutes, 35 seconds

FLAME FRONT: 8 feet maximum

TIME TO MAXIMUM SPREAD: 9 minutes, 00 seconds

TEST DURATION: 10 minutes, 00 seconds

SUMMARY: FLAME SPREAD: 20 (20.0 unrounded) **SMOKE DEVELOPED:** 170 (168 unrounded)

OBSERVATIONS:

Sample initially started to discolor and warp prior to ignition. Soon following ignition sample displayed signs of charring, flaking, and shrinking away from flame. Steady flame spread to window 8 and stayed for duration of test. Minimal afterflame was noted at test completion.

CALIBRATION DATA:

Time to Ignition of Last Red Oak (sec):	57
Red Oak Smoke Area (%A * Min):	111
Total Fuel Burned (ft ³)	59.68



SUMMARY OF ASTM E84 RESULTS:

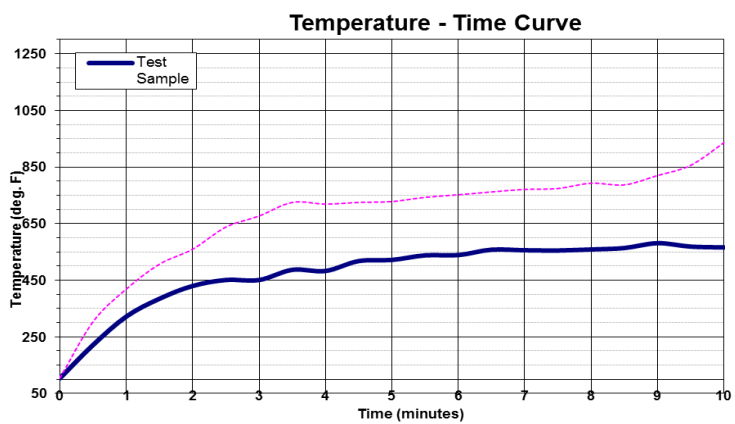
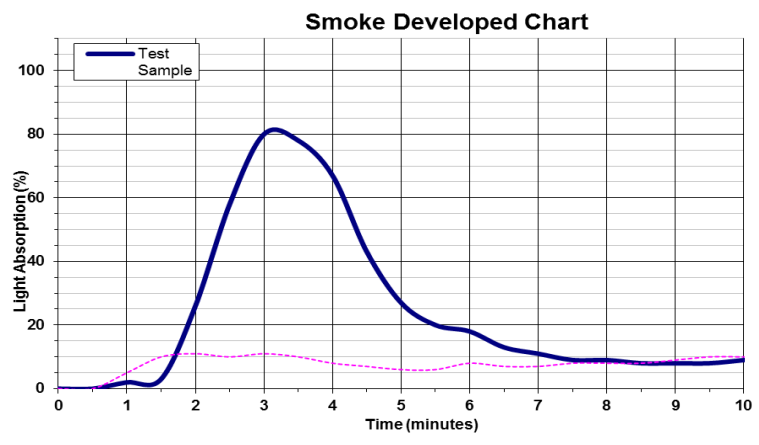
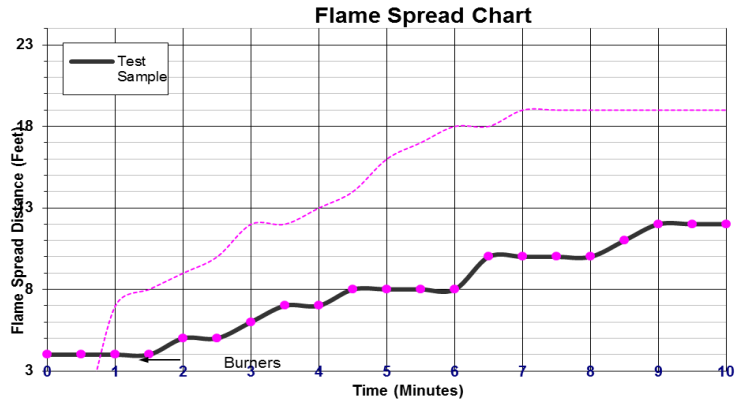
Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5. Smoke Density values over 200 are rounded to the nearest figure divisible by 50.

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

<u>NFPA CLASS</u>	<u>IBC CLASS</u>	<u>FLAME SPREAD</u>	<u>SMOKE DEVELOPED</u>
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.



END OF REPORT

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