

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

Test Report No: TJ1847-2 R	Date: March 15, 2016
-----------------------------------	-----------------------------

SAMPLE ID: The Client submitted and identified the following test material as “**Glasbord FX 06**”
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 December 30, 2013

TESTING PERIOD: January 15, 2014

AUTHORIZATION: Proposal FB-2013-103001

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	40

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

REVISION: Client requested that the thickness be changed from mm to inches.

Prepared By

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


Jeff Foster
Fire Test Technician


J. Brian McDonald
Operations Manager



PREPARATION AND CONDITIONING: The sample was submitted in six 4 foot long panels cut to measure 24 1/2 inches wide and approximately .060" 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 supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at 2' intervals across the width of the test chamber.

CLIENT: Crane Composites Inc. **DATE:** March 15, 2016

SAMPLE: Glasbord FX 06

IGNITION: 0 minutes, 34 seconds

FLAME FRONT: 5 feet maximum

TIME TO MAXIMUM SPREAD: 3 minute, 00 seconds

TEST DURATION: 10 minutes, 00 seconds

SUMMARY: FLAME SPREAD: 20 (20.0 unrounded) **SMOKE DEVELOPED:** 38 (40 unrounded)

OBSERVATIONS:

Sustained ignition was at 34 seconds. Incipient phase showed minimal growth, with uneventful first minute. Charring was visible at 1 minute 45 seconds. There was a spike and growth/spread around the 3 to 5 minute mark, with heavy smoke at this time. Decay phase was observed at 6 minutes into the test. Test completed at 10 minutes with no after burn.

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:

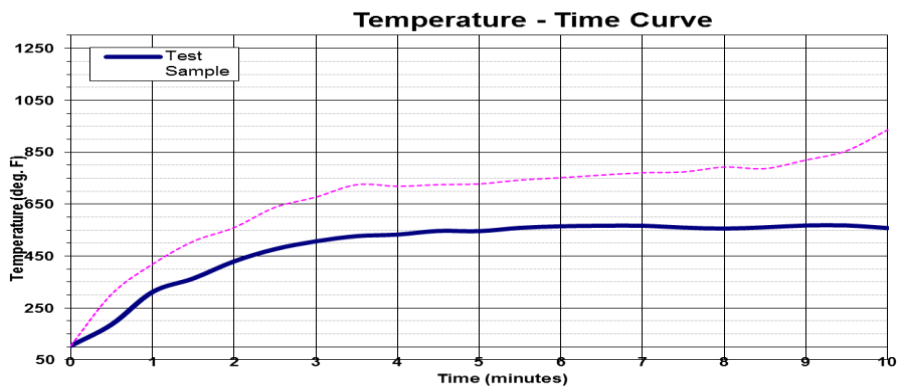
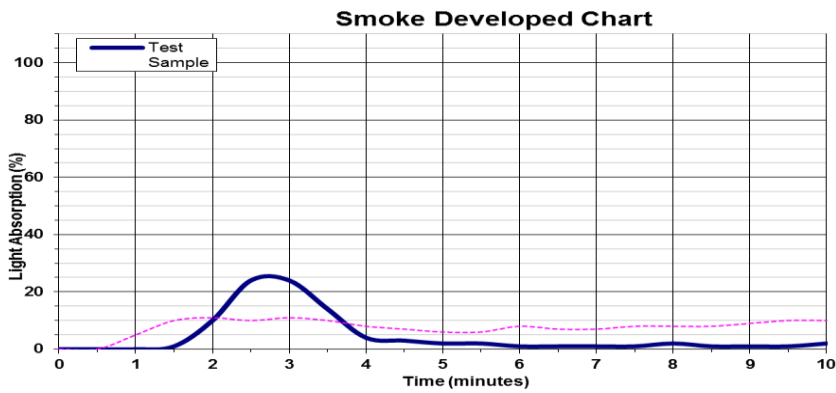
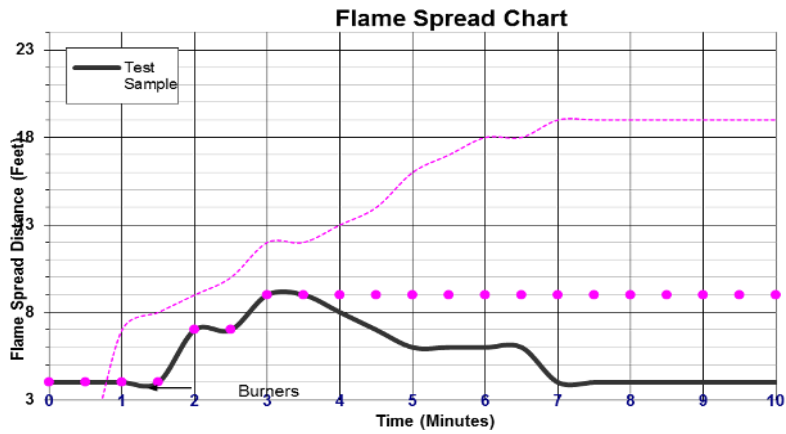
Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5. Smoke Density values over 200 are rounded to the nearest figure divisible by 50.

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

THIS REPORT IS THE CONFIDENTIAL PROPERTY OF THE CLIENT ADDRESSED. THE REPORT MAY ONLY BE REPRODUCED IN FULL. PUBLICATION OF EXTRACTS FROM THIS REPORT IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM QAI. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED FOR THE INDIVIDUAL PROJECT FILE REFERENCED. THE RESULTS OF THIS REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.