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CAN/ULC-S102 Surface Burning Characteristics of "Glasbord PCI 09" FRP Panel

A Report To:	**Crane Composites, Inc.** 23525 West Eames Channahon, Illinois 60410 USA
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Attention:	Mike Buhr
Submitted by:	Exova Warringtonfire North America
Report No.	13-002-338 4 Pages
Date:	June 6, 2013

ACCREDITATION To ISO/IEC 17025 for a defined Scope of Testing by the International Accreditation Service

SPECIFICATIONS OF ORDER

Determine the Flame Spread and Smoke Developed Values based upon a single test conducted in accordance with CAN/ULC-S102-10, as per Crane Composites, Inc. Purchase Order No. 87654 and Exova Warringtonfire North America Quotation No. 13-002-190,603 accepted May 14, 2013.

SAMPLE IDENTIFICATION (Exova sample identification number 13-002-S0338)

Fiberglass reinforced plastic panel material, identified as:
"Glasbord PCI 09"

TEST PROCEDURE

The method, designated as CAN/ULC-S102-10, "Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical samples produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, the test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

SAMPLE PREPARATION

The test sample consisted of 6 sections of material, each approximately 533 mm in width by 1219 mm in length by 2 mm in thickness. The sections were butted together to form the requisite specimen length. Prior to testing, the sample was conditioned to constant mass at a temperature of 23 ± 3°C and a relative humidity of 50 ± 5%. During testing the sample was supported across its width by 6 mm steel rods spaced nominally at 610 mm intervals and the printed surface was exposed to the test flame.

The testing was performed on: 2013-06-05

SUMMARY OF TEST PROCEDURE

The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 7315 mm long, 305 mm above the floor. The lid is then lowered into place.

SUMMARY OF TEST PROCEDURE (continued)

Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted. Calculations ignore all flame front recessions and the Flame Spread Value (FSV) is determined by calculating the total area under the curve for the test sample. If the total area under the curve (AT) is less than or equal to 29.7 m·min, FSV = 1.85·AT; if greater, FSV = 1640/(59.4-AT).

The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively. The Smoke Developed Value (SDV) is determined by dividing the total area under the obscuration curve by that of red oak and multiplying by 100.

TEST RESULTS

SAMPLE	Flame Spread Value (FSV)	Smoke Developed Value (SDV)
"Glasbord PCI 09"	58	204

Observations of Burning Characteristics

- The sample ignited approximately 32 seconds after exposure to the test flame.
- The flame front propagated to a maximum distance of 4 metres at approximately 227 seconds.

Note: This is an electronic copy of the report. Signatures are on file with the original report.

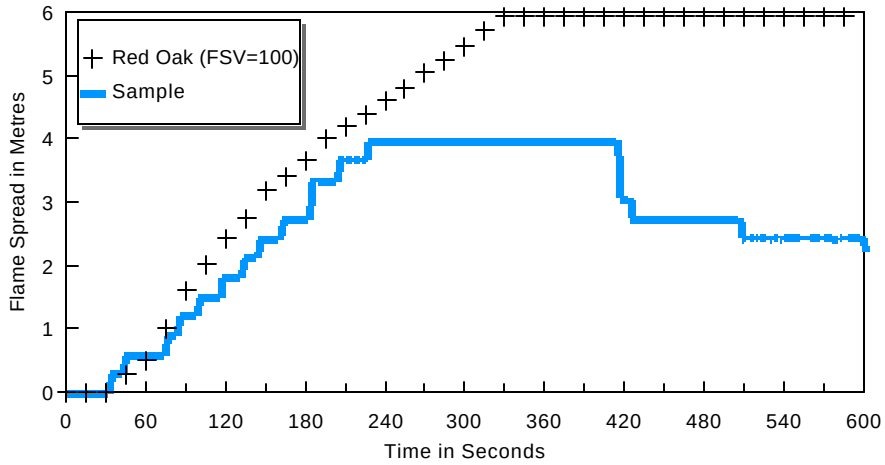
Robert A. Carleton,
Technologist.

Ian Smith,
Technical Manager.

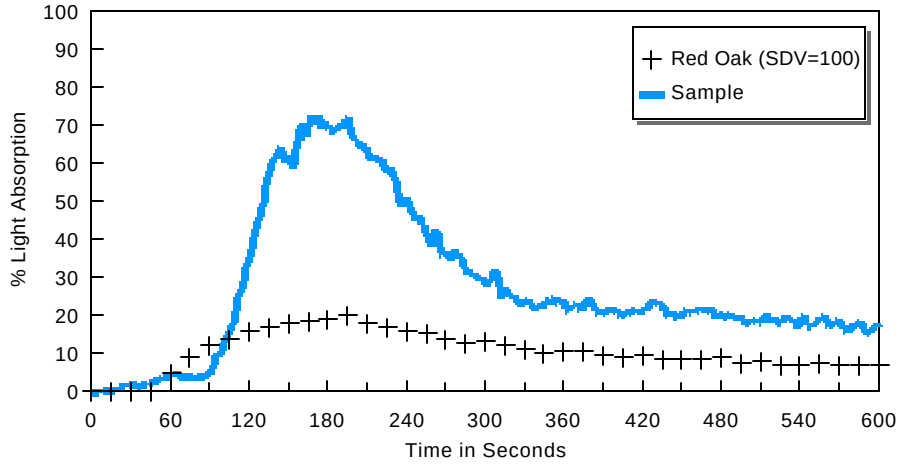
Note: This report and service are covered under Exova Canada Inc. Standard Terms and Conditions of Contract which may be found on the Exova website (www.exova.com), or by calling 1-866-263-9268.

Sample:"Glasbord PCI 09"

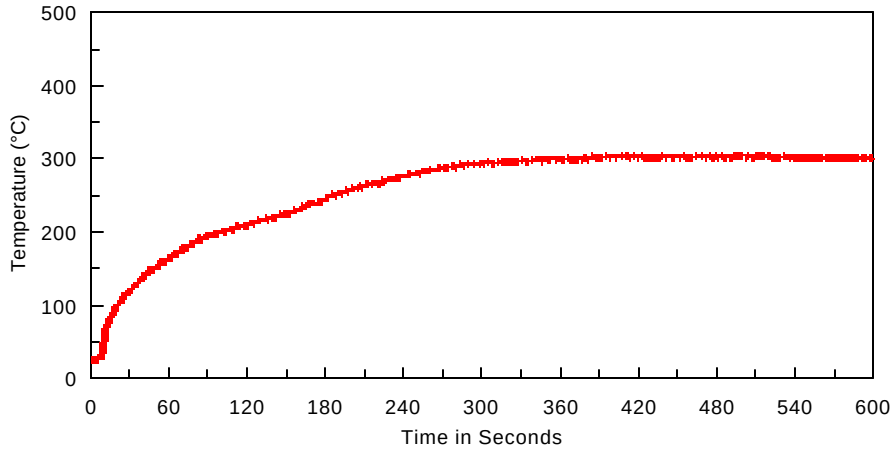
FLAME SPREAD



SMOKE DEVELOPED



TEMPERATURE



FSV	SDV	Max. Temp. (°C)
58	204	307