

**CAN/ULC-S102 Surface Burning Characteristics
of 0.100" Ceiling Panel**

A Report To: **Sequentia, Inc.**
450 N Highway 368
Grand Junction. TN 38039
USA

Phone: 731-764-2153
Fax: 731-764-6397

Attention: Michael Ridge

Submitted by: Fire Testing Services

Report No. 03-02-915
6 Pages

Date: February 12, 2004

ACCREDITATION Standards Council of Canada, Registration #1.

REGISTRATION ISO 9002-1994, registered by QMI, Registration #001109.

SPECIFICATIONS OF ORDER

Determine the Flame Spread and Smoke Developed Classifications based upon triplicate testing conducted in conformance with CAN/ULC-S102-03, as your request of January 30, 2004.

SAMPLE IDENTIFICATION

Fibreglass panels identified as: "S21150-32-7 0.100" Canadian Class "C" Ceiling Panel".

(BMTC sample identification number 03-02-S0915)

TEST PROCEDURE

The method, designated as CAN/ULC-S102-03, "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 are expressed in terms of Flame Spread Classification (FSC) and Smoke Developed (SD).

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 three test samples, each consisting of six panels 1219 mm long and 533 mm wide, were conditioned to constant mass at a temperature of 23°C and a relative humidity of 50% prior to testing. During testing the samples were supported with 6 mm diameter steel rods spaced at two foot intervals.

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 15 seconds. Flame spread distance versus time is plotted ignoring any flame front recessions. If the area under the curve (A) is less than or equal to 29.7 m-min, $FSC1 = 1.85 \cdot A$; if greater, $FSC1 = 1640 / (59.4 - A)$. Smoke Developed is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, arbitrarily established as 0 and 100, respectively.

TEST RESULTS

<u>SAMPLE</u>		<u>FSC1</u>	<u>SD</u>
"0.100 " Ceiling Panels"	Test #1	100	235
	Test #2	130	220
	Test #3	<u>115</u>	<u>250</u>
	Average:	115	235

Observations of Burning Characteristics

- In all three tests, the sample began to ignite and propagate flame after approximately 30 seconds exposure to the test flame.
- The flame fronts all advanced to a maximum distance of 6 meters (end point) at times of 4.75 minutes in Test #1, 3.75 minutes in Test #2, and 4.5 minutes in Test #3.
- Maximum amounts of Smoke Developed was recorded during the initial minutes of the test coinciding with the flame advances (see accompanying charts).



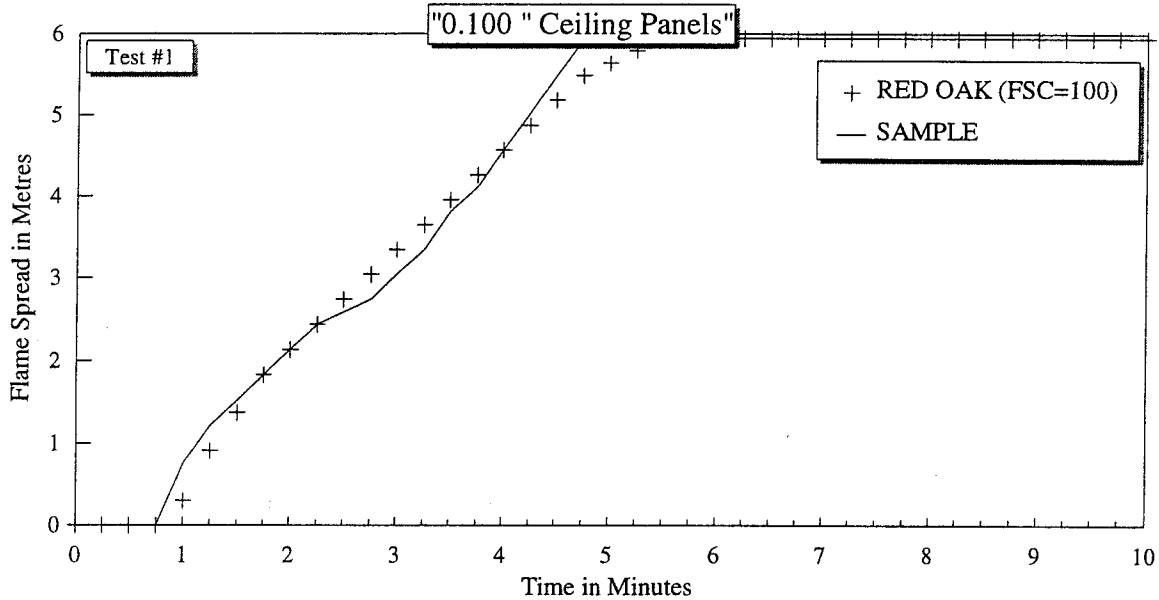
Robert A. Carleton
Fire Testing Services.



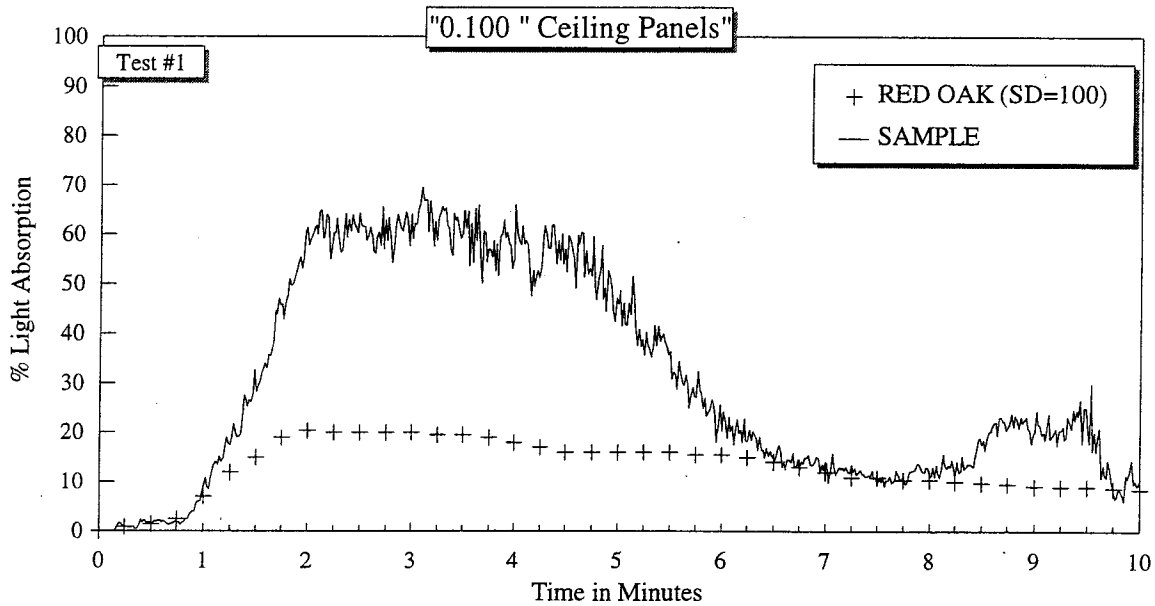
Richard J. Lederle
Fire Testing Services.

Note: This report consists of a cover page, plus 5 additional pages that comprises the report "body". It should be considered incomplete if all pages are not present.

FLAME SPREAD CLASSIFICATION



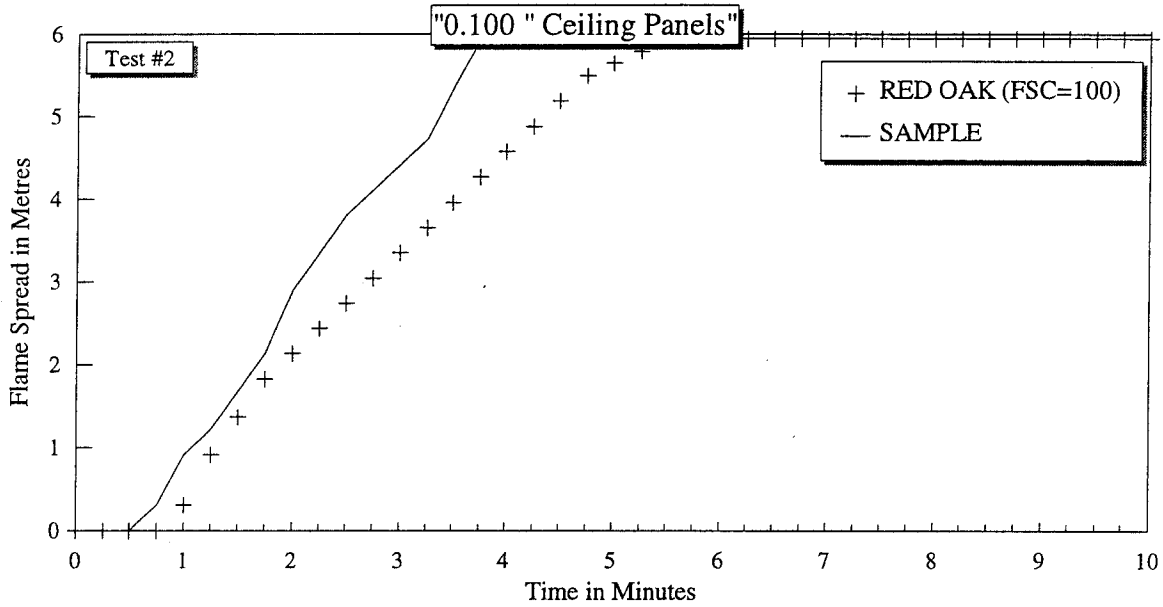
SMOKE DEVELOPED



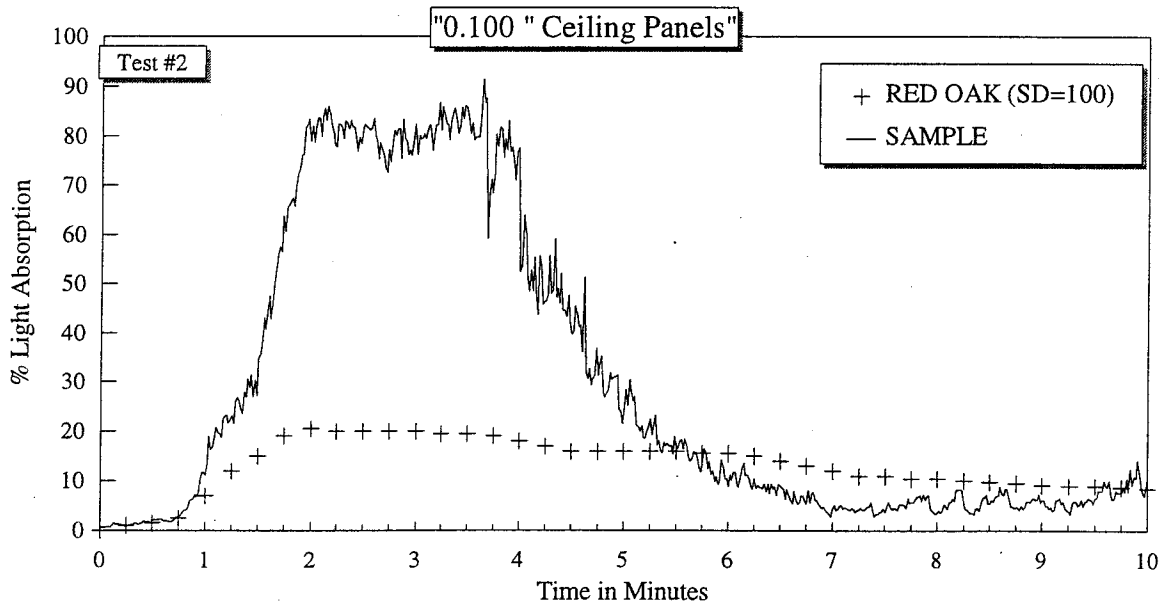
FSC1
100

SD
235

FLAME SPREAD CLASSIFICATION



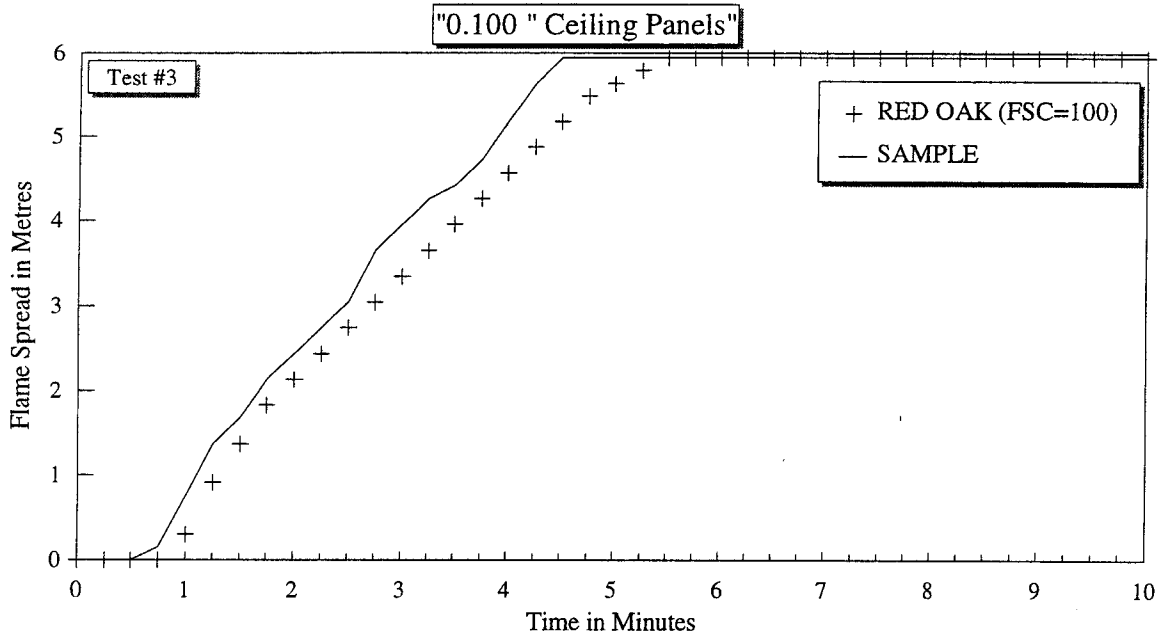
SMOKE DEVELOPED



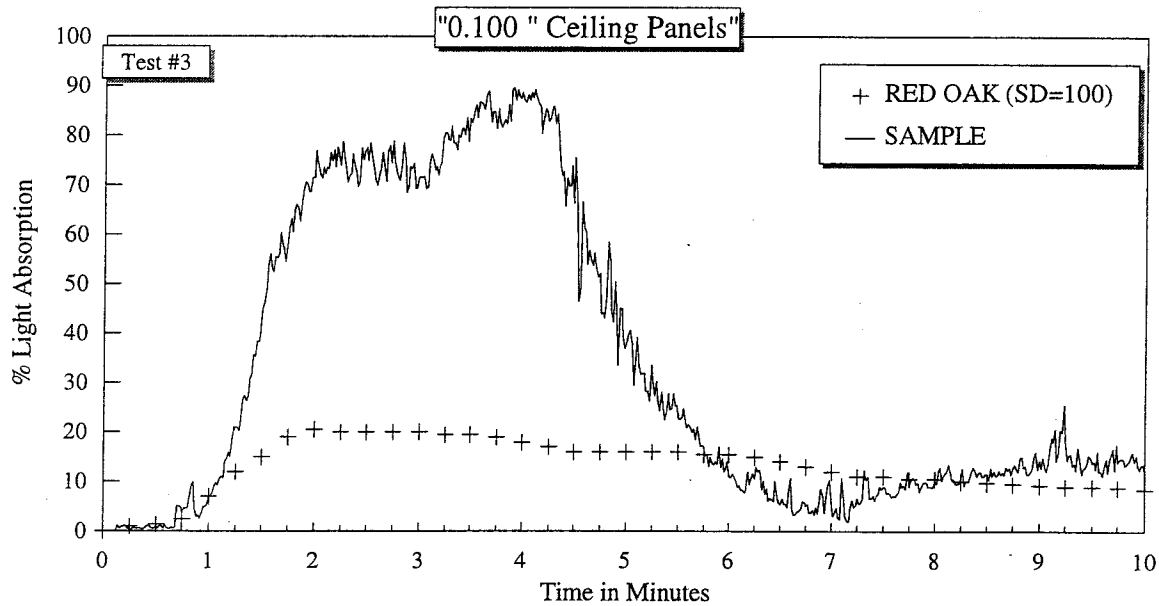
ESC1
130

SD
220

FLAME SPREAD CLASSIFICATION



SMOKE DEVELOPED



ESC1
115

SD
250