

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 Indices based upon a single test conducted in conformance with ASTM E 84-03b, as per your Purchase Order # 11773 dated November 18, 2003.

SAMPLE IDENTIFICATION (BMTC sample identification number 03-02-S0819-6)

The acoustic panel submitted for testing was identified as follows:

- Panel Type: Veneered Gypsum Wood (Manufacturer Gustafs)
- Panel Construction: 1/2" (12 mm) thick gypsum wood core, with stress skin on back surface
- Panel Finish: Beech Veneer finished with UV tempered clear varnish
- Adhesive: Low formaldehyde content adhesive

TEST PROCEDURE

The method, designated as ASTM E 84-03b, "Standard Method of Test for Surface Burning Characteristics of Building Materials", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of flame spread index (FSI) 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 sample, which consisted of six sections 21 inches wide and 4 feet long, was conditioned to constant mass at a temperature of 73°F and a relative humidity of 50% prior to testing.

SUMMARY OF TEST PROCEDURE

The tunnel is preheated to 150°F, as measured by the floor-embedded thermocouple located 23.25 ft. downstream of the burner ports, and allowed to cool to 105°F, as measured by the floor-embedded thermocouple located 13 ft. 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 24 ft. long, 12 inches 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 97.5 min-ft, $FSI = 0.515 \cdot A$; if greater, $FSI = 4900 / (195 - A)$. 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>
"Veneered Gypsum Wood" (Non-perforated)	10	10

Observations of Burning Characteristics

- The sample began to ignite after approximately 45 seconds exposure to the test flame.
- The flame front propagated to a maximum distance of 2.5 feet at 5.0 minutes and then receded slightly during the remainder of the 10 minute test period.
- A slight increase in smoke production was recorded coinciding with the flaming activity and the flame advance (see accompanying graphs).

Authorities having jurisdiction usually refer to these categories:

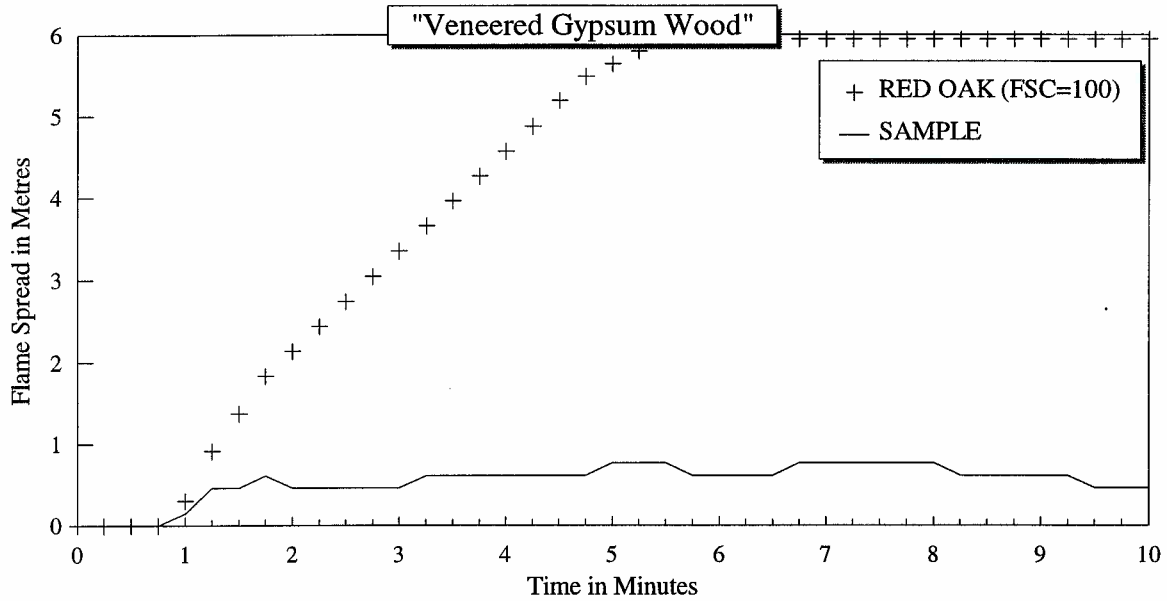
	<u>Flame-Spread Index</u>	<u>Smoke Development</u>
Class 1 or A	0 - 25	450 Maximum
Class 2 or B	26 - 75	450 Maximum
Class 3 or C	76 - 200	450 Maximum


Robert A. Carleton
Fire Testing Services.

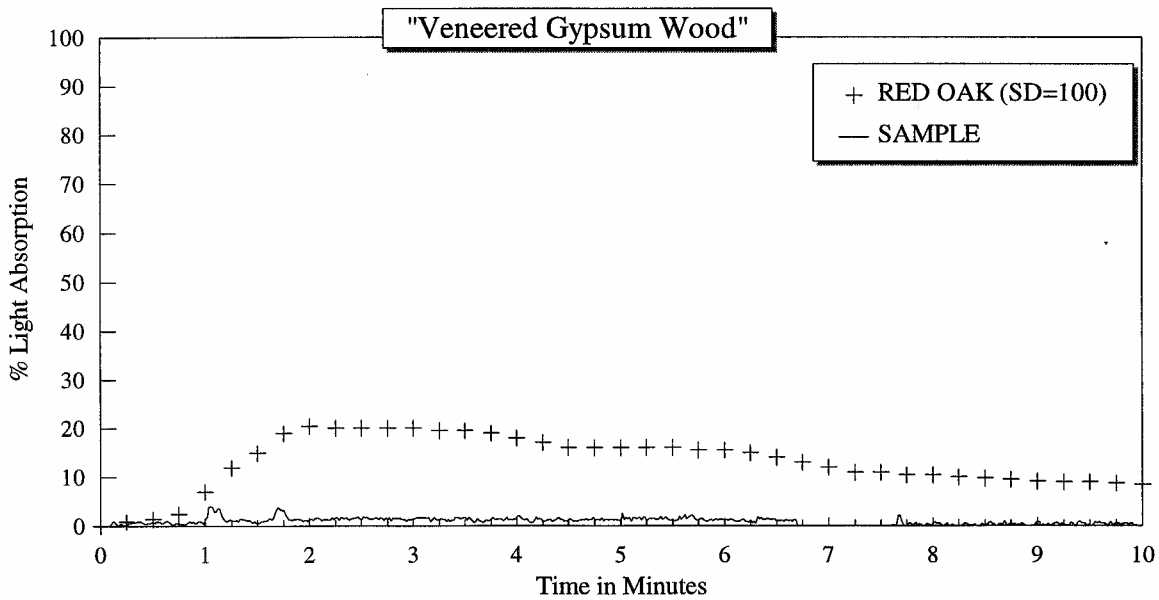

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Note: This report consists of a cover page, plus 3 additional pages that comprises the report "body". It should be considered incomplete if all pages are not present.

FLAME SPREAD CLASSIFICATION



SMOKE DEVELOPED



FSC1

10

SD

10