

**ELECTRONIC DRAFT COPY**

**CAN/ULC-S102 Surface Burning Characteristics  
of "Primacoustic" Ceiling Tile**

A Report To: **Radial Engineering Ltd.**  
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Submitted by: Fire Testing

Report No. 08-002-854(A)  
4 Pages

Date: December 8, 2008

**REGISTRATION** ISO 9001:2000, registered by QMI, Registration #001109.

**SPECIFICATIONS OF ORDER**

Determine the Flame Spread and Smoke Developed Values based upon a single test conducted in accordance with CAN/ULC-S102-07, as per our Quotation No. 08-002-7511 accepted October 23, 2008.

**SAMPLE IDENTIFICATION** (Bodycote sample identification number 08-002-S0854)

Ceiling tile material identified as: "Brand: Primacoustic; Model: Thunder Tile".

**TEST PROCEDURE**

The method, designated as CAN/ULC-S102-07, "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 sample, which consisted of 12 sections of material, each approximately 610 mm by 533 mm by 25 mm in thickness was conditioned at a temperature of  $23 \pm 3^{\circ}\text{C}$  and a relative humidity of  $50 \pm 5\%$  prior to testing. During testing the sample was self-supporting.

The testing was performed on: 2008-12-08

**SUMMARY OF TEST PROCEDURE**

The tunnel is preheated to  $85^{\circ}\text{C}$ , as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to  $40^{\circ}\text{C}$ , 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, FSV = 1.85·A; if greater, FSV = 1640/(59.4-A). 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, arbitrarily established as 0 and 100, respectively.

**TEST RESULTS**

<u>SAMPLE</u>	<u>FSV</u>	<u>SDV</u>
"Brand: Primacoustic; Model: Thunder Tile"	2	10

**Observations of Burning Characteristics**

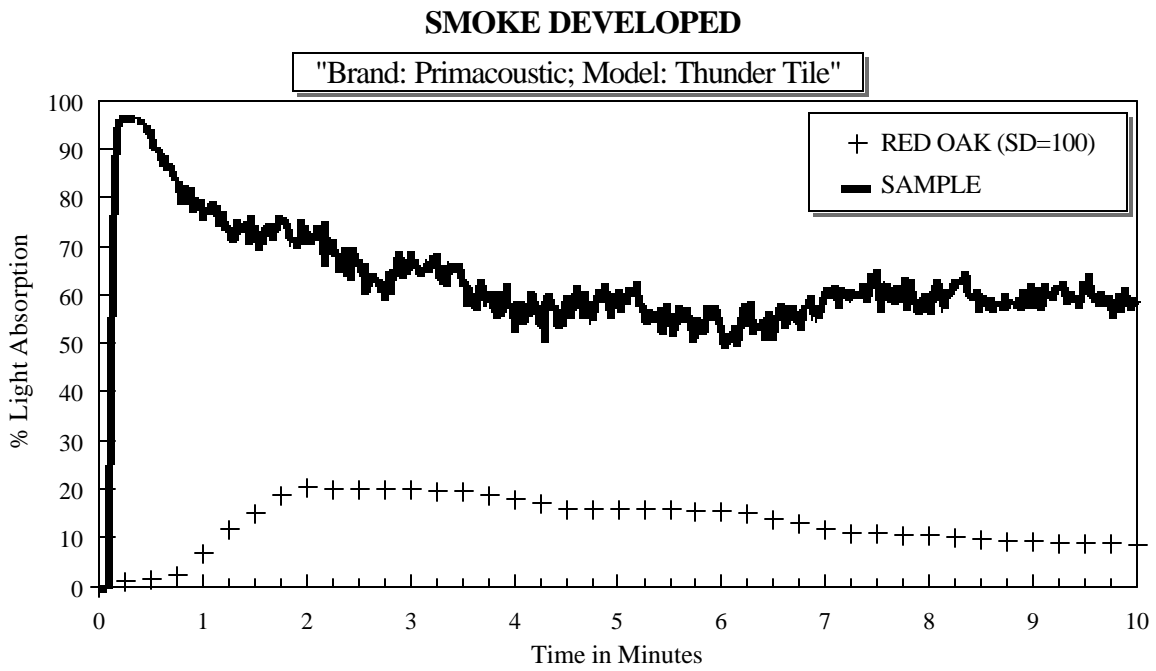
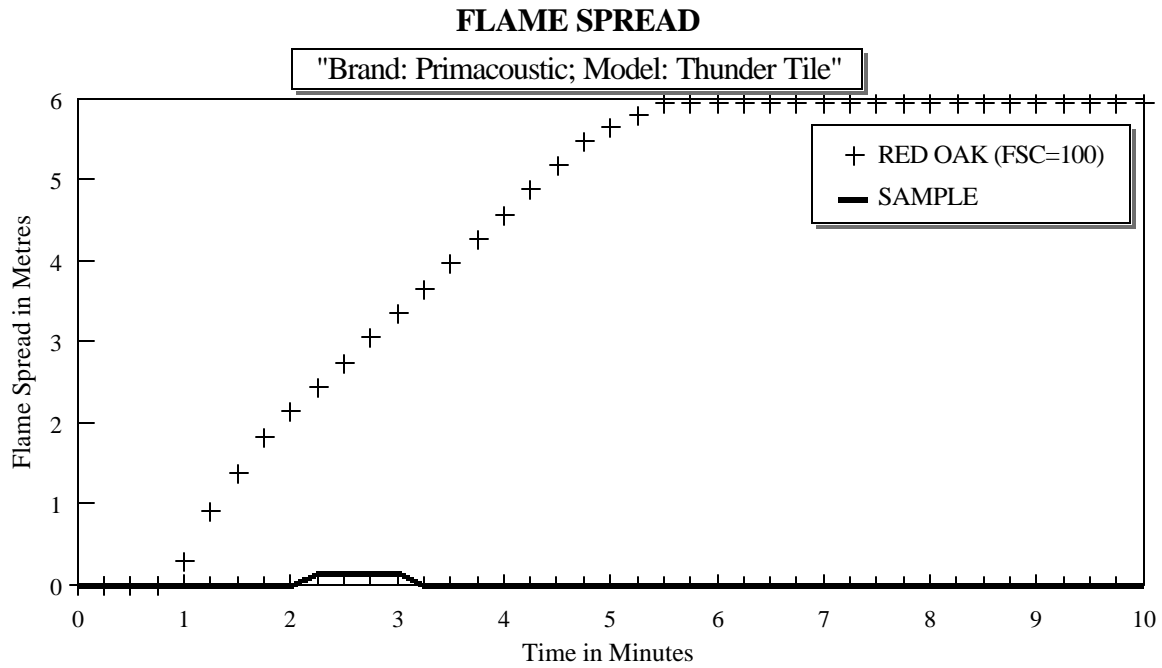
- The sample began to ignite approximately 1 minute after exposure to the test flame.
- The flame front propagated to a maximum distance of 0.15 metres at approximately 2.25 minutes and receded to the baseline by approximately 3.25 minutes.
- Smoke Developed was recorded during the test (see accompanying chart).

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

Robert A. Carleton,  
Fire Testing.

Ian Smith,  
Fire Testing.

*Note: This report consists of 4 pages, including the cover page, that comprise the report "body". It should be considered incomplete if all pages are not present.*



**FSV**  
2

**SDV**  
10