

**CAN/ULC-S102.2 Surface Burning Characteristics  
of "LM 31" Stretch Ceiling Fabric**

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Attention: **Pascal Gicquel**  
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Submitted by: **Fire Testing Services**

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3 Pages

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**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 a single test conducted in accordance with CAN/ULC-S102.2, as per your letter of March 26, 2001 and our quotation accepted February 13, 2001

## **SAMPLE IDENTIFICATION**

Stretch ceiling fabric identified as: LM 31 - Marble Finish.

(Bodycote Ortech sample identification number 01-02-S0206-2)

## **TEST PROCEDURE**

The method, designated as CAN/ULC-S102.2-M88, "Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials", 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 sample was conditioned to constant mass at a temperature of 23°C and a relative humidity of 50% prior to testing.

## **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 floor of the tunnel so as to form a continuous surface and then the lid is lowered.

**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>
LM 31 - Marble Finish	427	65

**Observations of Burning Characteristics**

- The sample began to melt, shrink and ignite immediately upon exposure to the flame.
- The flame front propagated to a distance of 6 metres (end point) during the initial 60 seconds of the test. The flame front then receded to the baseline for the remainder of the test period.
- The flame advance was accompanied by a rapid increase in smoke developed. Maximum amounts of smoke were recorded coinciding with the total flaming involvement of the sample at the 1 minute mark of the test. Smoke production then decreased as burning activity subsided (see accompanying charts).



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