

**ASTM E 84 Surface Burning Characteristics  
of "Flamant" Wallcover**

A Report To: **Arte NV**  
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Attention: Liene Sourbron

Submitted by: Fire Testing

Report No. 09-002-186(A)  
4 Pages

Date: March 25, 2009

## **Bodycote Testing Group**

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Page 2 of 4

For: *Arte NV*

Report No. 09-002-186(A)

**ACCREDITATION** Standards Council of Canada, Registration #1.

### **SPECIFICATIONS OF ORDER**

Determine the Flame Spread and Smoke Developed Indices based upon a single test conducted in accordance with ASTM E 84-08a, as per our Quotation No. 09-002-1599 RV1 dated February 27, 2009.

**SAMPLE IDENTIFICATION** (Bodycote sample identification number 09-002-S0186-1)

Wallcover material identified as "Flamant".

### **TEST PROCEDURE**

The method, designated as ASTM E 84-08a, "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 consisted of 3 sections of material, each approximately 21 inches in width by 96 inches in length, adhered to a 6 mm thick, fiberglass reinforced cement board substrate with Shurstik 111 adhesive. Prior to testing, the sample was conditioned at a temperature of  $73 \pm 5^\circ\text{F}$  and a relative humidity of  $50 \pm 5\%$ .

The testing was performed on: 2009-03-19

### **SUMMARY OF TEST PROCEDURE**

The tunnel is preheated to  $150^\circ\text{F}$ , as measured by the floor-embedded thermocouple located 23.25 feet downstream of the burner ports, and allowed to cool to  $105^\circ\text{F}$ , as measured by the floor-embedded thermocouple located 13 feet 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 feet 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. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (A) is less than or equal to 29.7 m<sup>2</sup>·min, curve (A) is less than or equal to 97.5 min·ft, FSI = 0.515·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>FSI</u>	<u>SD</u>
"Flamant"	10	20


**Observations of Burning Characteristics**

- The sample began to ignite immediately upon exposure to the test flame.
- The flame front propagated to a maximum distance of 1.5 feet at approximately 1.5 minutes and receded to the baseline by approximately 4 minutes.
- Smoke Developed was recorded during the test (see accompanying chart).

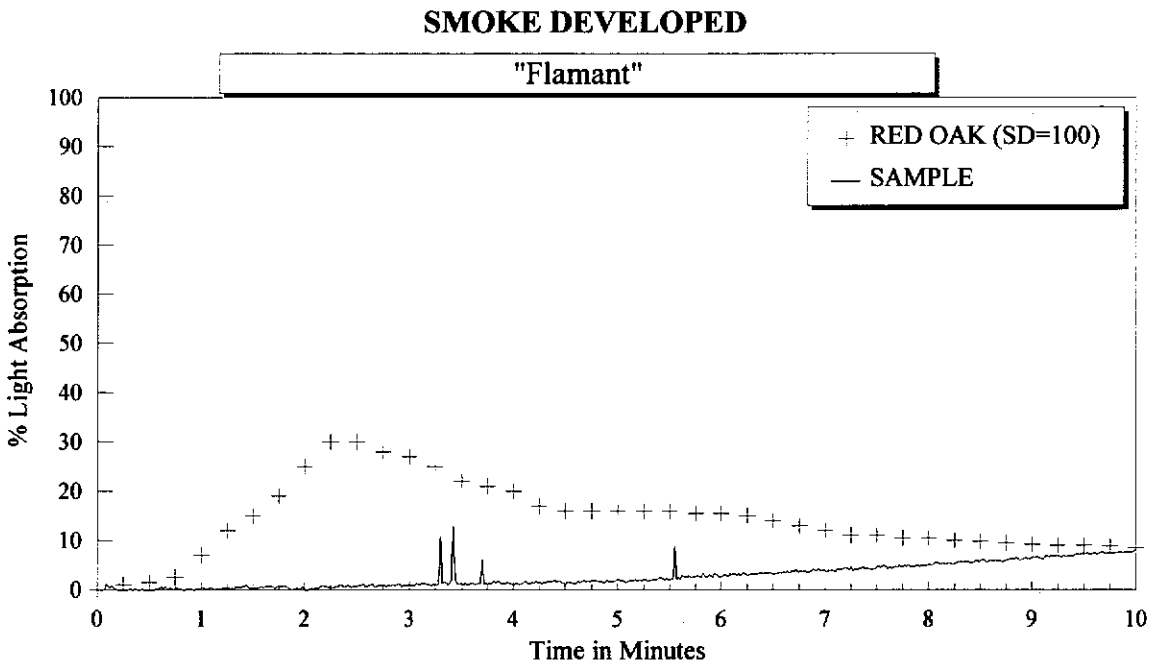
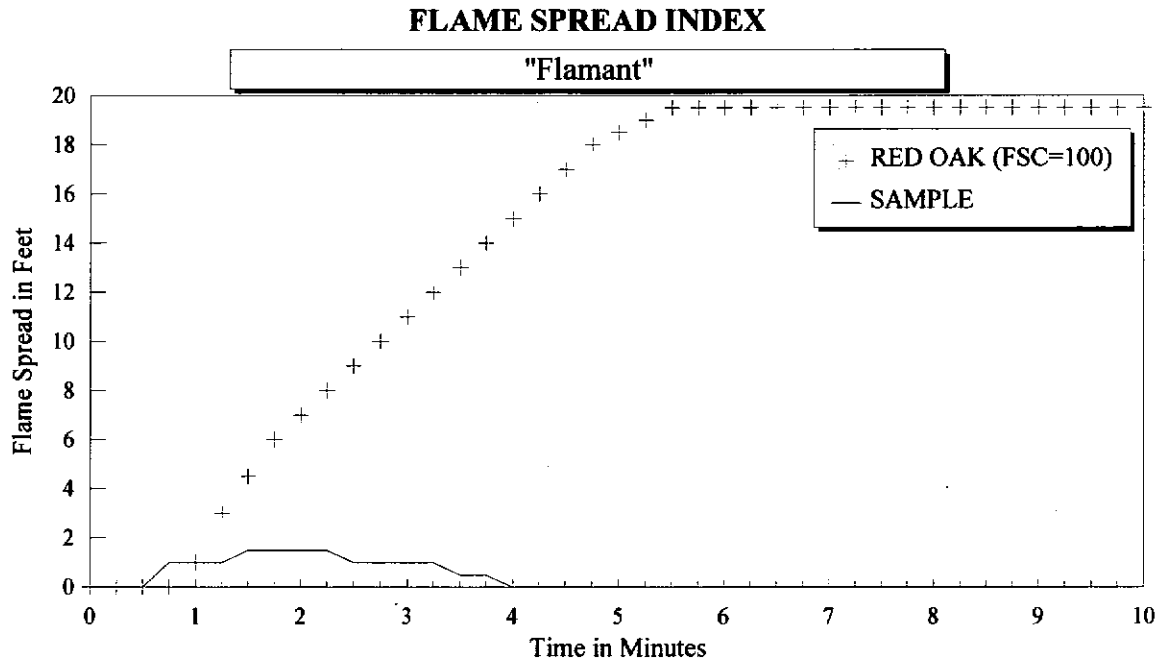
**Authorities having jurisdiction usually refer to these categories:**

	<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.

  
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.*



**FSI**  
10

**SD**  
20