



Test Report No.: 24-002-172

ASTM E84 Testing of "Aluminum Fluted Panels"

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For: Nortem

approximately 12 inches (305 mm) above the floor. Three 96 inch (2438 mm) sections of 0.25 inch (6 mm) cement board are then placed on the back side of the specimen and the lid is then lowered into place. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted. Calculations ignore all flame front recessions and Flame Spread Index (FSI) is determined by calculating the total area under the curve for the test sample. If the area under the curve (A) is less than or equal to 97.5 min-ft, then  $FSI = 0.515 \cdot A$ ; if greater,  $FSI = 4900 / (195 - A)$ . FSI is then rounded to the nearest multiple of 5.

Smoke Developed Index (SDI) is determined by dividing the total area under the obscuration curve by that established for liquid heptane, and multiplying by 100. SDI is then rounded to the nearest multiple of 5 if less than 200. SDI values over 200 are rounded to the nearest multiple of 50.

## 7.0 TEST RESULTS

### SAMPLE: "Aluminum Fluted Panels"

Approx. Time to Ignition (s)	Maximum Flame Front Distance	Time to Maximum Flame Front (s)	Maximum Temperature (° F)	Flame Spread Index (FSI)	Smoke Developed Index (SDI)
-	(ft.): 0.0 (m): 0.00	0	530	0	10

### 7.1 Observations of Burning Characteristics

The material did not ignite. Discoloration was observed in the area of direct test burner flame impingement. Material that fell to the floor of the apparatus also ignited (at approximately 428 seconds).

## 8.0 INTERPRETATION OF RESULTS

Industry documents such as the International Building Code (IBC), NFPA 101 Life Safety Code, etc. refer to ASTM E84 (UL 723, NFPA 255) test results using the following material classification categories:

	Flame-Spread Index (FSI)	Smoke Developed Index (SDI)
Class 1 or Class A	0 - 25	450 Maximum
Class 2 or Class B	26 - 75	450 Maximum
Class 3 or Class C	76 - 200	450 Maximum
Tested Material Results Classification (if applicable):		<b>Class 1 or Class A</b>



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