

Class A Fire Rating Certificate · United States

ASTM E84-05

molo soft collection

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Standard Test Method for Surface Burning Characteristics of Building Materials

molobrown PaperStone® products have achieved a Class A fire rating testing under the North American standard ASTM E84-05.

ASTM E84, also known as the Standard Test Method for Surface Burning Characteristics of Building Materials, is a fire testing standard used to assess how materials react to fire. It measures two main factors: the Flame Spread Index (FSI), which indicates how quickly flames travel across the surface, and the Smoke Developed Index (SDI), which quantifies the amount of smoke generated.

According to ASTM, the purpose of this test method is to determine the relative burning behavior of the material by observing the flame spread along the specimen. Flame Spread Index (FSI) and Smoke Development Index (SDI) are reported for a given sample. However, there is not necessarily a relationship between these two measurements. FSI is the measurement for the speed at which flames progress across the surface of the sample, while SDI measures the amount of smoke a sample emits as it burns. Code officials, designers, and architects use the FSI and SDI results to determine if the product meets applicable building codes requirements based on the results of this test. Most commonly, results are correlated as shown in the chart below for interior finishes (Reference Chapter 6 of the International Building Code).

ASTM E84-05 test classifications are subdivided as follows:

Class A:

Flame-Spread Index (FSI) - 0-25

Smoke Development Index (SDI) - 450 Maximum

Class B:

Flame-Spread Index (FSI) - 26-75

Smoke Development Index (SDI) - 450 Maximum

Class C:

Flame-Spread Index (FSI) - 76-200

Smoke Development Index (SDI) - 450 Maximum

<https://www.intertek.com/building/standards/astm-e84/>

All products should always be kept away from any open flame or heat source to avoid possible damage.

INTERTEK TESTING SERVICES NA, INC.

ASTM E84 DATASHEETS

Client: Paneltech International, LLC
Date: 7/11/2006 4:46 P.M.
Test Number: 4
Project Number: 3099454SAT-001
Operator: EH/TA

Specimen ID:
"PaperStone™". The specimen was self-supporting.

TEST RESULTS:

FLAME SPREAD INDEX: 20
SMOKE DEVELOPED INDEX: 110

SPECIMEN DATA

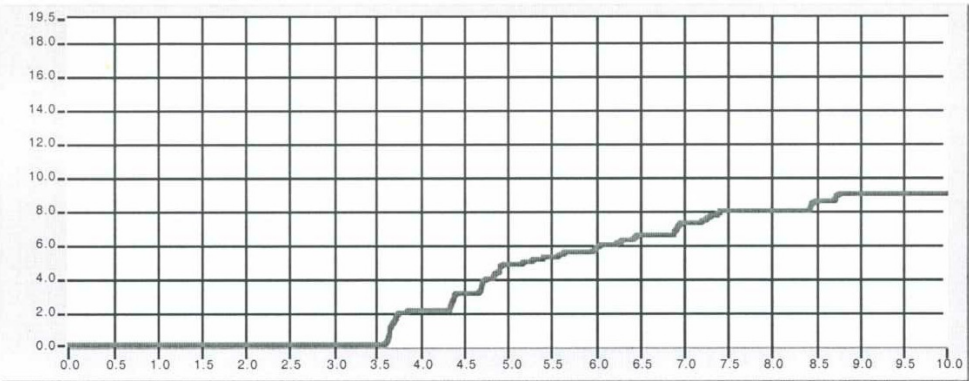
Time to Ignition	=	218 (sec)
Time to Max FS	=	529 (sec)
Maximum FS	=	9.0 (feet)
Time to 980 °F	=	Never Reached (sec)
Max Temp	=	678 (°F)
Time to Max Temp	=	600 (sec)
Total Fuel Burned	=	50.81 (cubic feet)
FS*Time Area	=	40.5 (ft*min)
Smoke Area	=	69.2 (%A*min)
Fuel Area	=	5600.6(°F*min)
Fuel Contributed Value	=	13
Unrounded F.S.I.	=	20.9

CALIBRATION DATA...

Time to Ignition of Last Red Oak	=	00:44 (min:sec)
Red Oak Smoke Area	=	62.50 (%A*min)
Red Oak Fuel Area	=	8972 (°F*min)
Glass Fiber Board Fuel Area	=	5065 (°F*min)

Project No: 3099454SAT-001

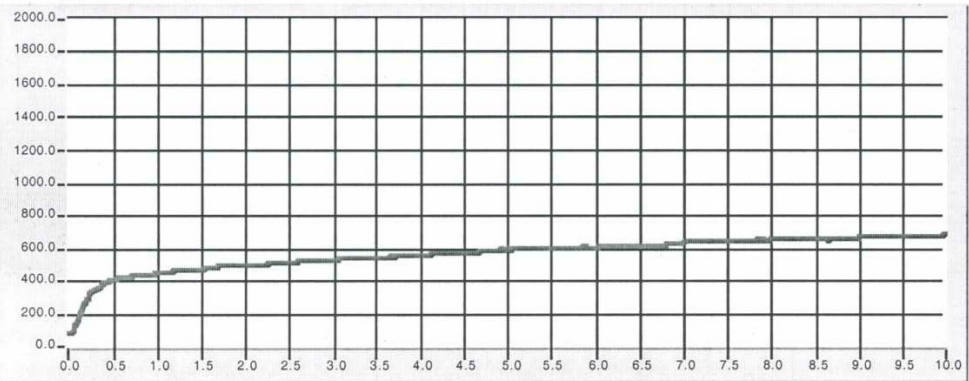
FLAME SPREAD (ft)



Smoke (%A)



Temperature (°F)



Time (min)