eSCAPE

Flame Spread Index (FSI) and Smoke Development Index (SDI)

ASTM E84

V. SAMPLE DETAILS

Name	Polyester fiber acoustic panel
Color / Density	Black / About 156 kg/m^3
Size of sections	600mmx1200mmx12.0mm and 600mm x120mmx12.0mm

Exposed face:

The front face

MOUNTING METHODS:

The 20-gage, 2-in. (51-mm) hexagonal galvanized steel netting should span the width of the tunnel, then the specimen shall be placed on the netting

The specimen consisted of 6 pieces of 600mm wide×1200mm long×12.0mm thickness and 1 piece of 600mm wide×120mm long and all sections jointed end-to-end.

TEST RESULTS

FSI	SDI
5	170

RATING:

The National Fire Protection Association Life Safety Code 101, Chapter 10, Section 10.2.3 “Interior Wall and Ceiling Finish Classification”, has a means of classifying materials with respect to Flame Spread and Smoke Developed when tested in accordance with NFPA 255, ASTM E84, UL 723 “Method of Test of Surface Burning Characteristics of Building Materials”.

International Building Code, Chapter 8, Interior Finishes, Section 803 “Wall and Ceiling Finishes”, was classified in accordance with ASTM E 84 or UL 723. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke-developed indexes.

The classifications are as follows:

	Class A	Class B	Class C
Flame Spread Index	0-25	26-75	76-200
Smoke-developed Index	0-450	0-450	0-450

Since the tested sample received a Flame Spread Index 5 and a Smoke-developed Index 170, it would meet the requirement of Class A interior Wall & Ceiling Finish Category.

OBSERVATIONS

Time to ignition (sec)	72
Time to Max. FS (sec)	281
Maximum FS (feet)	1

GRAPHICAL RESULTS:

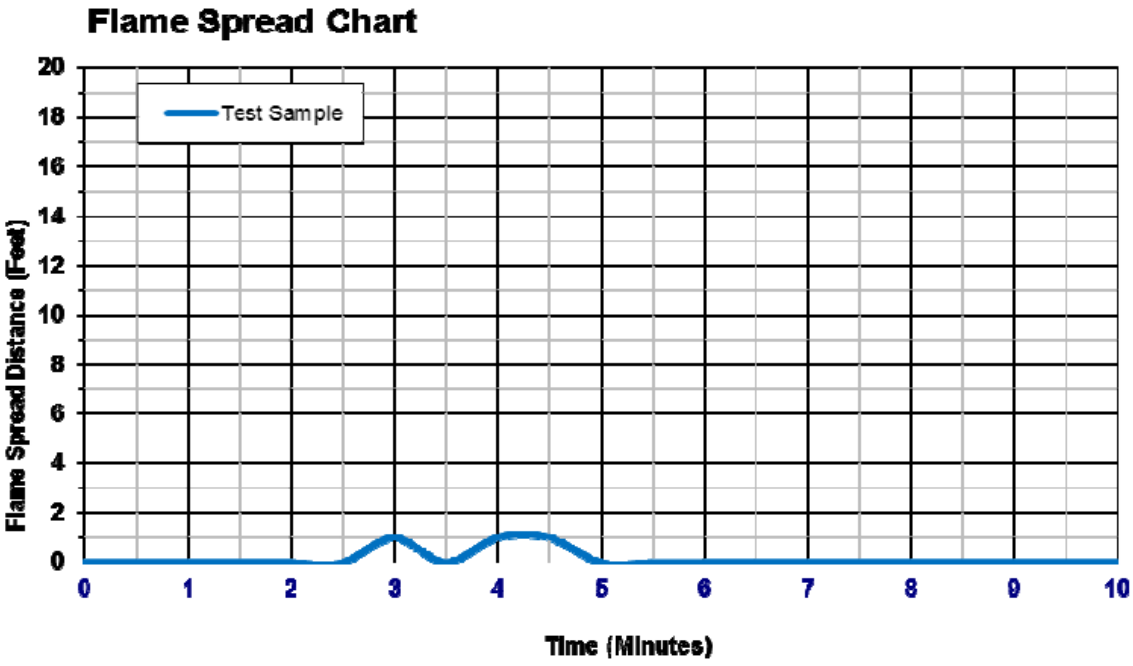

Figure 1 Flame Spread Chart

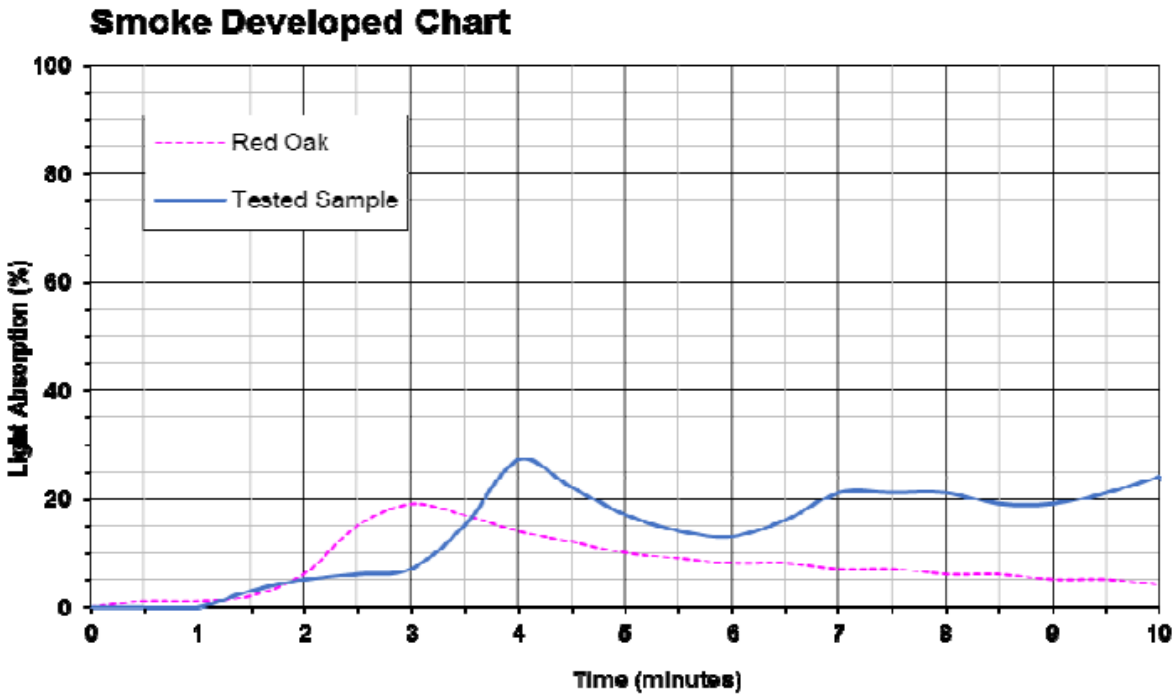

Figure 2 Smoke Developed Chart