

ASTM E84

The ASTM E84 is a tunnel test for the “surface burning characteristics of building materials.

The ASTM E84 is a tunnel test for the “surface burning characteristics of building materials as measured by flame spread and smoke density developed. The test chamber is approximately 2’ wide x 1’ high x 25 ‘ long, with a flame source at one end. The sample is mounted on the ceiling of the chamber .A flame is delivered up ward against the face of the surface for 10 minutes. the maximum flame spread ia measured. The smoke is directed to the end of the tunnel where it passes through an optical measuring device. A material is said to have a 25/50 rating if it has a flame spread of 25 and a smoke developed of 50.

To be considered:

1)Class A Materials can be used in public facilities of 300 people or more. And is suitable for use in any residential or commercial building in America.The material must have:

- a. Flame spread: 0-25
- B. Smoke Developed: 0-450

1)Class B The materials must have

- a. Flame spread: 26-75
- B. Smoke Developed: 0-450

1)Class C The materials must have

- a. Flame spread: 26-20
- B. Smoke Developed: 0-450

FACTORY MUTUAL RESEARCH CORPORATION ASTM E-84 TEST FILE: ST055D

TEST IDENTIFICATION

DATE: 02/24/93

SAMPLE NO: BSC-25

J.I NUMBER; 0X2Q0.AM

LIBRARY CATALOG UMBER:

RUN NUMBER: 1

4820

personnel: oper at or: m.d
projec t engineer: t.m shestnu t

obse rv er: f.j.c

clien t inform ation

obse rv er: f.j.c

All Noise Control, 2731
Vista Park way
Suite # D-6 WPB,
Florida 33411
fl 561-964-9360
f ax 561-964-9359

con ta ct salman sheikh

tes t speciman

thickness:	1"
denist y:	lb/cut/ft
DAYS CONDITIONED	7
EXPOSED SURFACE:	quilted acoustical blanket
METHOD OF SUPPORT:	L Aid ON LEDGE WITH
RODS	COLOR: ALUMINIUM
QUILTED ACOUSTICAL BLANKET	LENGTH 1 PCS 24'LNG,

ADDITIONAL DATA

time: 00:00:00.000

405 104.1 64.2 58.3 .644

FLAME SPREAD INDEX: 22.784

SMOKE DENISTY INDEX: 30.561

TEST NAME: STO55D

TEST RESULTS

FLAME SPREAD INDEX: 22.784
MAXIMUM FLAME SPREAD DISTANCE: 9.0
MV-MIN: 25.941
SMOKE DENSITY INDEX: 30.561
CALIBRATION FACTOR FOR GAS METER: 31

MIN-FT 44.242
TIME: 00.19
RED OAK MV-MIN 849

OBSERVATIONS

....DURING TEST....

TIME OF MATERIAL IGNITION; 02SEC.
DELAMINATION: 0 MIN.
SAGGING: 0 MIN.
FALLOUT: 0 SEC.
BURNING AT FLOOR, TIME: 0
BURNING AT FLOOR, DISTANCE: 0'

....AFTER TEST....

CHAR, LENGTH: 20'
DEPTH OF CHAR: 0
CRACKING: 0
SEVERE CHAR: 9
SMOKE COUNT 0
BURN THROUGH AT

The material tested is not manufactured under the factory mutual-up inspection and re-examination program: Therefore. the manufacturer can not use the Factory Mutual name for marking or advertising the material.

The product is not approved, unless separately listed in the Factory Mutual Approval Guide for specific end-use application.

Cautions: these numerical flame spread and smoke density values are not intended to reflect the hazards presented by this or any material under actual fire conditions.

The products of combustion were not analyzed nor is it required by the ASTM E-84 method.

The ASTM E-84 Test Method subject materials to limited fire conditions when tested in a horizontal ceiling application. The test result may not indicate the material actual burning characteristics when field installed in a vertical position.

Also, the sample mounting prescribed in this test method may not produce a fire behavior representative of actual building fires.

