

# FIRE PREVENTION TECHNOLOGIES INC

Fort Worth, Texas 76106



Standard Test Method ASTM D3806

SPECIMENS 1/4" thick recycled rubber mat flooring

Three coats Flame Safe Fire Poly FPCC applied to specimen at 250 sq. ft /gallon (final coverage rate 83.33 sq.ft / gallon) or 12 mils.

## CALCULATION:

Calculate the experimental flame-spread rating using the following equation (ASTM D3806 Test Method):

$$F_{SE} = \frac{(L_s - L_a)}{L_R - L_a} \times F_{SR}$$

where:

$F_{SE}$  = flame spread of specimen,

$L_s$  = mean of three flame advance readings of specimen, inches, (9.5, 9.0, 9.0) = 9.166.

$L_a$  = mean of three flame advance reading of zero flame-spread standard, inches, (8.5, 8.5, 8.5) = 8.5 (Cement Board)

$L_R$  = mean of three flame advance readings of rated standard, inches, (16.5, 16.5, 16.5) = 16.5 (Red Oak) and

$F_{SR}$  = flame-spread rating of rated standard = 100

To Calculate Projected ASTM E84 Flame Spread Rating (based on the ASTM D3806 Test Method) use the following equation:

$$F_{SE} + 4.8 \times .95 = FS_{84} \text{ (Round to Nearest Whole Number)}$$

$$F_{SE} = \frac{(9-8.5)}{16.5 - 8.5} = \frac{.5}{8} \times 100 = 6.25 + 4.8 \times .95 = 10 \text{ Round to nearest whole number}$$

Predicted E84 Flame Spread is 10

Optical Smoke Density estimated at 150

Project number: 051220-1

Notation:

The ASTM E84 Class A (UL723, Type 1) standard for Surface Burning Characteristics of Materials requires a flame spread rating of less than 25 and an optical smoke density of less than 450.