



February 02, 2016

Rieke Office Interiors
Mr. Todd Rieke
2000 Fox Ln.
Elgin, IL 60123

Our Reference: SV30565 / 4787326412

Subject: Report Of Surface Burning Characteristics Tests On Felt Material As
Submitted By Rieke Office Interiors

Dear Mr. Rieke:

This is a Report summarizing the results of tests conducted under the Commercial Inspection and Testing Services (CITS) program of UL LLC (UL) identified as Assignment No. 4787326412.

GENERAL:

The results relate only to items tested.

METHOD:

Each test was conducted in accordance with Standard ANSI/UL723, Tenth Edition, dated September 10, 2008 with revisions through August 12, 2013, "Test for Surface Burning Characteristics of Building Materials", (ASTM E84).

The test determines the Surface Burning Characteristics of the material, specifically the flame spread and smoke developed indices when exposed to fire.

The maximum distance the flame travels along the length of the sample from the end of the igniting flame is determined by observation. The Flame Spread Index of the material is derived by plotting the progression of the flame front on a time-distance basis, ignoring any flame front recession, and using the equations described below:

- A. $CFS = 0.515 A_T$ when A_T is less than or equal to 97.5 minute-foot.
- B. $CFS = 4900 / (195 - A_T)$ when A_T is greater than 97.5 minute-foot.

Where A_T = total area under the time distance curve expressed in minute-foot.

The Smoke Developed Index (SDI) is determined by rounding the Calculated Smoke Developed (CSD) as described in UL 723. The CSD is determined by the output of photoelectric equipment operating across the furnace flue pipe. A curve is developed by plotting the values of light absorption (decrease in cell output) against time. The CSD is derived by expressing the net area under the curve for the material tested as a percentage of the area under the curve for untreated red oak.

The CSD is expressed as:

$$CSD = (A_m / A_{ro}) \times 100$$

Where:

CSD = Calculated Smoke Developed

A_m = The area under the curve for the test material.

A_{ro} = The area under the curve for untreated red oak.

SAMPLES:

The samples utilized in this investigation were neither prepared nor selected by a Laboratories' representative such that no verification of composition can be provided.

The samples consisted of two constructions of felt material as described below.

Sample Description

Test No.	System
1	3mm Wool Felt Material
2	Rigid 9mm PET Acoustic Board

The 3mm wool felt material consisted of a length 24 ft. long by 24 in. wide of the finished product.

The rigid 9mm PET acoustic board consisted of three 8 by 2 ft. wide boards butted end-to-end to form the required 24 ft. long surface.

Each test sample was supported by 2 in. hexagonal poultry netting supported by 1/4 in. diameter steel rods spaced 2 ft. apart.

RESULTS:

The results are tabulated below are considered applicable only to the specific samples tested.

Data sheets and graphical plots of flame travel versus time and smoke developed versus time are also enclosed.

Table 1: Test Summary

Test No.	Test Code	Sample Description	CFS Calculated Flame Spread	FSI Flame Spread Index	CSD Calculated Smoke Developed	SDI Smoke Developed Index
1	01271606	3mm Wool Felt Material	0.00	0	169.0	170
2	01271615	Rigid 9mm PET Acoustic Board	3.05	5	260.5	250

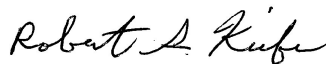
The Classification Marking of UL on the product is the only method provided by UL to identify products which have been produced under its Classification and Follow-Up Service. No use of a Classification Marking has been authorized as a result of this investigation.

Since the anticipated work has been completed, we have instructed our Accounting Department to terminate the investigation and invoice you for the charges incurred to date.

Should you have any questions, please contact the undersigned.

Very truly yours

Reviewed by:



Robert S. Kiefer (ext. 42014)
Senior Engineering Associate
Fire Protection Division

James F. Smith (ext. 42666)
Staff Engineering Associate
Fire Protection Division

Project: 4787326412
Tested by:

File: SV30565
Engineer: ROBERT KIEFER

TestCode: 01271606
Date: 2016-01-27

TEST METHOD: The test was conducted in accordance with UL 723, Tenth Edition.

Client Name: Rieke Office Interiors			
Test Duration: 10 minutes	Test No.: 1	Hot Test: No	
Mounting: Rods & Wire	Test Type: CITS	Burn-Out Required: No	
Test Sample: 3mm Wool Felt Material			

FLAME SPREAD RESULTS

Flame Spread Data

Distance (Feet)		Time (Sec)
Ignition		16

Calculated Flame Spread (CFS): 0.00
Flame Spread Index (FSI): 0
Time to Ignition (sec): 16
Maximum Flame Spread (ft.): 0.0
Area Under the Flame Spread Curve (ft.-min.): 0.0

SMOKE RESULTS

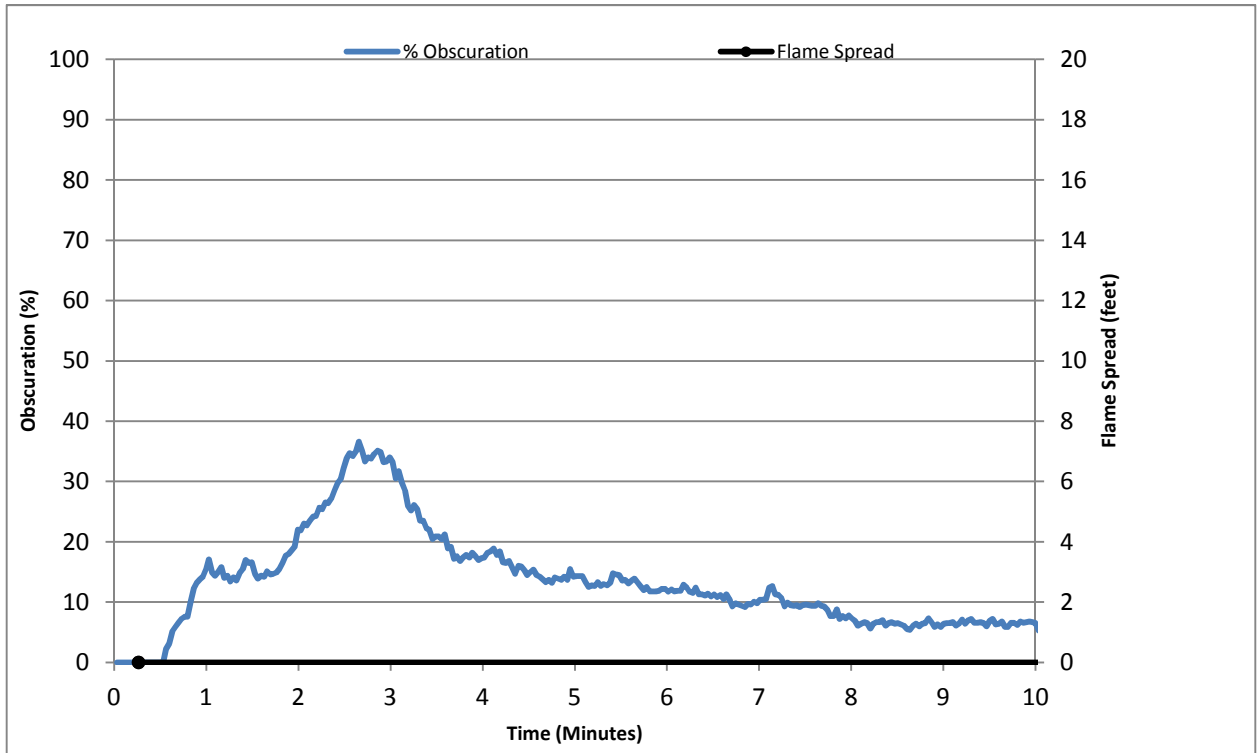
Calculated Smoke Developed (CSD): 169.0
Smoke Developed Index (SDI): 170
Area Under the Smoke Curve (Obs-min.): 134.27
Area Under Red Oak Curve (Obs-min.): 79.45

Post-Test Observations

Melt (Feet From Burner): 10

Flame Spread / Smoke Results

Rieke Office Interiors 3mm Wool Felt Material



Test Num.: 1
SV30565 / 4787326412
01271606

Flame Spread Index: 0
Smoke Developed Index: 170
Max. Flame Spread (ft.): 0.0

Project: 4787326412
Tested by:

File: SV30565
Engineer: ROBERT KIEFER

TestCode: 01271615
Date: 2016-01-27

TEST METHOD: The test was conducted in accordance with UL 723, Tenth Edition.

Client Name:	Rieke Office Interiors			Hot Test:	No
Test Duration:	10 minutes	Test No.:	2	Burn-Out Required:	Yes
Mounting:	Rods & Wire	Test Type:	CITS		

Test Sample: Rigid 9mm PET acoustic board.

FLAME SPREAD RESULTS

Flame Spread Data

Distance (Feet)	Time (Sec)	Distance (Feet)	Time (Sec)
Ignition	24	8	578
3	566	9	582
4	568	11	588
5	570	13	594
6	574		

Calculated Flame Spread (CFS): 3.05

Flame Spread Index (FSI): 5

Time to Ignition (sec): 24

Maximum Flame Spread (ft.): 13.0

Area Under the Flame Spread Curve (ft.-min): 5.9

SMOKE RESULTS

Calculated Smoke Developed (CSD): 260.5

Smoke Developed Index (SDI): 250

Area Under the Smoke Curve (Obs-min.): 206.94

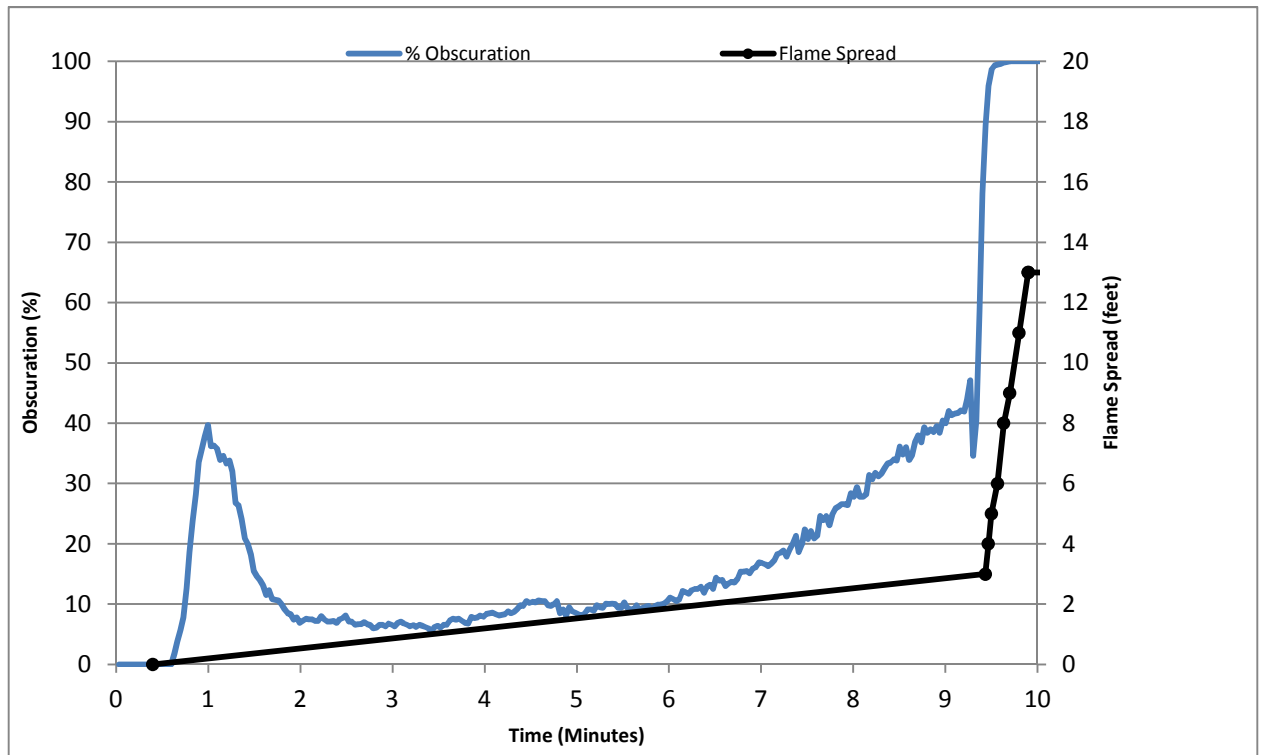
Area Under Red Oak Curve (Obs-min.): 79.45

Post-Test Observations

Char (Feet From Burner): 24

Flame Spread / Smoke Results

Rieke Office Interiors Rigid 9mm PET Acoustic Board.



Test Num.: 2
SV30565 / 4787326412
01271615

Flame Spread Index: 5
Smoke Developed Index: 250
Max. Flame Spread (ft.): 13.0