



February 07, 2020

Mr. Russell McNeice
Coat Zone Inc.
21011 Hegar Rd
Hockley, TX 77447

Our Reference: SV31458/4789072314

Subject: Report Of Surface Burning Characteristics Tests On Samples
As Submitted By Coat Zone Inc

Dear Mr. McNeice,

This is a Report summarizing the results of a test conducted under the Commercial Inspection and Testing Services (CITS) program of UL LLC (UL) identified as Assignment No. 4789072314.

GENERAL:

The results relate only to items tested.

METHOD:

Each test was conducted in accordance with Standard ANSI/UL723, Eleventh Edition, dated April 19, 2018, "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.

Sample Description

Test No.	System
1	THERMALBLOCK coating formulation (80 sq. ft. per gallon)

Samples were prepared by applying them to 1/4 in. thick inorganic reinforced cement board at an application rate of 80 sq. ft. per gallon.

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	01292005	ThermalBlock	5.27	5	21.5	20

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

Thomas Sias
Senior Engineering Associate
Building Materials & Systems

Project: 4789072314
Tested by: Abran Garcia

File: SV31458
Engineer: Thomas Sias

TestCode: 01292005
Date: 2020-01-29

TEST METHOD: The test was conducted in accordance with UL 723, Eleventh Edition (2018/04/19).

Client Name: Energy Performance			
Test Duration: 10 minutes	Test No.: 1		Hot Test: No
Mounting: RCB	Test Type: CITS		Burn-Out Required: No

Test Sample: THERMALBLOCK

FLAME SPREAD RESULTS

Flame Spread Data

Distance (Feet)		Time (Sec)
Ignition		182
1		280
2		336

Calculated Flame Spread (CFS): 5.27
Flame Spread Index (FSI): 5
Time to Ignition (sec): 182
Maximum Flame Spread (ft): 2.0
Area Under the Flame Spread Curve (ft.-min.): 10.2

SMOKE RESULTS

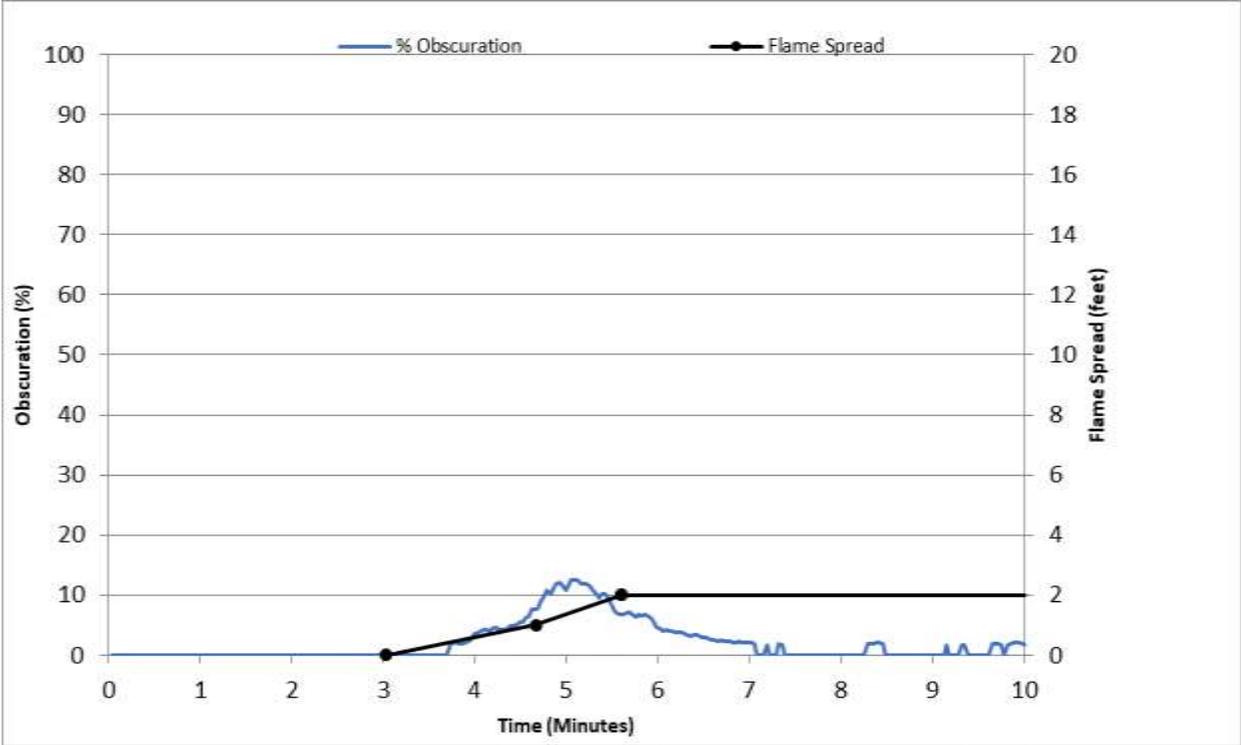
Calculated Smoke Developed (CSD): 21.5
Smoke Developed Index (SDI): 20
Area Under the Smoke Curve (Obs.-min.): 20.70
Area Under Heptane Curve (Obs.-min.): 96.38

Post-Test Observations

Discoloration (Feet From Burner): 24
Char (Feet From Burner): 8

Flame Spread / Smoke Results

Energy Performance THERMALBLOCK



Test Num.: 1
SV31458 / 4789072314
01292005

Flame Spread Index: 5
Smoke Developed Index: 20
Max. Flame Spread (ft.): 2.0