



August 11, 2017

Contego International Inc.  
Mr. Danny French  
PO Box 49  
Rochester, IN 46975-0049

Our Reference: R25382 / 4788022828

Subject: Report Of Surface Burning Characteristics Tests On Coated Louvered  
Door Panels As Submitted By Contego International Inc.

Dear Mr. French:

This is a Report summarizing the results of a test conducted under a preliminary investigation identified as Assignment No. 4788022828.

**GENERAL:**

Preliminary investigations are initiated to obtain information with respect to a product or products prior to submittal to UL LLC (UL) for Investigation, Classification and Follow-Up Service. This Report does not constitute evidence of such a submittal to UL. 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.

**Sample Description**

Test No.	System
1	Coated louvered door panels.

The test sample consisted 1 ft. wide panels butted side by side and end to end to form the 24 ft. long by 24 in. wide finished product.

The 1 ft. wide panels were supported with 1/4 in. diameter uncoated steel rods and placed at 2 ft. intervals.

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

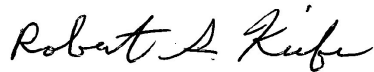
Test No.	Test Code	Sample Description	CFS Calculated Flame Spread	FSI Flame Spread Index	CSD Calculated Smoke Developed	SDI Smoke Developed Index
1	08091709	Coated louvered door panels.	0.00	0	462.3	450

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,



Robert S. Kiefer (Ext. 42014)  
Sr. Engineering Assoc  
Fire Protection Division

Reviewed by,



James F Smith (Ext. 42666)  
Staff Engineering Assoc  
Fire Protection Division

Project: 4788022828  
Tested by: ABRAN GARCIA

File: R25382  
Engineer: ROBERT KIEFER

TestCode: 08091709  
Date: 2017-08-09

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

Client Name: Contego International Inc.	Test No.: 1	Hot Test: No
Test Duration: 10 minutes	Test Type: Developmental	Burn-Out Required: No
Mounting: Rods		

**Test Sample:** Coated louvered door panels.

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FLAME SPREAD RESULTS

**Flame Spread Data**

Distance (Feet)	Time (Sec)
Ignition	68

**Calculated Flame Spread (CFS):** 0.00  
**Flame Spread Index (FSI):** 0  
**Time to Ignition (sec):** 68  
**Maximum Flame Spread (ft.):** 0.0  
**Area Under the Flame Spread Curve (ft.-min.):** 0.0

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SMOKE RESULTS

**Calculated Smoke Developed (CSD):** 462.3  
**Smoke Developed Index (SDI):** 450  
**Area Under the Smoke Curve (Obs.-min.):** 408.72  
**Area Under Red Oak Curve (Obs.-min.):** 88.41

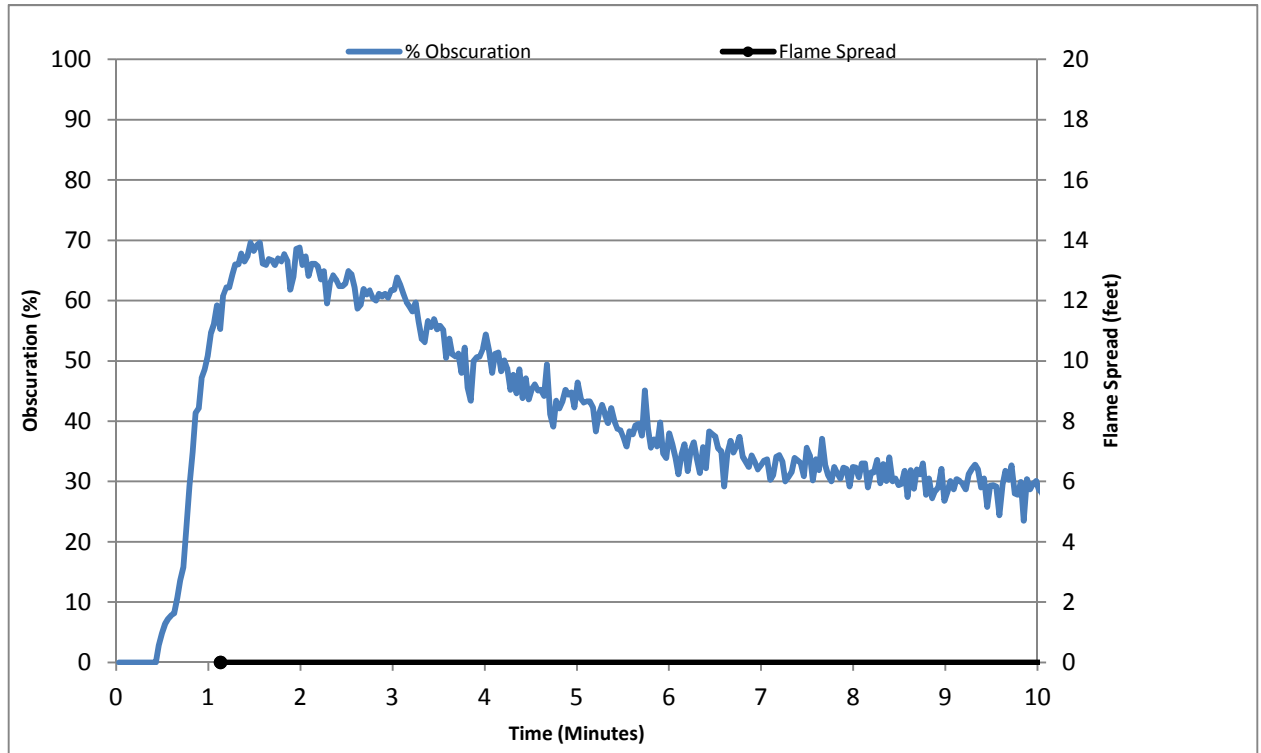
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Post-Test Observations

**Discoloration (Feet From Burner):** 24  
**Char (Feet From Burner):** 6

# Flame Spread / Smoke Results

Contego International Inc.  
Coated Louvered Door Panels.



Test Num.: 1  
R25382 / 4788022828  
08091709

Flame Spread Index: 0  
Smoke Developed Index: 450  
Max. Flame Spread (ft.): 0.0