



November 29, 2010
Revised: January 10, 2013
Revised: January 18, 2013

Mr. Herbert Wheeler
Railtech Ltd.
325 Ave Lee, Baie-D'Urf
QC H9X 3S3
Canada

Our Reference: R26549/09CA56627

Subject: Report of Surface Burning Characteristics Tests on Skyfold Panel
Samples As Submitted By Railtech Ltd

Dear Mr. Wheeler:

This is a Report summarizing the results of a test conducted under a preliminary investigation identified as Assignment No. 09CA56627.

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 13, 2010, "Test for Surface Burning Characteristics of Building Materials", (ASTM E84-11).

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	Skyfold panels no finish

Due to the rigidity of the test samples, supplementary means of support was not required.

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	11241008	Skyfold panels no finish	0	0	0.0	0

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:



Jamila Shawon (ext. 42607)
Senior Project Engineer
Fire Protection Division

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

Project: 09CA56627
Tested by: SCOTT KNIGHTON

File: R26549
Engineer: JAMILA SHAWON

TestCode: 11241008
Date: 2010-11-24

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

Client Name: RAILTECH LTD

Test Duration: 10 minutes

Test No.: 1

Hot Test: No

Mounting: Self

Test Type: Developmental

Burn-Out Required: No

Test Sample: Skyfold panels no finish

FLAME SPREAD RESULTS

Flame Spread Data

Distance (Feet)	Time (Sec)
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Calculated Flame Spread (CFS): 0.00

Flame Spread Index (FSI): 0

Time to Ignition (sec): None

Maximum Flame Spread (ft): 0.0

Area Under the Flame Spread Curve (ft.-min.): 0.0

SMOKE RESULTS

Calculated Smoke Developed (CSD): 0.0

Smoke Developed Index (SDI): 0

Area Under the Smoke Curve (Obs-min.): 0.00

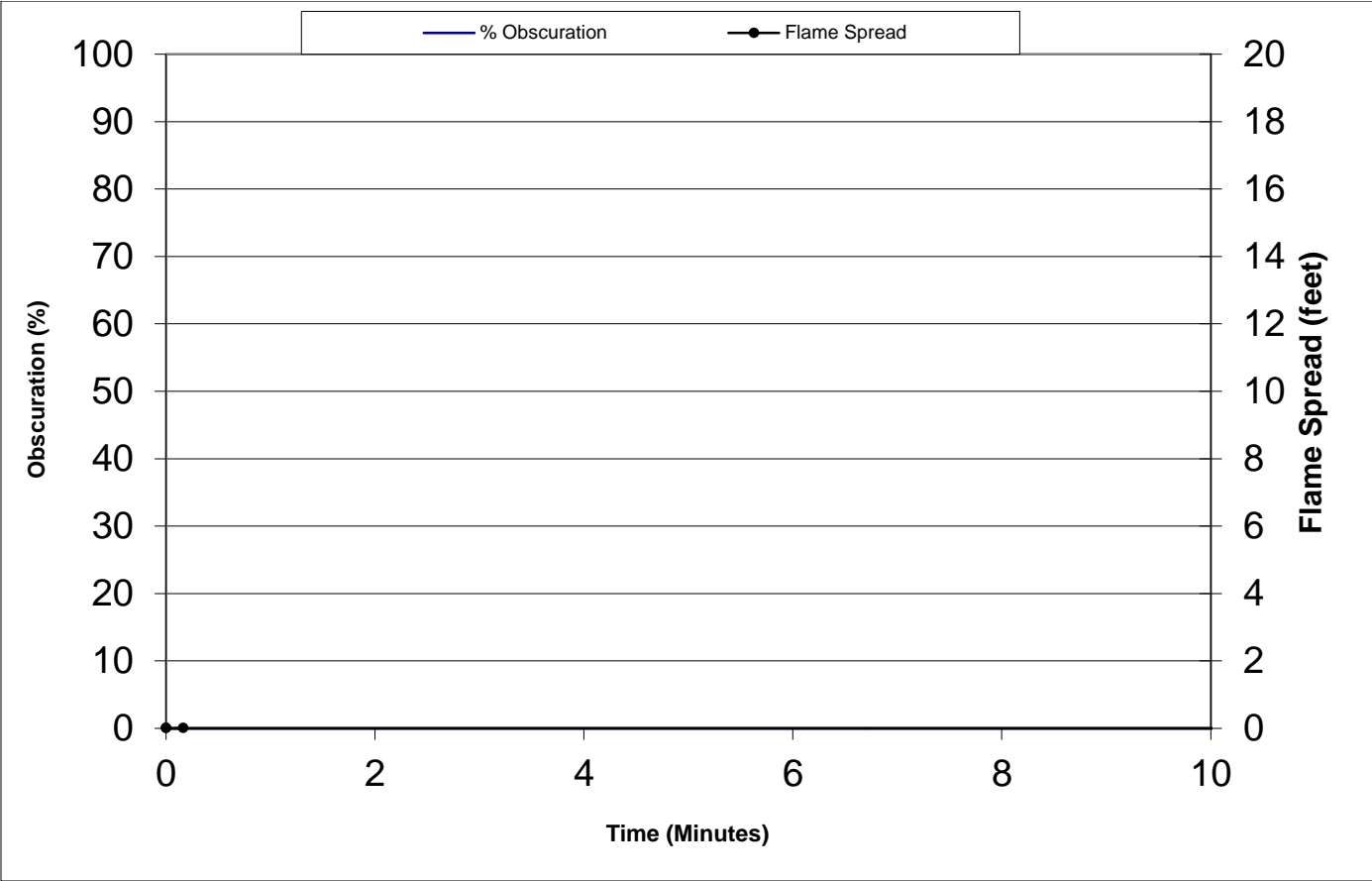
Area Under Red Oak Curve (Obs-min.): 73.87

Post-Test Observations

Discoloration (Feet From Burner): 8

Flame Spread / Smoke Results

RAILTECH LTD
Skyfold panels no finish



Test Num.: 1
R26549 / 09CA56627
11241008

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