



Summary of Investigation
For
London Eco Metal Manufacturing Inc, Dorchester ON

Subject: Surface Burning Characteristics of EPS insulated metal panels
Reference: SV30551 / 4787306993

March 30th, 2016

The following is a summary of the test results obtained on composite panels designated by London Eco Metal Manufacturing Inc as "EPS insulated metal panels" under Project 4787306993. The tests were conducted at ULC's test facility in Toronto, Ontario on March 24th, 2016 in accordance with CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition.

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Underwriters Laboratories of Canada authorizes the above named company to reproduce this Report provided it is reproduced in its entirety. Underwriters Laboratories of Canada did not witness the production of the test samples nor were we provided with information relative to the formulation or identification of component materials used in the test samples. The test results relate only to the items tested and may not apply to subsequently produced samples or assemblies.

The sole purpose of this investigation was to provide fire test data for the composite panels submitted and tested in accordance with the requirements of CAN/ULC-S102-10. This data should not be considered representative of test results for other composite panels in the absence of testing the composite panels in accordance with CAN/ULC-S102-10.

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Sincerely,

Handwritten signature of Stanis Yu in black ink.

Stanis Yu
Project Handler
Building & Life Safety Technologies

Reviewed by:

Handwritten signature of Beny Spensieri, Jr. in black ink.

Beny Spensieri, Jr.
Project Handler
Building & Life Safety Technologies

SAMPLE DESCRIPTION AND PREPARATION

The composite panels were submitted for testing in ready-to-test form and designated “EPS insulated metal panels”. Details of the materials used in the construction of the composite panels were not provided nor investigated. The panels consisted of a white, steel facing with a longitudinal joint along the centerline of the panel. The panels were capped on all sides and sealed with caulking material. Three steel bars spanning the width of the panel were attached to the unexposed side of the panel. The core material was described as “EPS” by the submitter. One panel measuring 5155 mm long mm long by 575 mm wide by 106 mm thick was butted end-to-end to a second panel measuring 2160 mm long mm long by 575 mm wide by 106 mm thick panel to create a 7315 mm long test sample. Three test samples were prepared and conditioned to constant mass at a temperature of $23 \pm 3^{\circ}\text{C}$ and a relative humidity of $50 \pm 5\%$ prior to the test.

Due to the rigidity of the test samples, supplementary means of support was not required. The test samples were installed on the ceiling of the tunnel furnace. A 350 mm long by 560 mm wide by 1.6 mm thick, uncoated, steel plate was placed on the specimen mounting ledge in front of and under the specimen at the fire end of the tunnel furnace “upstream” from the gas burners to complete the 7620 mm chamber length. An airtight water seal was maintained around the furnace lid during the test.

TEST METHOD

The tests were conducted in accordance with CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition.

This method defines the relative surface burning characteristics under specific test conditions. Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions. Test results relate only to the items tested.

SURFACE BURNING CHARACTERISTICS

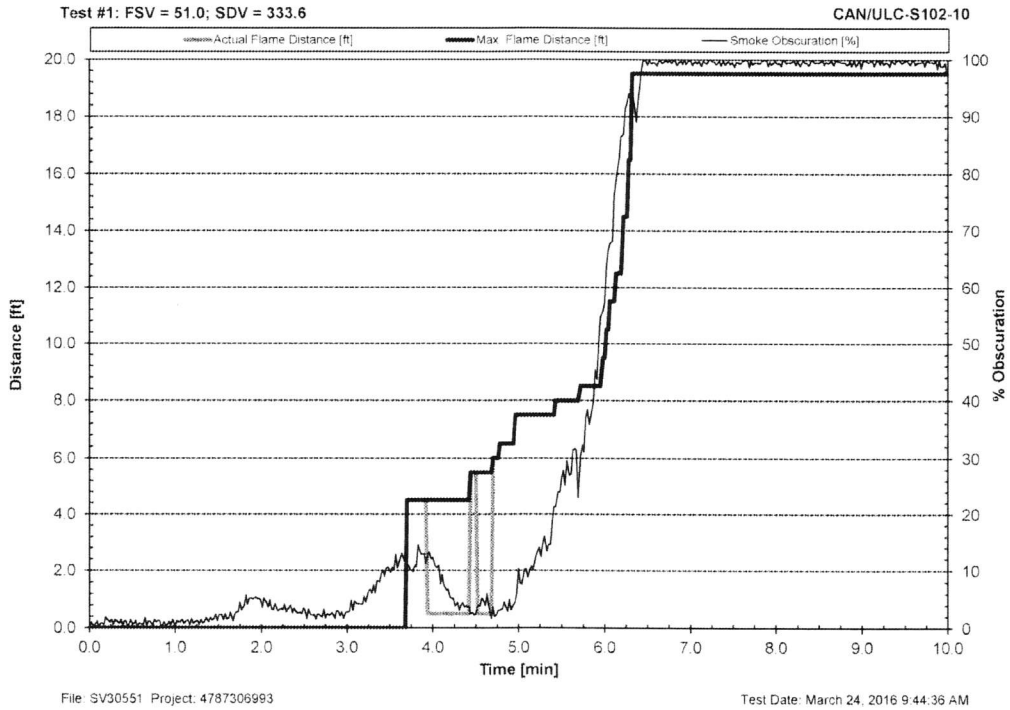
A summary of the individual test results is tabulated below. Graphical plots of flame spread and light transmission data are attached. The test results relate only to the actual samples tested.

TEST No.	SAMPLE DESCRIPTION	CALCULATED VALUES	
		FLAME SPREAD VALUE (FSV)	SMOKE DEVELOPED VALUE (SDV)
1	EPS insulated metal panels	51.0	333.6
2	EPS insulated metal panels	74.0	412.1
3	EPS insulated metal panels	43.4	286.2

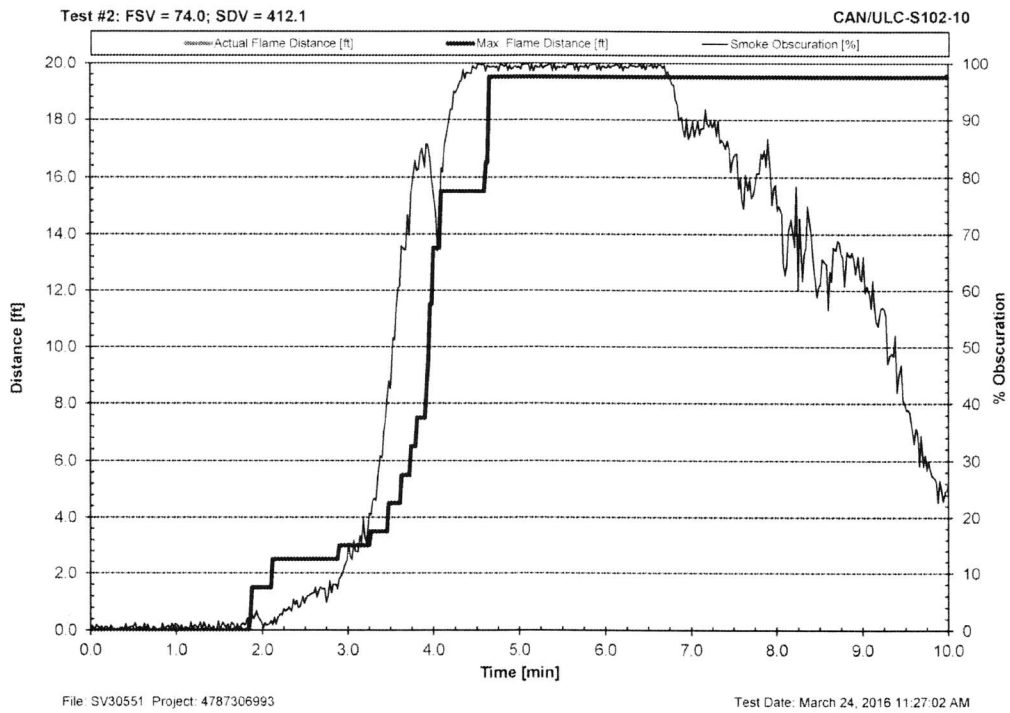
The surface burning characteristics of composite panels described herein warrants the assignment of the following rating or classification in comparison to untreated red oak as 100 and inorganic reinforced cement board as 0.

MATERIAL DETAILS	RATING OR CLASSIFICATION	
	FLAME SPREAD RATING (FSR)	SMOKE DEVELOPED CLASSIFICATION (SDC)
EPS insulated metal panels	55	345

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