



Summary of Investigation  
For  
Arcoplast Inc, Saint Peters MO

Subject: Surface Burning Characteristics of Engineered Polymer Panels  
Reference: SV18619 / 4788361213

March 7<sup>th</sup>, 2018

The following is a summary of the test results obtained on plastic material designated by Arcoplast Inc as "Engineered Polymer Panel" under Project 4788361213. The tests were conducted at ULC's test facility in Toronto, Ontario on March 1<sup>st</sup>, 2018 in general accordance with CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7<sup>th</sup> Edition. (Exception, less than three tests were conducted as indicated under "Surface Burning Characteristics").

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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 samples nor were we provided with information relative to the formulation or identification of component materials used in the 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 plastic material submitted and tested in general accordance with the requirements of CAN/ULC-S102-10. This data should not be considered representative of test results for other plastic material in the absence of testing the plastic material in accordance with CAN/ULC-S102-10.

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Sincerely,

A handwritten signature in black ink, appearing to read 'Stanis Yu'.

Stanis Yu  
Project Handler  
Building & Life Safety Technologies

Reviewed by:

A handwritten signature in black ink, appearing to read 'Beny Spensieri Jr'.

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

## **SAMPLE DESCRIPTION AND PREPARATION**

The plastic material was submitted for testing in ready-to-test form and designated “Engineered Polymer Panel”. Details of the materials used in the construction of the plastic material were not provided nor investigated. Each panel consisted of a rigid, white plastic with a smooth glossy surface. Four panels each measuring 1830 mm long by 610 mm wide were butted end-to-end to create a 7320 mm long test specimen. Two test specimens – one 9.5 mm thick and one 12.7 mm thick – 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 specimens, supplementary means of support was not required. The test specimens 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 general accordance with CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7<sup>th</sup> Edition. (Exception, less than three tests were conducted as indicated under “Surface Burning Characteristics”).

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.

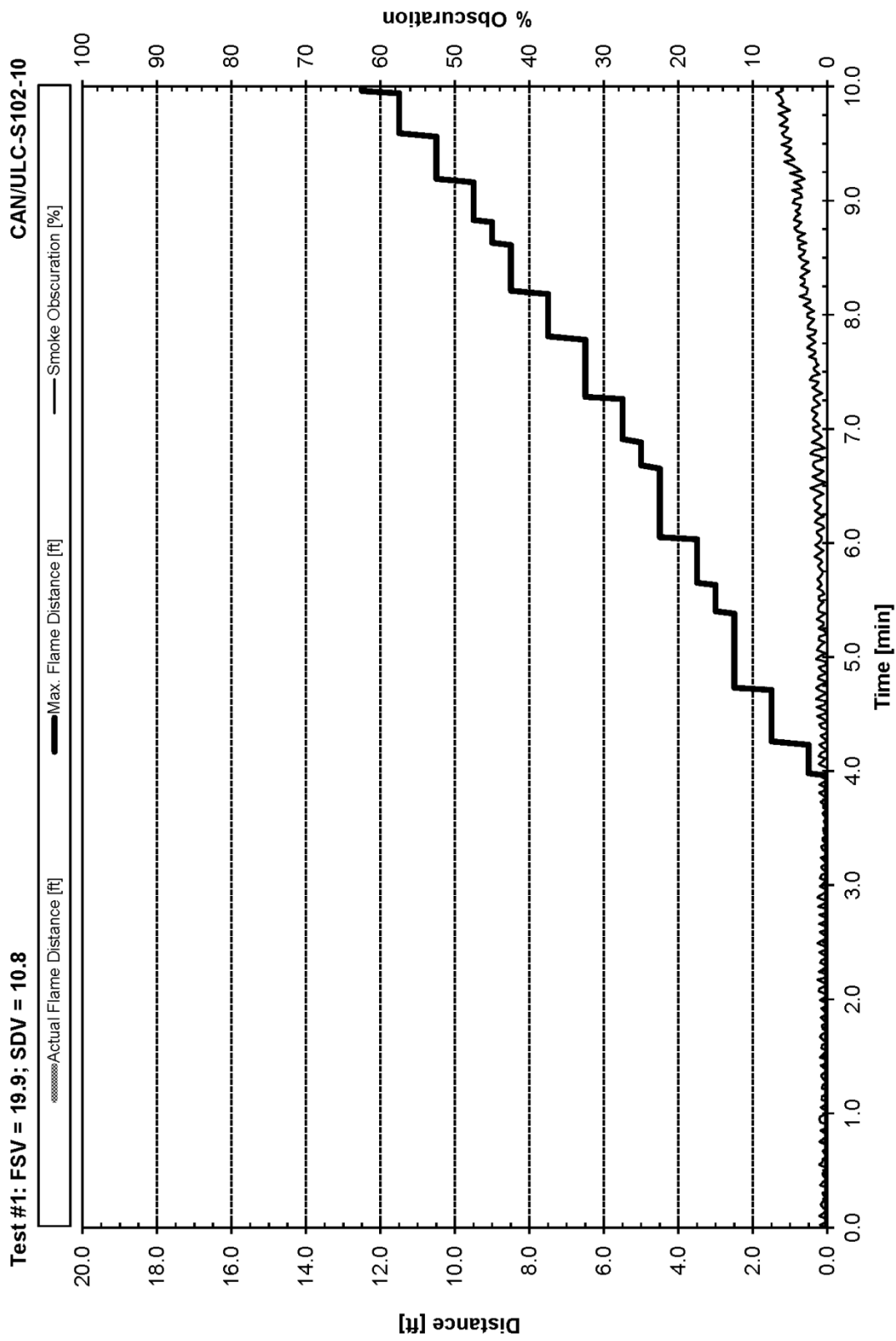
## **SURFACE BURNING CHARACTERISTICS**

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	9.5 mm thick Engineered Polymer Panels	19.9	10.8
2	12.7 mm thick Engineered Polymer Panels	10.8	6.1

Section 9.4 of CAN/ULC-S102-10, stipulates that the Flame Spread Rating (FSR) and Smoke Developed Classification (SDC) of a product or assembly shall be determined from the results of not less than three identical test specimens. Since only one test was conducted on each thickness, the plastic material does not warrant the assignment of a rating or classification.

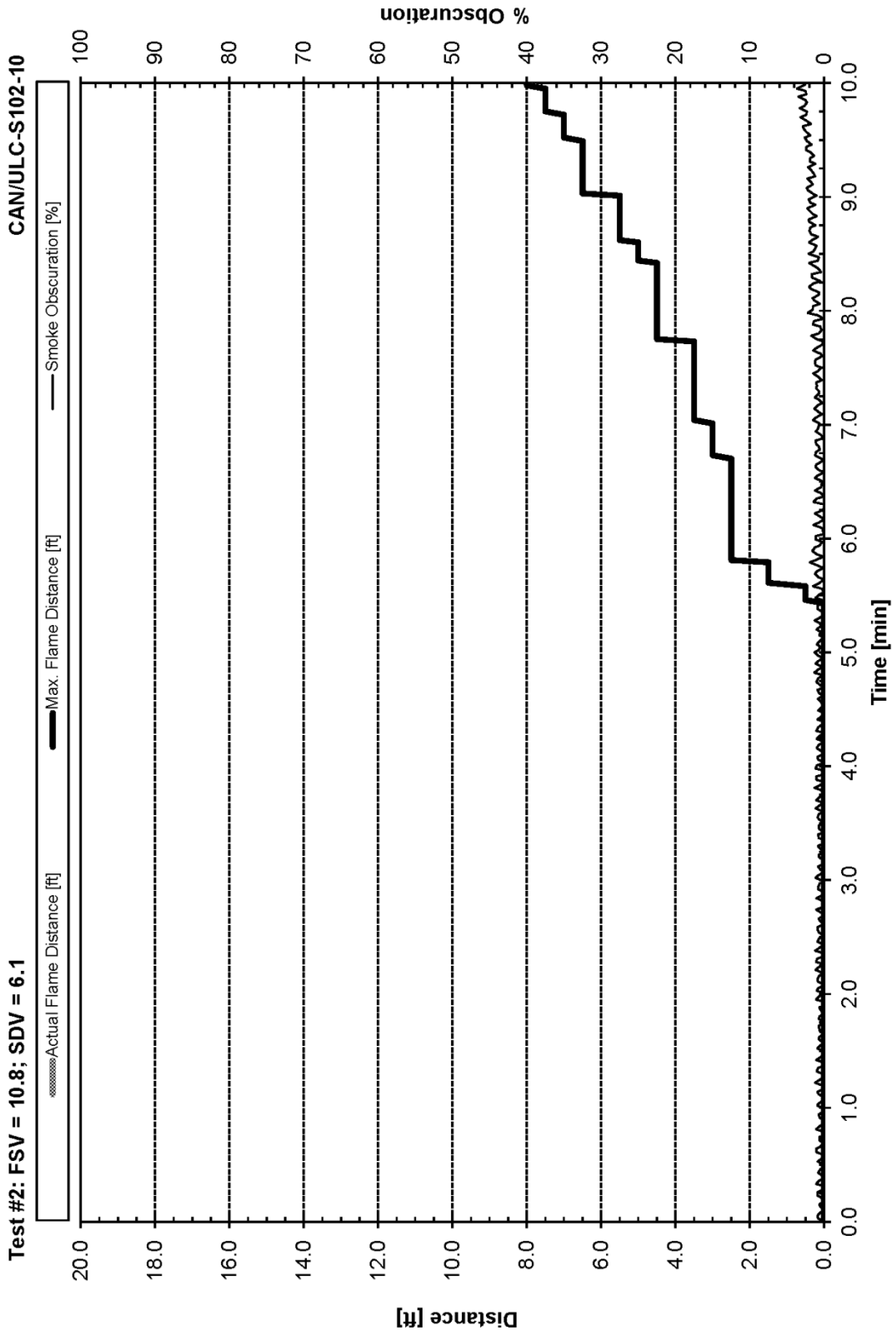
**SURFACE BURNING CHARACTERISTICS**  
**ARCOPLAST INC**  
**9.5 mm thick Engineered Polymer Panels**



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**SURFACE BURNING CHARACTERISTICS**  
**ARCOPLAST INC**  
**12.7 mm thick Engineered Polymer Panels**



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