Summary of Investigation
For
Arcoplast Inc., St. Peters MO

Subject: Surface Burning Characteristics of Solid Core and Cement Core
Reference: SV18619 / 10CA59023

February 18, 2011

The following is a summary of the test results obtained on plastic materials designated by Arcoplast Inc. as "Solid Core and Cement Core" under Project 10CA59023. The testing was conducted at ULC's test facility in Toronto and completed on February 16, 2011.

The tests were conducted in general accordance with the Standard, CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition. (Exception, less than three tests were conducted as indicated under "Results".)

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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 plastic materials 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 materials in the absence of testing the plastic materials in accordance with CAN/ULC-S102-10.

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Very truly yours,

Stanis Yu
Project Handler
Building Materials / Life Safety & Securities

Reviewed by:

G. Abbas Nanji
Principal Engineer
Building Materials, Fire Resistance.
Dept. 3019EFPD

TEST METHOD:

The tests were conducted in general accordance with the Standard CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition. (Exception, less than three tests were conducted as indicated under "Results".)

Two products were submitted for testing by Arcoplast Inc. – Cement Core panels and Solid Core panels. The Cement Core panels consisted of a nominal 6.8 mm thick cement core substrate with a nominal 2.8 mm thick plastic surface on one side. The average thickness of the panels was 9.7 mm. The Solid Core panels consisted of a solid resin/glass matrix with a plastic surface on one side. The average thickness of the panels was 9.4 mm. All panels measured 2437 mm long by 505 mm wide.

For each product, three panels were butted end-to-end to create a 7311 mm long test sample. One test sample for each type was prepared and conditioned to constant mass at a temperature of 23 ± 3°C and a relative humidity of 50 ± 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 sample mounting ledge in front of and under the sample 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.

RESULTS:

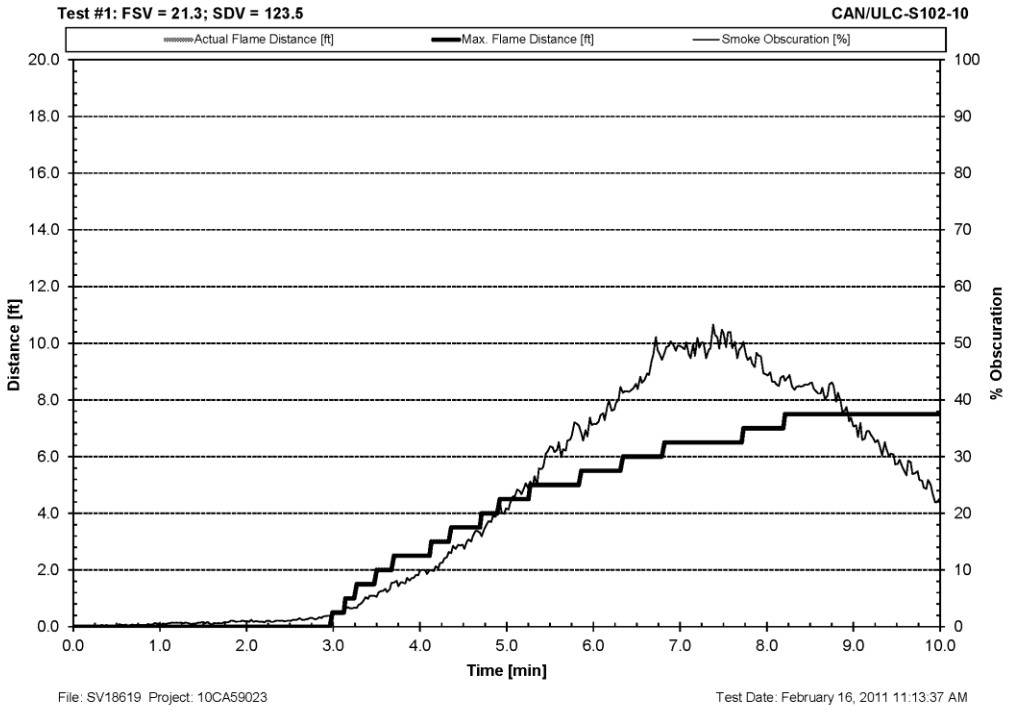
During Test No. 1, the sample ignited at 2 minutes and 48 seconds into the test and the flame front traveled a maximum of 2.3 m in a time of 8 minutes and 13 seconds. The maximum smoke obscuration of 53.3% occurred at 7 minutes and 23 seconds into the test. During Test No. 2, the sample ignited at 4 minutes and 6 seconds into the test and the flame front traveled a maximum of 2.0 m in a time of 6 minutes and 14 seconds. The maximum smoke obscuration of 67.7% occurred at 5 minutes and 38 seconds into the test. No other significant observations were made.

A summary of 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.

		Calculated Values	
Test No.	Sample Description	Flame Spread Value (FSV)	Smoke Developed Value (SDV)
1	Cement Core Panels – Shinny Side Exposed	21.3	123.5
2	Solid Core Panels – Shinny Side Exposed	18.9	63.4

Clause 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 samples. Since only one test was conducted on each of the Solid Core and Cement Core panels, the products do not warrant the assignment of a rating or classification.

SURFACE BURNING CHARACTERISTICS
ACROPLAST INC.
Cement Core Panels - Shinny Side Exposed



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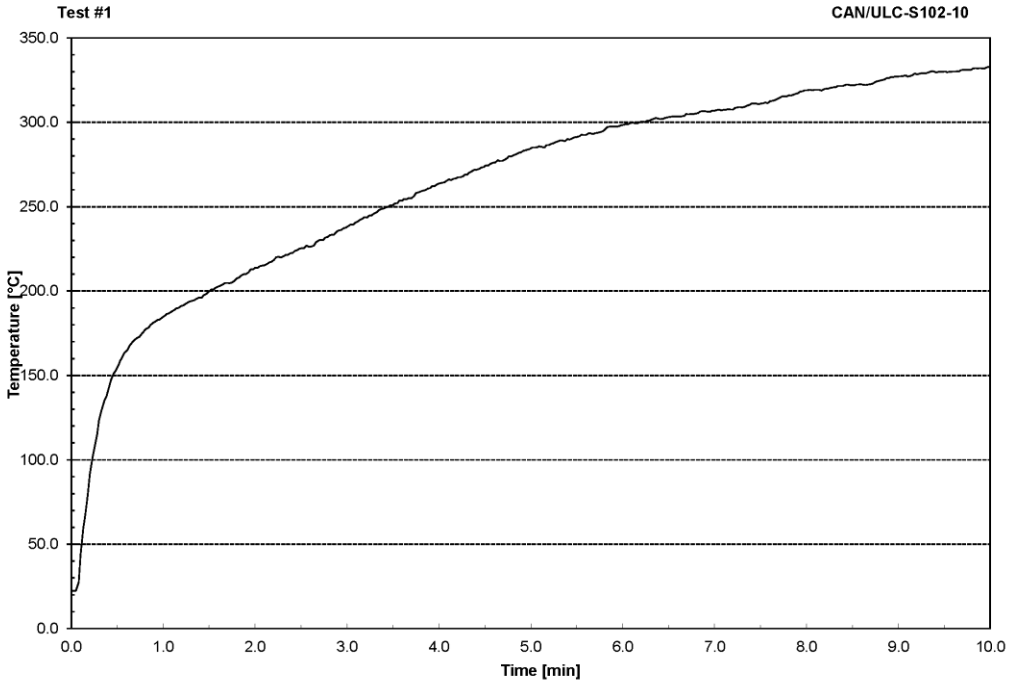
FURNACE TIME-TEMPERATURE CURVE AT 7000 mm
ACROPLAST INC.
Cement Core Panels - Shinny Side Exposed



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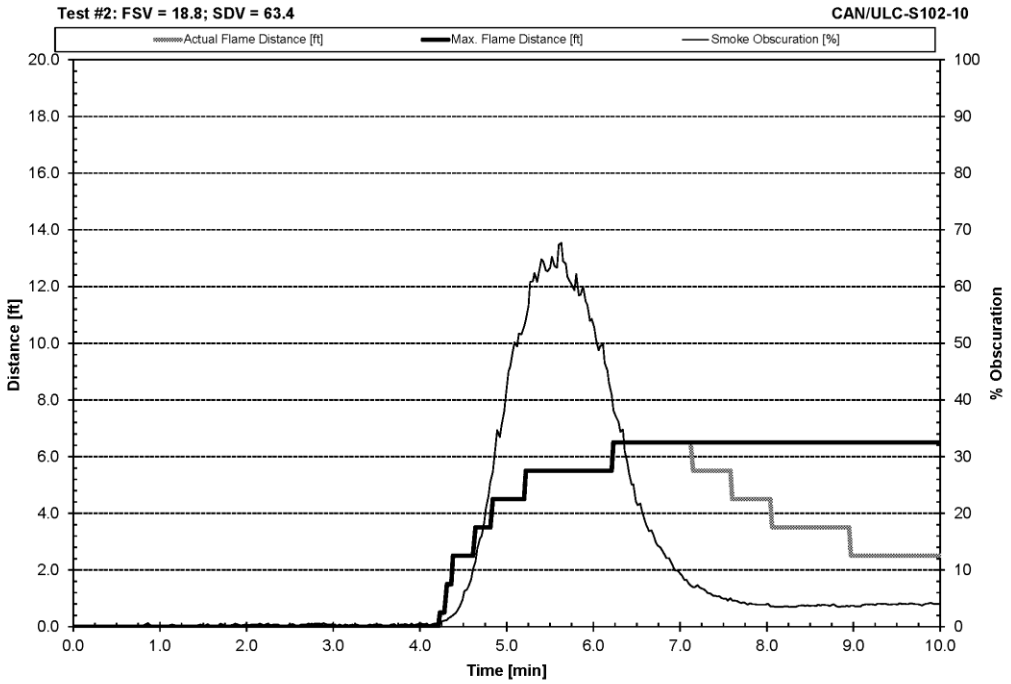
SURFACE BURNING CHARACTERISTICS
ACROPLAST INC.
Solid Core Panels - Shinny Side Exposed



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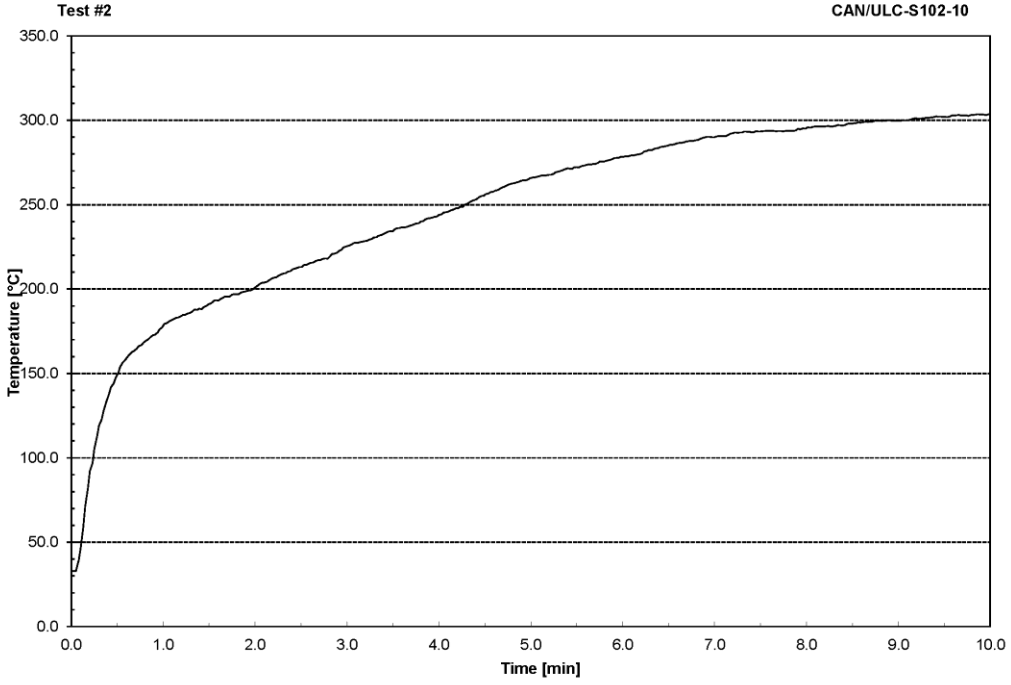
FURNACE TIME-TEMPERATURE CURVE AT 7000 mm
ACROPLAST INC.
Solid Core Panels - Shinny Side Exposed



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