

TEST REPORT

The Intertek logo consists of the word "Intertek" in a white, sans-serif font, centered within a dark blue rounded rectangular background.

REPORT NUMBER: 101028947COQ-003
ORIGINAL ISSUE DATE: February 20, 2013

EVALUATION CENTER
Intertek Testing Services NA Ltd.
1500 Brigantine Drive
Coquitlam, B.C. V3K 7C1

RENDERED TO

Monoglass Inc.
922 – 1200 West 73rd Avenue
Vancouver, BC V6P 6G5

PRODUCT EVALUATED: Monoglass[®] Spray-Applied Insulation
EVALUATION PROPERTY: Surface Burning Characteristics

**Report of Monoglass[®] Spray-Applied Insulation for compliance
with the applicable requirements of the following criteria:
CAN/ULC S102-10, Standard Method of Test for Surface Burning
Characteristics of Building Materials and Assemblies**

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2 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Monoglass Inc. to evaluate the surface burning characteristics of Monoglass® Spray-Applied Insulation. Testing was conducted in accordance with the standard methods of CAN/ULC S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.

This evaluation began February 13, 2013 and was completed the same day.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client and were not independently selected for testing. The sample panels were received at the Evaluation Center on February 12, 2013.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Upon receipt of the samples at the Intertek Coquitlam laboratory they were placed in a conditioning room where they remained in an atmosphere of $23 \pm 3^{\circ}\text{C}$ ($73.4 \pm 5^{\circ}\text{F}$) and $50 \pm 5\%$ relative humidity.

The sample panels consisted of a Hardiboard substrate with nominal 1 in. thickness of the spray-applied fiberglass insulation applied to one side.

For each test run, four 5 ft. and one 4 ft long by 24 in. wide panels were placed end to end on the upper ledge of the flame spread tunnel to form the required 24 ft. sample length. The fiberglass face was oriented towards the flame. A layer of 6 mm reinforced cement board was placed over top of the samples, the tunnel lid was lowered into place, and the samples were then tested in accordance with CAN/ULC S102-10.

4 Testing and Evaluation Methods

4.1. TEST STANDARD

The results of the tests are expressed by indexes, which compare the characteristics of the sample under tests relative to that of select grade red oak flooring and inorganic-cement board.

(A) Flame Spread Classification:

This index relates to the rate of progression of a flame along a sample in the 25 foot tunnel. A natural gas flame is applied to the front of the sample at the start of the test and drawn along the sample by a draft kept constant for the duration of the test. An observer notes the progression of the flame front relative to time.

The test apparatus is calibrated such that the flame front for red oak flooring passes out the end of the tunnel in five minutes, thirty seconds (plus or minus 15 seconds).

(B) Smoke Developed:

A photocell is used to measure the amount of light, which is obscured by the smoke passing down the tunnel duct. When the smoke from a burning sample obscures the light beam, the output from the photocell decreases. This decrease with time is recorded and compared to the results obtained for red oak, which is defined to be 100.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

(A) Flame Spread

The resultant flame spread classifications are as follows:
(Classification rounded to nearest 5)

Nominal 1 in. Thickness Monoglass® Spray-Applied Insulation	Flame Spread	Flame Spread Classification
Run 1	0	5
Run 2	7	
Run 3	3	

(B) Smoke Developed

The areas beneath the smoke developed curve and the related classifications are as follows:
(Classification rounded to nearest 5)

Nominal 1 in. Thickness Monoglass® Spray-Applied Insulation	Smoke Developed	Smoke Developed Classification
Run 1	1	0
Run 2	4	
Run 3	0	

(C) Observations

There was no visible ignition noted on any of the test runs.

6 Conclusion

The samples of Monoglass® Spray-Applied Insulation, submitted by Monoglass Inc., exhibited the following flame spread characteristics when tested in accordance CAN/ULC S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.


A series of three test runs of each material was conducted to conform to the requirements of the National Building Code of Canada.

Sample Material	Flame Spread Classification	Smoke Developed Classification
Nominal 1 in. Thickness Monoglass® Spray-Applied Insulation	5	0

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK TESTING SERVICES NA LTD.

Tested and
Reported by: 
Greg Philp
Technician – Building Products Testing

Reviewed by: 
Scott Leduc, EIT
Test Engineer – Building Products

APPENDIX A

DATA SHEETS

CAN/ULC S102-10 DATA SHEETS

Run 1

Standard: ULC S102

Page 1 of 2

Client: Monoglass
Date: 02 13 13
Project Number: 101028947
Test Number: 1
Operator: Greg Philp

Specimen ID: Spray applied fiberglass Insulation 1 in thick applied to hardiboard

TEST RESULTS

FLAMESPREAD INDEX: 0

SMOKE DEVELOPED INDEX: 0

SPECIMEN DATA . . .

Time to Ignition (sec): 0
Time to Max FS (sec): 73
Maximum FS (mm): 23.2
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 310
Time to Max Temperature (sec): 593
Total Fuel Burned (cubic feet): 48.00

FS*Time Area (M*min): 0.2
Smoke Area (%A*min): 2.2
Unrounded FSI: 0.4
Unrounded SDI: 1.3

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0
Red Oak Smoke Area (%A*min): 168.3

Tested By: CS

Reviewed By: SL

CAN/ULC S102-10 DATA SHEETS

Run 1

Page 2 of 2

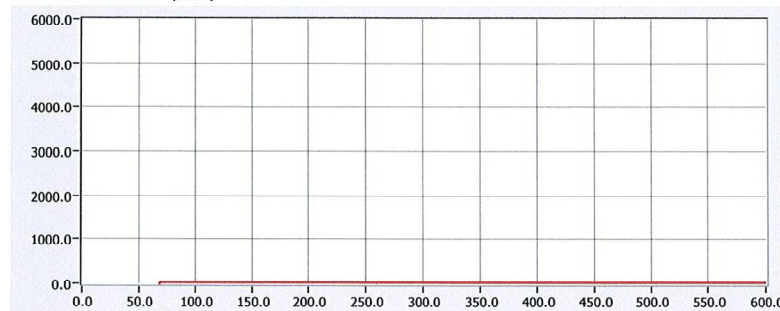
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Specimen ID: Spray applied fiberglass Insulation 1 in

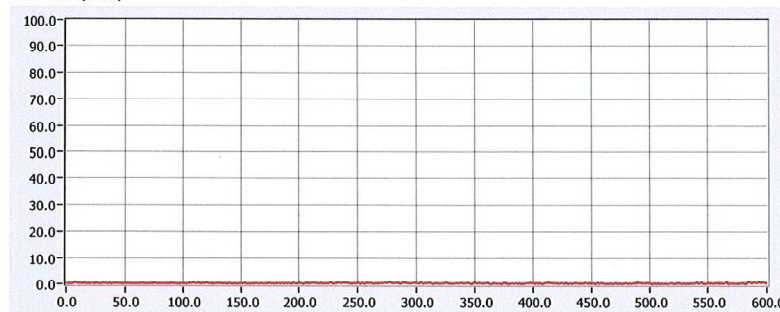
Test No.: 1

Standard: ULC S102

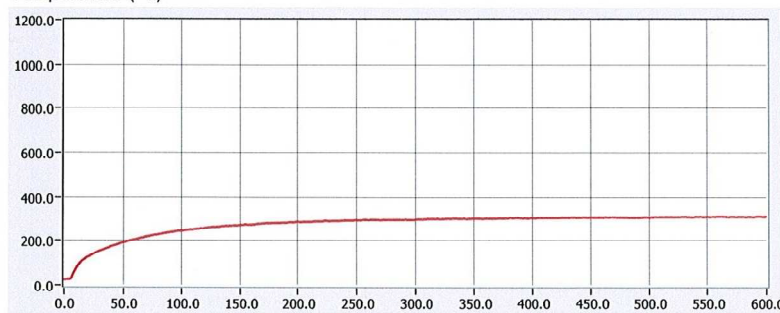
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By:

Reviewed By:

CAN/ULC S102-10 DATA SHEETS
Run 2

Standard: ULC S102

Page 1 of 2

Client: Monoglass
Date: 02 13 2013
Project Number: 101028947
Test Number: 2
Operator: Greg Philp

Specimen ID: Spray applied fiberglass insulation 1 in thick applied to
hardboard

TEST RESULTS

FLAMESPREAD INDEX: 5

SMOKE DEVELOPED INDEX: 5

SPECIMEN DATA . . .

Time to Ignition (sec): 0
Time to Max FS (sec): 92
Maximum FS (mm): 429.7
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 308
Time to Max Temperature (sec): 588
Total Fuel Burned (cubic feet): 48.00

FS*Time Area (M*min): 3.8
Smoke Area (%A*min): 6.9
Unrounded FSI: 7.1
Unrounded SDI: 4.1

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0
Red Oak Smoke Area (%A*min): 168.3

Tested By:

Reviewed By:

CAN/ULC S102-10 DATA SHEETS

Run 2

Page 2 of 2

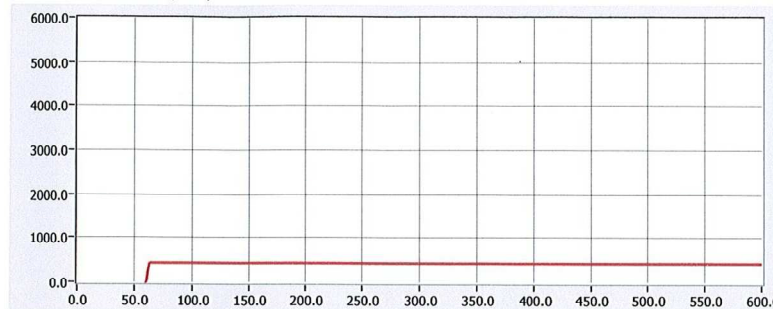
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Specimen ID: Spray applied fiberglass insulation 1 in

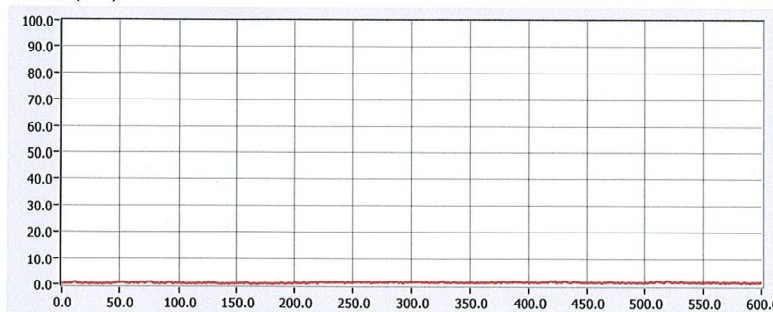
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Standard: ULC S102

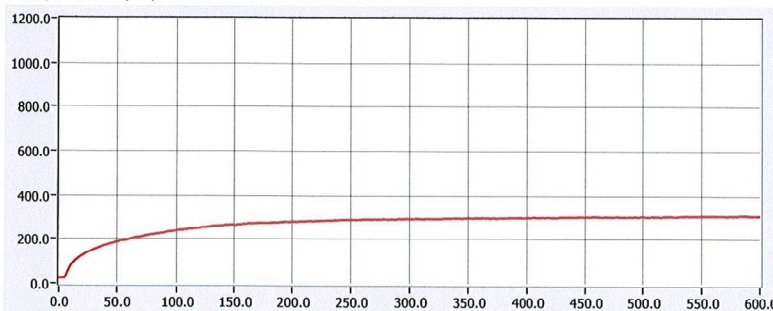
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By:

Reviewed By:

CAN/ULC S102-10 DATA SHEETS
Run 3

Standard: ULC S102

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Client: Monoglass
Date: 02 13 2013
Project Number: 101028947
Test Number: 3
Operator: Greg Philp

Specimen ID: Spray applied fiberglass insulation1 in thick applied to hadiboard

TEST RESULTS

FLAMESPREAD INDEX: 5

SMOKE DEVELOPED INDEX: 0

SPECIMEN DATA . . .

Time to Ignition (sec): 0
Time to Max FS (sec): 497
Maximum FS (mm): 182.4
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 305
Time to Max Temperature (sec): 570
Total Fuel Burned (cubic feet): 48.00

FS*Time Area (M*min): 1.7
Smoke Area (%A*min): 0.0
Unrounded FSI: 3.1
Unrounded SDI: 0.0

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0
Red Oak Smoke Area (%A*min): 168.3

Tested By: 

Reviewed By: 

CAN/ULC S102-10 DATA SHEETS

Run 3

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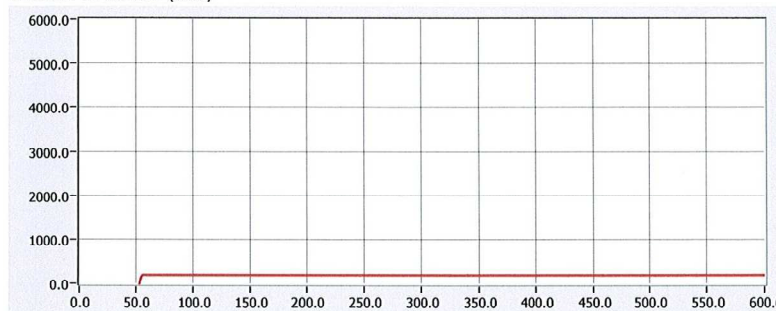
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Specimen ID: Spray applied fiberglass insulation1 in

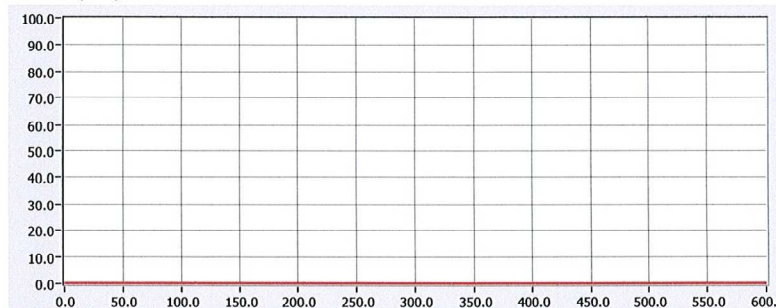
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Standard: ULC S102

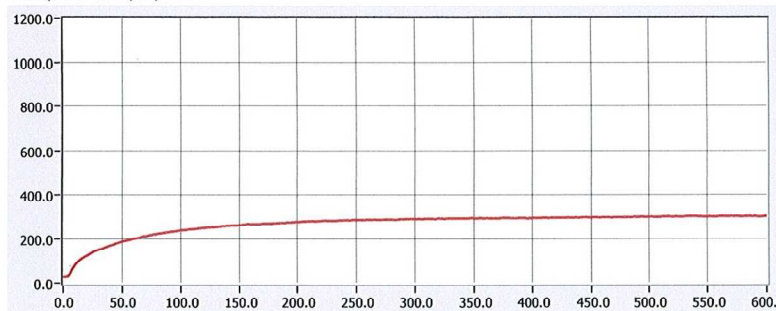
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By: gs

Reviewed By: 9v

REVISION SUMMARY

DATE	PAGE(S)	SUMMARY
February 20, 2013	All	Original Issue Date