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ARCONIC ARCHITECTURAL PRODUCTS, LLC

TEST REPORT

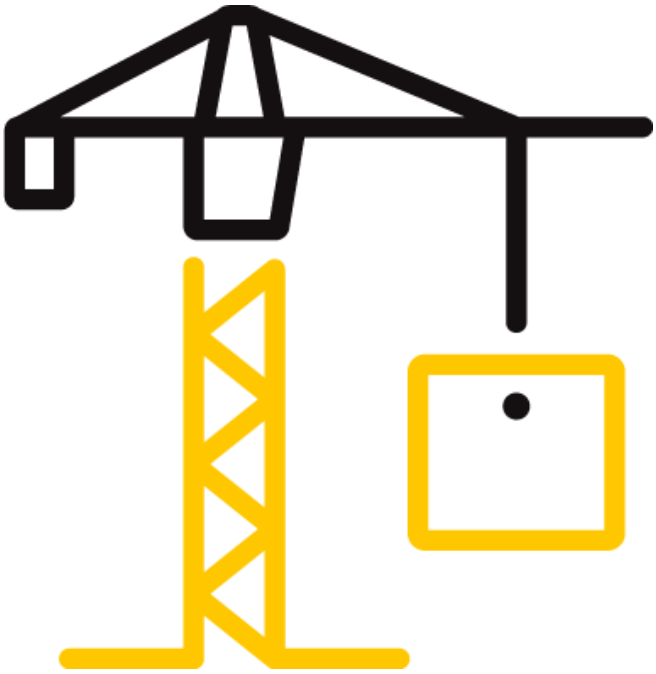
SCOPE OF WORK
REPORT OF TESTING 3MM THICK PRE-PAINTED BONDED SHEET AS3000B ALUMINIUM PANELS FOR COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING CRITERIA: CAN/ULC S102-18, STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AND ASSEMBLIES.

REPORT NUMBER
104263399COQ-002 R0
TEST DATE(S)
02/28/20 - 02/28/20

ISSUE DATE 02/28/20
REVISION DATE 04/29/20

PAGES
15

DOCUMENT CONTROL NUMBER
GFT-OP-10c (AUGUST 27, 2018)



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TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

REPORT ISSUED TO
ARCONIC ARCHITECTURAL PRODUCTS, LLC
50 INDUSTRIAL BLVD
EASTMAN, GA USA 31023

SECTION 1
SCOPE

Intertek Building & Construction (B&C) was contracted by Arconic Architectural Products, LLC to perform testing in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies on their 3mm thick Pre-painted Bonded Sheet AS3000B Aluminum Panels. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek Testing Services NA Ltd. (Intertek) test facility in Coquitlam, BC Canada.

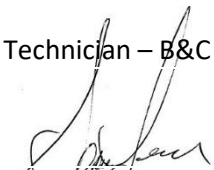
This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2
SUMMARY OF TEST RESULTS

The samples of 3mm thick Pre-painted Bonded Sheet AS3000B Aluminum Panels submitted by Arconic Architectural Products, LLC were tested in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

The product test results are presented in Section 10 of this report.

For INTERTEK B&C:

COMPLETED BY:	Sean Fewer	**REVIEWED BY:**	Greg Philp
TITLE:	Technician – B&C	**TITLE:**	Reviewer – B&C
SIGNATURE:		**SIGNATURE:**	
DATE:	02/28/20	**DATE:**	02/28/20

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SECTION 3
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

SECTION 4
MATERIAL SOURCE/INSTALLATION

Samples were submitted to Intertek directly from the client and were not independently selected for testing and Intertek accepts no responsibility for any inaccuracies provided.

SECTION 5
EQUIPMENT

ASSET #	DESCRIPTION	MODEL	CAL DUE DATE
WH2189	Photocell	Huygen 856	11/27/20
WH 2190	Smoke Opacity Meter	Huygen	11/27/20
WH 2494	Data Logger	Yokogawa DA100	07/18/20

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Sean Fewer	Intertek B&C
Greg Philp	Intertek B&C

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SECTION 7
TEST CALCULATIONS

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 Rating:

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.

SECTION 8
TEST SPECIMEN 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°C (73.4 $\pm$ 5°F) and 50 $\pm$ 5% relative humidity.

The sample material was identified by the client as 3mm thick Pre-painted Bonded Sheet AS3000B Aluminum Panels. Each panel measured 24 in. wide by 8 ft. long.

For each trial run, three 8 ft. long by 24 in. wide sample panels were butted together and placed on the upper ledge of the flame spread tunnel to form the required 24 ft. sample length. 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 S102-18.

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SECTION 9
TEST RESULTS

(A) Flame Spread

The resultant flame spread ratings are as follows:
(Rating rounded to nearest 5)

3mm thick Pre-painted Bonded Sheet AS3000B Aluminum panels	Flame Spread	Flame Spread Rating
Run 1	2	0
Run 2	1	
Run 3	1	

(B) Smoke Developed

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

3mm thick Pre-painted Bonded Sheet AS3000B Aluminum panels	Smoke Developed	Smoked Developed Classification
Run 1	5	5
Run 2	4	
Run 3	4	

(C) Observations

During the test runs, surface ignition occurred between 217 and 236 seconds; the flame began to progress along the sample until it reached the maximum flame spread.

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SECTION 10
CONCLUSION

The samples of 3mm thick Pre-painted Bonded Sheet AS3000B Aluminum Panels submitted by Arconic Architectural Products, LLC exhibited the following flame spread characteristics when tested in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

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

Sample Material	Flame Spread Rating	Smoke Developed Classification
3mm thick Pre-painted Bonded Sheet AS3000B Aluminum Panels	0	5

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.

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TEST DATA (6 PAGES)

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TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 1

Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Arconic Architectural Products
Date: 27 Feb 2020
Project Number: 104263399
Test Number: 1
Operator: Sean Fewer

Specimen ID and Description:

3 mm thick Reynodual Panels

TEST RESULTS

FLAMESPREAD INDEX: 2.000
SMOKE DEVELOPED INDEX: 5.000

SPECIMEN DATA

Time to Ignition (sec): 219.013
Time to Max Flame Spread (min): 4.184
Maximum Flame Spread (mm): 0.160
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 265.960
Time to Max Temperature (sec): 599.013
Total Fuel Burned (cubic feet): 44.008

Flame Spread*Time Area (M*min): 0.935
Smoke Area (%A*min): 7.854
Unrounded FSI: 1.730
Unrounded SDI: 4.949

CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 44

Calibrated Smoke Area (%A*min): 158.700

15 point Heptane average for E84-19b
5 point Red Oak average for S102

Tested by: SF Reviewed by:

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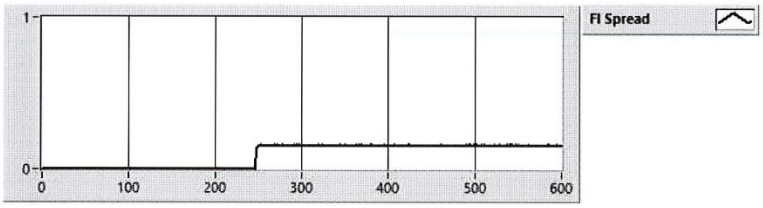
TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 1

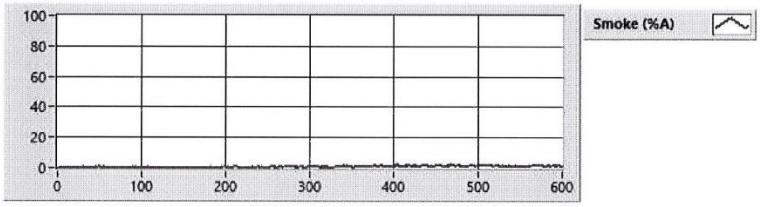
Client: Aronic | Project Number: 104263399

Test Number: 1 | Test Standard: ULC S102

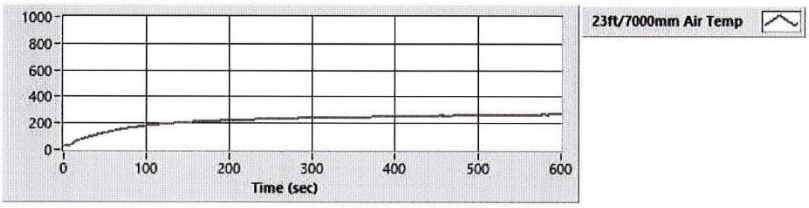
FLAME SPREAD



SMOKE (%A)



TEMPERATURE



Tested by: SF _____ Reviewed by: _____

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TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 2

Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Arconic Architectural Products
Date: 28 Feb 2020
Project Number: 104263399
Test Number: 2
Operator: Sean Fewer

Specimen ID and Description:

3 mm thick Reynodual Painted Aluminium Panels

TEST RESULTS

FLAMESPREAD INDEX: 1.000
SMOKE DEVELOPED INDEX: 4.000

SPECIMEN DATA

Time to Ignition (sec): 236.990
Time to Max Flame Spread (min): 5.933
Maximum Flame Spread (mm): 0.190
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 262.110
Time to Max Temperature (sec): 598.989
Total Fuel Burned (cubic feet): 43.962

Flame Spread*Time Area (M*min): 0.775
Smoke Area (%A*min): 5.827
Unrounded FSI: 1.435
Unrounded SDI: 3.672

CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 44

Calibrated Smoke Area (%A*min): 158.700

15 point Heptane average for E84-19b
5 point Red Oak average for S102

Tested by: SF Reviewed by:

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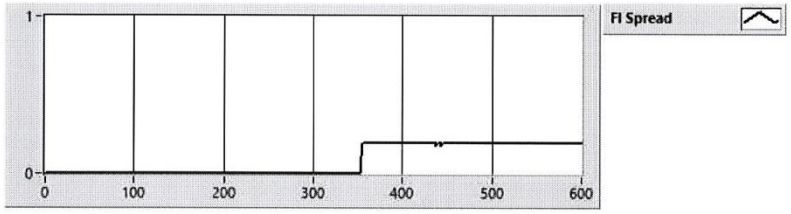
TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 2

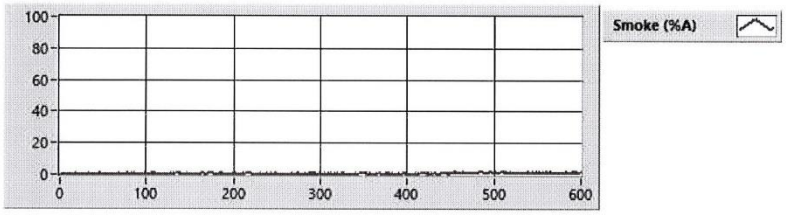
Client: Arconic | Project Number: 104263399

Test Number: 2 | Test Standard: ULC S102

FLAME SPREAD



SMOKE (%A)



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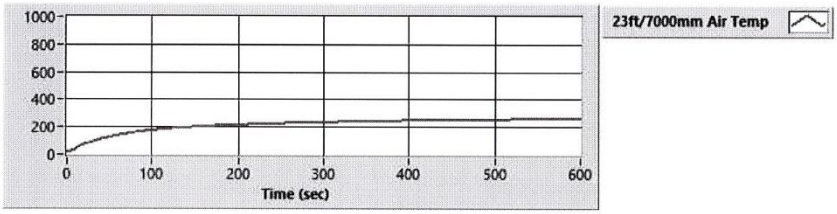

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TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
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Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 3

Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Arconic Architectural Products
Date: 28 Feb 2020
Project Number: 104263399
Test Number: 3
Operator: Sean Fewer

Specimen ID and Description:

3 mm thick Reynodual Painted Aluminium Panels

TEST RESULTS

FLAMESPREAD INDEX: 1.000
SMOKE DEVELOPED INDEX: 4.000

SPECIMEN DATA

Time to Ignition (sec): 217.039
Time to Max Flame Spread (min): 5.867
Maximum Flame Spread (mm): 0.160
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 268.480
Time to Max Temperature (sec): 593.039
Total Fuel Burned (cubic feet): 43.920

Flame Spread*Time Area (M*min): 0.662
Smoke Area (%A*min): 5.581
Unrounded FSI: 1.225
Unrounded SDI: 3.517

CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 44

Calibrated Smoke Area (%A*min): 158.700

15 point Heptane average for E84-19b
5 point Red Oak average for S102

Tested by: SF Reviewed by:

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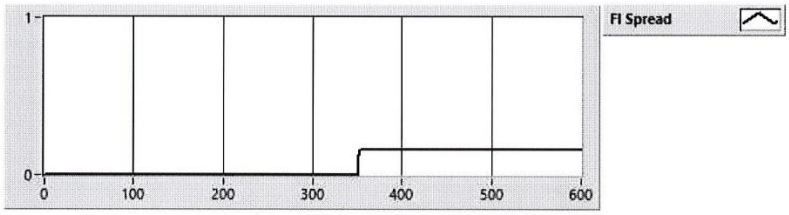
TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS, LLC
Report No.: 104263399COQ-002 R0
Date: 02/28/20

CAN/ULC S102-18 DATA SHEETS
Run 3

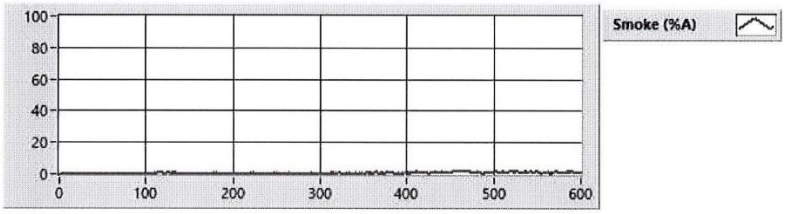
Client: Arconic | Project Number: 104263399

Test Number: 3 | Test Standard: ULC S102

FLAME SPREAD



SMOKE (%A)



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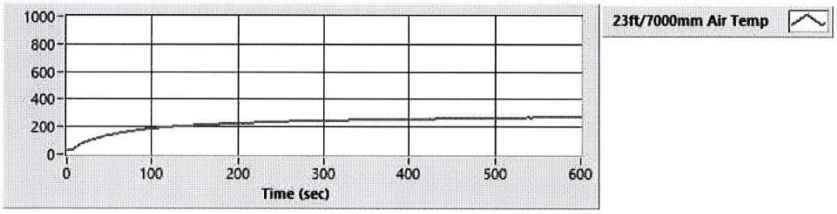

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SECTION 12
PHOTOGRAPHS

Photo No. 1
Pre-Test

Photo No. 2
Post Test

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SECTION 13
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	02/28/20	N/A	Original Report Issue
1	02/24/20	1,2,4,5&6	Added Product Name
2	04/29/20	1,2,4,5&6	Changed Product Identifier to Pre-painted Bonded Sheet AS3000B