

NUEWAL INC. TEST REPORT

SCOPE OF WORK

REPORT OF TESTING NUEBOARD PVC SIDING (BLACKWOOD) FOR COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING CRITERIA: CAN/ULC S102.2-18, STANDARD METHOD OF TESTING FOR SURFACE BURNING CHARACTERISTICS OF FLOORCOVERING, AND MISCELLANEOUS MATERIALS AND ASSEMBLIES.

REPORT NUMBER

104051780COQ-002 R0

TEST DATE(S)

09/23/19 - 09/23/19

ISSUE DATE

09/24/19

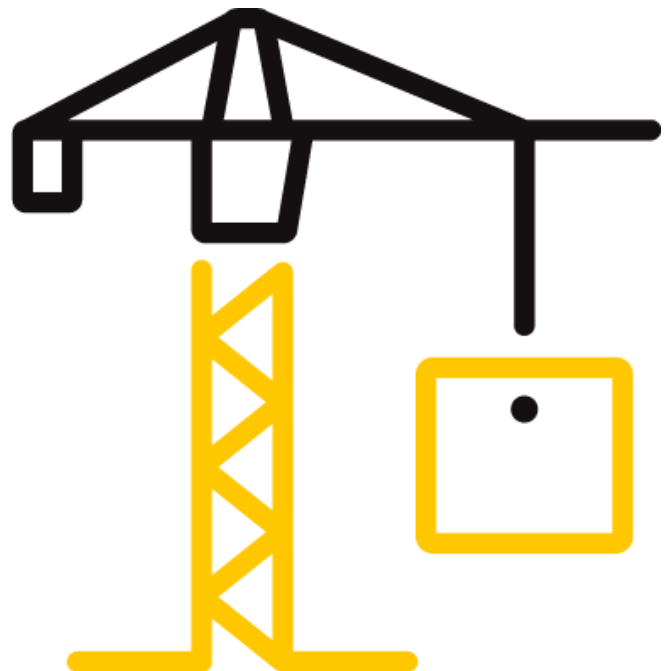
PAGES

15

DOCUMENT CONTROL NUMBER

GFT-OP-10c (AUGUST 27, 2018)

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TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

REPORT ISSUED TO

NUEWAL INC.

386 YONGE STREET

TORONTO, ON M5B 0A5 CANADA

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Nuewal Inc. to perform testing in accordance with S102.2-18 Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies., on their NueBoard PVC Siding (Blackwood). 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 NueBoard PVC Siding (Blackwood) submitted by Nuewal Inc. were tested in accordance with S102.2-18, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies.

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

For INTERTEK B&C:

COMPLETED BY:	Sean Fewer
TITLE:	Technician – B&C
SIGNATURE:	
DATE:	09/24/19

REVIEWED BY:	Greg Philp
TITLE:	Senior Technician – B&C
SIGNATURE:	
DATE:	09/24/19

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TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance with the following:

CAN/ULC S102.2-18, *Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies.*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Intertek representative, Valerie Fernandes sampled and selected test samples on August 23, 2019. The sampling was conducted at Nuewal Inc. facility located at Unit 7A 174 bartley Drive North York ON.

SECTION 5

EQUIPMENT

ASSET #	DESCRIPTION	MODEL	CAL DUE DATE
WH 2189	Photocell	Huygen 856	05/14/20
WH 2190	Smoke Opacity Meter	Huygen	05/14/20
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

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

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 $23 \pm 3^{\circ}\text{C}$ ($73.4 \pm 5^{\circ}\text{F}$) and $50 \pm 5\%$ relative humidity.

The sample material was identified by the client as 0.66 in. thick by $6 \frac{3}{4}$ in. wide by 19 ft. long NueBoard PVC Siding (Blackwood).

For each trial run, $17 \frac{3}{8}$ in. wide by 24 ft. of sample material was placed on the floor of the tunnel. A layer of 6mm reinforced cement board was placed on the upper ledges of the tunnel, the tunnel lid was lowered into place, and the samples were then tested in accordance with CAN/ULC S102.2-18.

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

SECTION 9**TEST RESULTS****(A) Flame Spread**

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

NueBoard PVC Siding	Flame Spread	Flame Spread Rating
Run 1	48	55
Run 2	59	
Run 3	64	

(B) Smoke Developed

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

NueBoard PVC Siding	Smoke Developed	Smoke Developed Classification
Run 1	443	470
Run 2	472	
Run 3	498	

(C) Observations

During the test runs, surface ignition occurred between 25 and 42 seconds; the flame then began to progress along the sample length until it reached the maximum flame spread. This was the case for all three test runs.

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

SECTION 10

CONCLUSION

The samples of NueBoard PVC Siding (Blackwood) submitted by Nuewal Inc. exhibited the following flame spread characteristics when tested in accordance with S102.2-18, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous 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
NueBoard PVC Siding	55	470

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.



Total Quality. Assured.

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

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Coquitlam, BC V3K 7C1

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SECTION 11

TEST DATA (6 PAGES)

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

CAN/ULC S102.2-18 DATA SHEETS

Run 1

Standard: Canadian ULC S102.2

Page 1 of 2

Client: Nuewal
Date: 09 23 2019
Project Number: 104051780
Test Number: 1
Operator: Sean Fewer
Specimen ID: Vinyl siding system

TEST RESULTS

FLAMESPREAD INDEX: 50

SMOKE DEVELOPED INDEX: 445

SPECIMEN DATA . . .

Time to Ignition (sec): 42
Time to Max FS (sec): 355
Maximum FS (mm): 5782.4
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): 358
Max Temperature (C): 422
Time to Max Temperature (sec): 600
Total Fuel Burned (cubic feet): 45.70

FS*Time Area (M*min): 25.7
Smoke Area (%A*min): 697.8
Unrounded FSI: 47.6
Unrounded SDI: 443.0

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 48.0
Red Oak Smoke Area (%A*min): 157.5

Tested By: SF

Reviewed By: [Signature]

TEST REPORT FOR NUEWAL INC.
Report No.: 104051780COQ-002 R0
Revision Date: 09/24/19

CAN/ULC S102.2-18 DATA SHEETS Run 1

Page 2 of 2

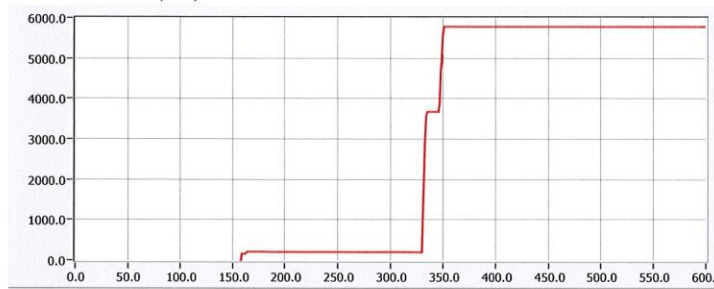
Client: Nuewal

Specimen ID: Vinyl siding system

Test No.: 104051780

Standard: Canadian ULC S102.2

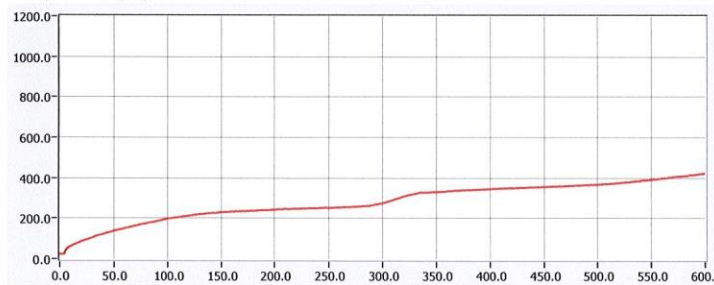
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)
600

Tested By: SF

Reviewed By: [Signature]

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

CAN/ULC S102.2-18 DATA SHEETS

Run 2

Standard: Canadian ULC S102.2

Page 1 of 2

Client: Nuewal

Date: 09 23 2019

Project Number: 104051780

Test Number: 2

Operator: Sean Fewer

Specimen ID: Vinyl siding system

TEST RESULTS

FLAMESPREAD INDEX: 60

SMOKE DEVELOPED INDEX: 470

SPECIMEN DATA . . .

Time to Ignition (sec): 33

Time to Max FS (sec): 292

Maximum FS (mm): 5786.6

Time to 527 C (sec): Never Reached

Time to End of Tunnel (sec): 299

Max Temperature (C): 498

Time to Max Temperature (sec): 600

Total Fuel Burned (cubic feet): 45.70

FS*Time Area (M*min): 31.7

Smoke Area (%A*min): 744.0

Unrounded FSI: 59.1

Unrounded SDI: 472.4

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 48.0

Red Oak Smoke Area (%A*min): 157.5

Tested By: SEF

Reviewed By: [Signature]

TEST REPORT FOR NUEWAL INC.
Report No.: 104051780COQ-002 R0
Revision Date: 09/24/19

CAN/ULC S102-18 DATA SHEETS Run 2

Page 2 of 2

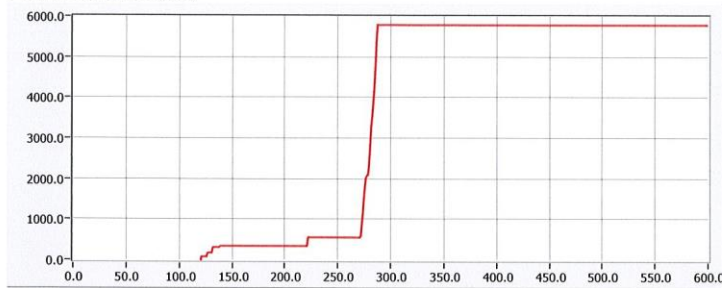
Client: Nuewal

Specimen ID: Vinyl siding system

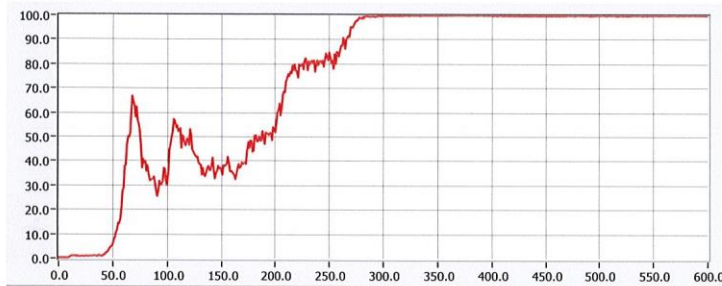
Test No.: 104051780

Standard: Canadian ULC S102.2

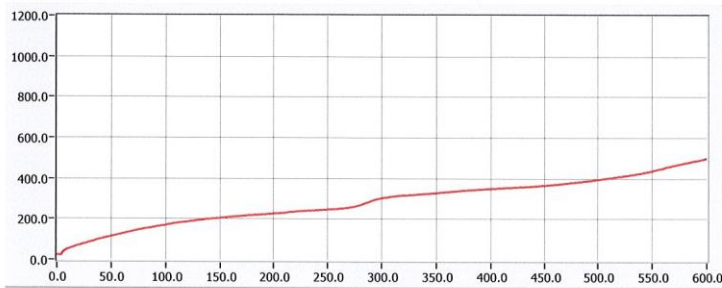
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By: SF

Reviewed By: [Signature]

TEST REPORT FOR NUEWAL INC.

Report No.: 104051780COQ-002 R0

Revision Date: 09/24/19

CAN/ULC S102.2-18 DATA SHEETS

Run 3

Standard: Canadian ULC S102.2

Page 1 of 2

Client: Nuewal
Date: 09 23 2019
Project Number: 104051780
Test Number: 3
Operator: Sean Fewer
Specimen ID: Vinyl siding system

TEST RESULTS

FLAMESPREAD INDEX: 65

SMOKE DEVELOPED INDEX: 500

SPECIMEN DATA . . .

Time to Ignition (sec): 25
Time to Max FS (sec): 286
Maximum FS (mm): 5787.2
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): 291
Max Temperature (C): 475
Time to Max Temperature (sec): 600
Total Fuel Burned (cubic feet): 45.70

FS*Time Area (M*min): 33.7
Smoke Area (%A*min): 785.2
Unrounded FSI: 63.5
Unrounded SDI: 498.5

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 48.0
Red Oak Smoke Area (%A*min): 157.5

Tested By: SF

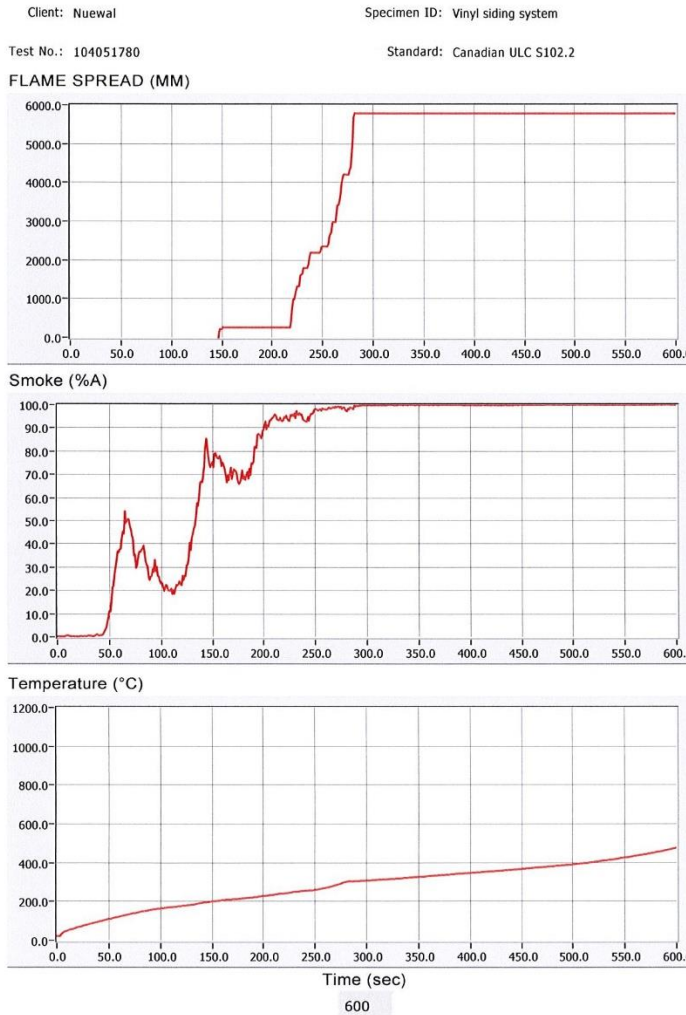
Reviewed By: [Signature]

TEST REPORT FOR NUEWAL INC.
Report No.: 104051780COQ-002 R0
Revision Date: 09/24/19

CAN/ULC S102.2-18 DATA SHEETS

Run 3

Page 2 of 2



Tested By: SF

Reviewed By: [Signature]



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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/24/19	N/A	Original Report Issue