

CONCRETE LCDA TEST REPORT

SCOPE OF WORK

REPORT OF TESTING CLASSIC PANBETON LCDA CONCRETE BOARD 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

104207812COQ-001 R0

TEST DATE(S)

03/09/20 - 03/09/20

ISSUE DATE

03/17/20

PAGES

15

DOCUMENT CONTROL NUMBER

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TEST REPORT FOR CONCRETE LCDA

Report No.: 104207812COQ-001 R0

Date: 03/17/20

REPORT ISSUED TO

**CONCRETE LCDA
8 RUE COPEERNIC
AVRILLE, 49240 FRANCE**

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Concrete LCDA 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 Classic Panbeton LCDA Concrete Board. 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.

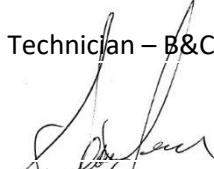
SECTION 2

SUMMARY OF TEST RESULTS

The samples of Classic Panbeton LCDA Concrete Board submitted by Concrete LCDA 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
TITLE:	Technician – B&C
SIGNATURE:	
DATE:	03/17/20

REVIEWED BY:	Greg Philp
TITLE:	Reviewer – B&C
SIGNATURE:	
DATE:	03/17/20

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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

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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 Classic Panbeton LCDA Concrete Board measuring $\frac{1}{2}$ in. thick by 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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TEST RESULTS

(A) Flame Spread

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

Classic Panbeton LCDA Concrete Board	Flame Spread	Flame Spread Rating
Run 1	3	0
Run 2	0	
Run 3	0	

(B) Smoke Developed

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

Classic Panbeton LCDA Concrete Board	Smoke Developed	Smoked Developed Classification
Run 1	0	0
Run 2	3	
Run 3	3	

(C) Observations

During the test runs, surface ignition occurred between 313 and 445 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 Classic Panbeton LCDA Concrete Board submitted by Concrete LCDA 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
Classic Panbeton LCDA Concrete Board	0	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.



Total Quality. Assured.

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Coquitlam, BC V3K 7C1

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SECTION 11

TEST DATA (6 PAGES)

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Report No.: 104207812COQ-001 R0

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CAN/ULC S102-18 DATA SHEETS

Run 1

Page 1 of 2

Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Concrete LCDA
Date: 09 Mar 2020
Project Number: 104207812
Test Number: 1
Operator: Sean Fewer

Specimen ID and Description:

Classic Panbeton LCDA Concrete Board

TEST RESULTS

FLAMESPREAD INDEX: 3.000
SMOKE DEVELOPED INDEX: 0.000

SPECIMEN DATA

Time to Ignition (sec): 313.583
Time to Max Flame Spread (min): 5.493
Maximum Flame Spread (mm): 0.340
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 272.330
Time to Max Temperature (sec): 590.582
Total Fuel Burned (cubic feet): 44.321

Flame Spread*Time Area (M*min): 1.531
Smoke Area (%A*min): 0.000
Unrounded FSI: 2.832
Unrounded SDI: 0.000

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: ST

Reviewed by: SE

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CAN/ULC S102-18 DATA SHEETS

Run 1

Page 2 of 2

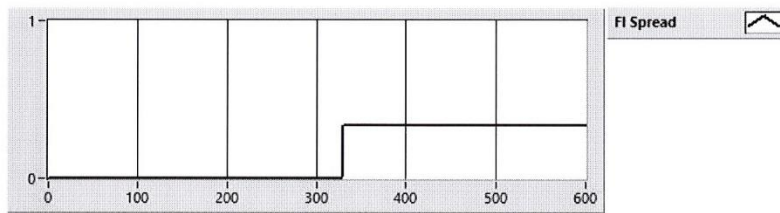
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Project Number: 104207812

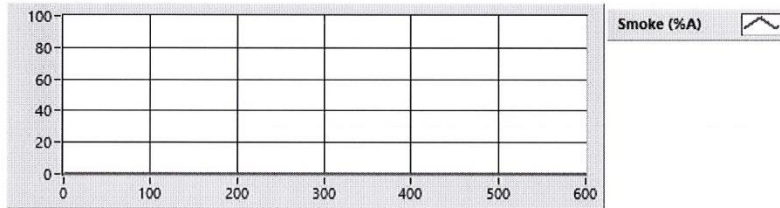
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Test Standard: ULC S102

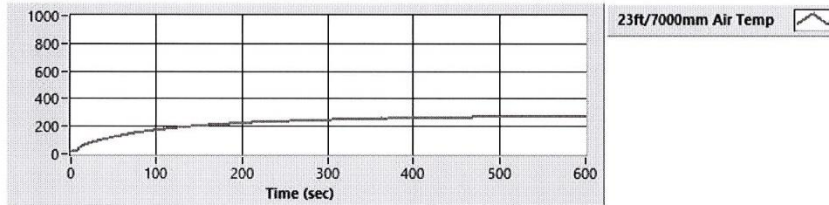
FLAME SPREAD



SMOKE (%A)



TEMPERATURE



Tested by: SF

Reviewed by: [Signature]

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CAN/ULC S102-18 DATA SHEETS

Run 2

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Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Concrete LCDA
Date: 09 Mar 2020
Project Number: 104207812
Test Number: 2
Operator: Sean Fewer

Specimen ID and Description:

LCDA Concrete board

TEST RESULTS

FLAMESPREAD INDEX: 0.000
SMOKE DEVELOPED INDEX: 3.000

SPECIMEN DATA

Time to Ignition (sec): 389.341
Time to Max Flame Spread (min): 9.572
Maximum Flame Spread (mm): 0.440
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 268.980
Time to Max Temperature (sec): 598.340
Total Fuel Burned (cubic feet): 44.306

Flame Spread*Time Area (M*min): 0.200
Smoke Area (%A*min): 5.062
Unrounded FSI: 0.370
Unrounded SDI: 3.190

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: [Signature]

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CAN/ULC S102-18 DATA SHEETS Run 2

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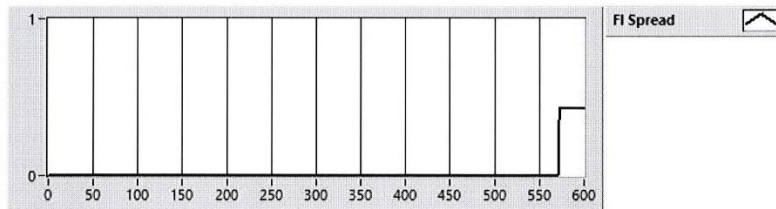
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Project Number: 104207812

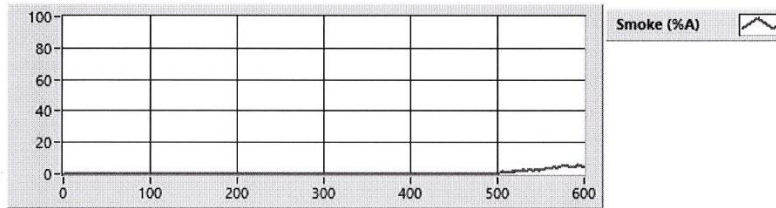
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Test Standard: ULC S102

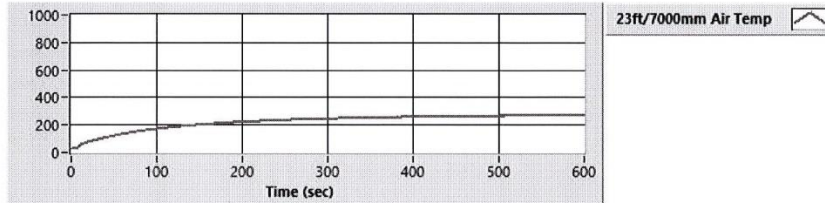
FLAME SPREAD



SMOKE (%A)



TEMPERATURE



Tested by: SF

Reviewed by: [Signature]

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CAN/ULC S102-18 DATA SHEETS

Run 3

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Standard: ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory
Client: LCDA Concrete
Date: 09 Mar 2020
Project Number: 104207812
Test Number: 3
Operator: Sean Fewer

Specimen ID and Description:

LCDA Concrete board

TEST RESULTS

FLAMESPREAD INDEX: 0.000
SMOKE DEVELOPED INDEX: 3.000

SPECIMEN DATA

Time to Ignition (sec): 444.597
Time to Max Flame Spread (min): 9.577
Maximum Flame Spread (mm): 0.220
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 271.640
Time to Max Temperature (sec): 597.597
Total Fuel Burned (cubic feet): 44.272

Flame Spread*Time Area (M*min): 0.091
Smoke Area (%A*min): 42.093
Unrounded FSI: 0.169
Unrounded SDI: 2.841

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: [Signature]

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CAN/ULC S102-18 DATA SHEETS Run 3

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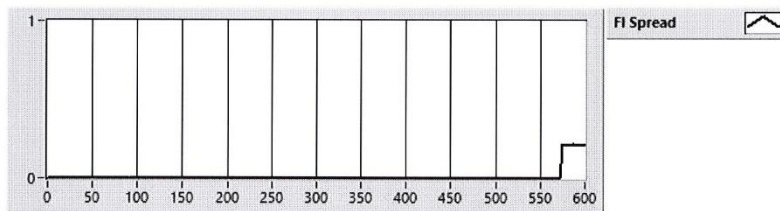
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Project Number: 104207812

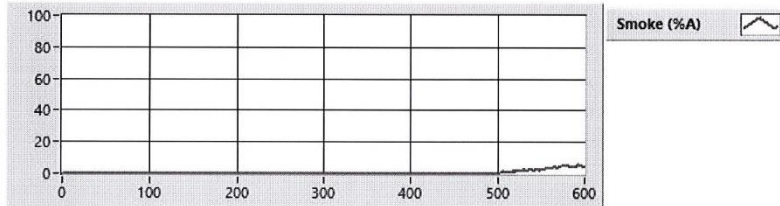
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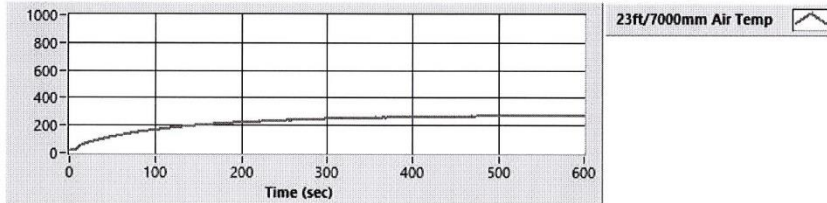
FLAME SPREAD



SMOKE (%A)



TEMPERATURE



Tested by: SF

Reviewed by: [Signature]

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SECTION 12

PHOTOGRAPHS

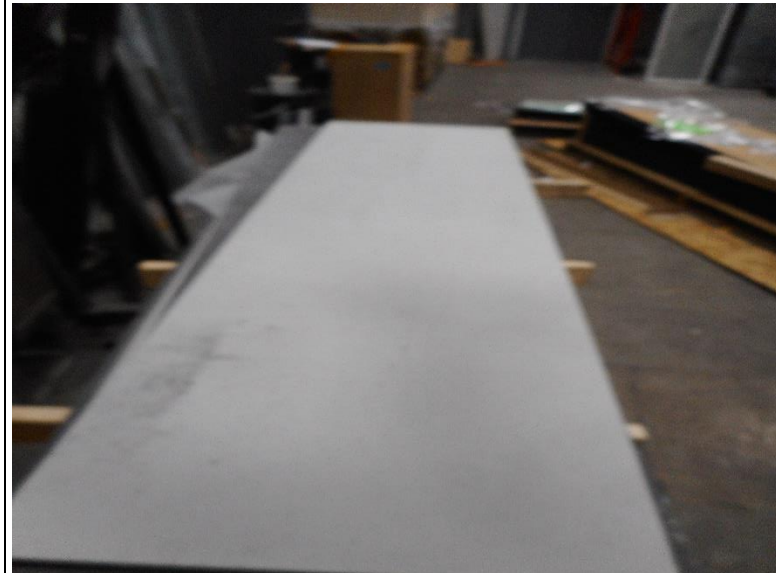


Photo No. 1
Pre-Test



Photo No. 2
Post Test



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REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	03/17/20	N/A	Original Report Issue