

# Primacoustic (a division of Radial Engineering Ltd.)

## TEST REPORT

### REPORT ISSUED TO

Primacoustic (a division of Radial Engineering Ltd.)  
1588 Kebet Way  
Port Coquitlam, BC V3C 5M5

### SCOPE OF WORK

Report of testing Beige Primacoustic Broadway Fabric Wrapped Acoustical Panels 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.

### REPORT NUMBER

103113609COQ-001a

### ISSUE DATE

17-July-2017

### PAGES

14

### DOCUMENT CONTROL NUMBER

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## TEST REPORT FOR PRIMACOUSTIC (A DIVISION OF RADIAL ENGINEERING LTD.)

Report No.: 103113609

Date: July 17 2017

1500 Brigantine Drive  
Coquitlam, BC, V3K 7C1

Telephone: 604-520-3321  
Facsimile: 604-524-9186  
www.intertek.com

### CONCLUSION

The samples Primacoustic Broadway Fabric Wrapped Acoustical Panels, submitted by Primacoustic (a division of Radial Engineering Ltd.), were tested in accordance with CAN/ULC S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

The product test results are presented in Section 7 of this report.

**Greg Philp**  
**TECHNICIAN**  
**BUILDING PRODUCTS**

**Riccardo DeSantis**  
**MANAGER**  
**BUILDING PRODUCTS CANADA**

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## SECTION 1

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## **SECTION 2**

### **OBJECTIVE**

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Primacoustic (a division of Radial Engineering Ltd.), to evaluate the surface burning characteristics of Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03). 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 July 17, 2017 and was completed July 17, 2017.

## **SECTION 3**

### **SAMPLE SELECTION**

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. The sample panels were received at the Evaluation Center on July 11, 2017.

## **SECTION 4**

### **SAMPLE ASSEMBLY AND 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 Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03). Each frame measured 2 in. thick by 24 in. wide by 4 ft. long and was beige in color.

For each trial run, six 4 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 S102-10.

## **SECTION 5**

### **TESTING AND EVALUATION METHODS**

#### **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 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 6

### RESULTS AND OBSERVATIONS

#### (A) Flame Spread

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)	Flame Spread	Flame Spread Rating
Run 1	15	15
Run 2	10	
Run 3	21	

#### (B) Smoke Developed

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)	Smoke Developed	Smoke Developed Classification
Run 1	144	145
Run 2	123	
Run 3	166	

#### (C) Observations

During the test runs, surface ignition occurred at 1 second. 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.

## **SECTION 7**

### **CONCLUSION**

The samples of Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03) submitted by Radial Engineering., exhibited the following flame spread characteristics when tested in accordance with CAN/ULC S102-10, 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.

<b>Sample Material</b>	<b>Flame Spread Rating</b>	<b>Smoke Developed Classification</b>
Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)	15	145

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.

## **SECTION 8**

### **APPENDIX A: TEST DATA (6 PAGES)**



**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 1**

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering  
Date: 07 17 2017  
Project Number: 103113609  
Test Number: 1  
Operator: Greg Philp  
Specimen ID: Primacoustic Broadway Fabric wrapped Acoustic Panels F102-2448-03  
(Beige)

**TEST RESULTS**

**FLAMESPREAD INDEX: 15**  
**SMOKE DEVELOPED INDEX: 145**

**SPECIMEN DATA . . .**

Time to Ignition (sec): 1  
Time to Max FS (sec): 26  
Maximum FS (mm): 833.1  
Time to 527 C (sec): Never Reached  
Time to End of Tunnel (sec): Never Reached  
Max Temperature (C): 346  
Time to Max Temperature (sec): 598  
Total Fuel Burned (cubic feet): 46.01  
  
FS\*Time Area (M\*min): 8.1  
Smoke Area (%A\*min): 258.3  
Unrounded FSI: 15.0  
Unrounded SDI: 144.3

**CALIBRATION DATA . . .**

Time to Ignition of Last Red Oak (Sec): 42.0  
Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 1**

Page 2 of 2

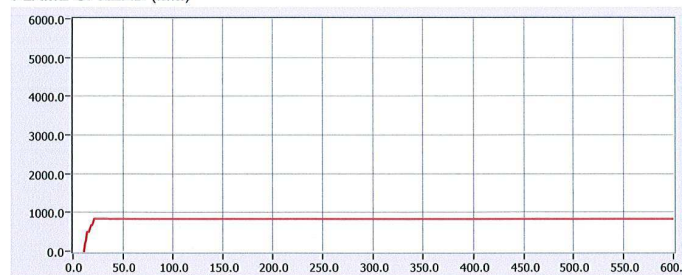
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric wrapped

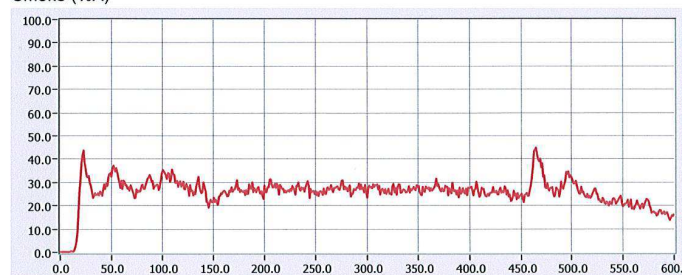
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Standard: ULC S102

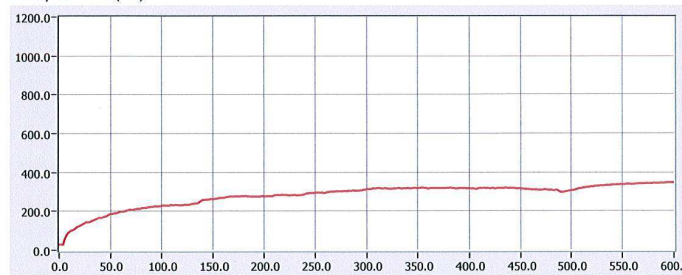
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By: [Signature]

Reviewed By: R.D.

## CAN/ULC S102.2-10 DATA SHEETS

### Run 2

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering

Date: 07 17 2017

Project Number: 103113609

Test Number: 2

Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-03  
(Beige)

#### TEST RESULTS

FLAMESPREAD INDEX: 10

SMOKE DEVELOPED INDEX: 125

#### SPECIMEN DATA . . .

Time to Ignition (sec): 1

Time to Max FS (sec): 36

Maximum FS (mm): 588.1

Time to 527 C (sec): Never Reached

Time to End of Tunnel (sec): Never Reached

Max Temperature (C): 351

Time to Max Temperature (sec): 519

Total Fuel Burned (cubic feet): 46.01

FS\*Time Area (M\*min): 5.6

Smoke Area (%A\*min): 219.5

Unrounded FSI: 10.4

Unrounded SDI: 122.7

#### CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0

Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

## CAN/ULC S102.2-10 DATA SHEETS

### Run 2

Page 2 of 2

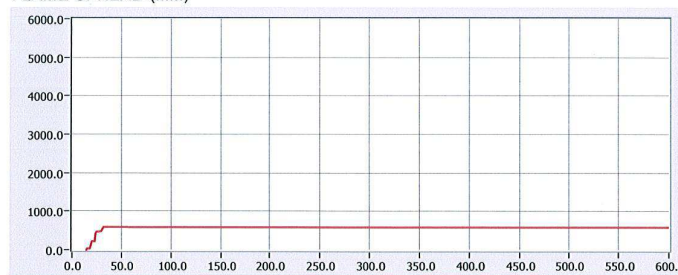
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

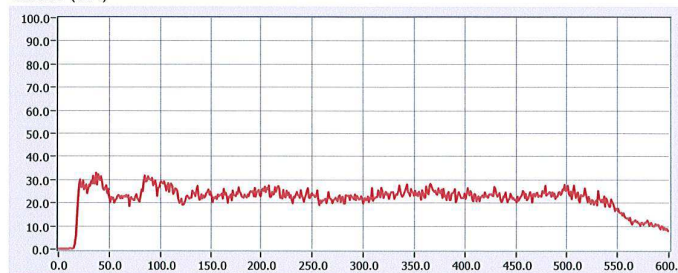
Test No.: 2

Standard: ULC S102

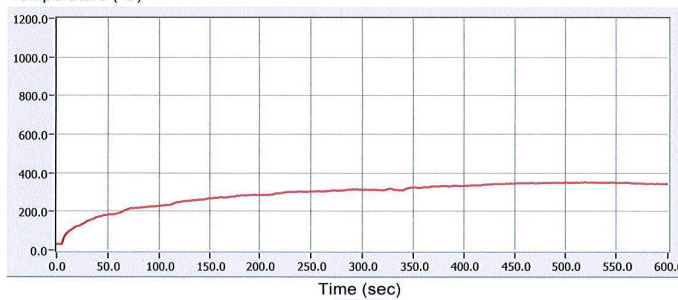
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By: 

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 3**

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering  
Date: 07 17 2017  
Project Number: 103113609  
Test Number: 3  
Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-03  
(Beige)

**TEST RESULTS**

**FLAMESPREAD INDEX: 20**

**SMOKE DEVELOPED INDEX: 165**

**SPECIMEN DATA . . .**

Time to Ignition (sec): 0  
Time to Max FS (sec): 37  
Maximum FS (mm): 1190.2  
Time to 527 C (sec): Never Reached  
Time to End of Tunnel (sec): Never Reached  
Max Temperature (C): 346  
Time to Max Temperature (sec): 596  
Total Fuel Burned (cubic feet): 46.01

FS\*Time Area (M\*min): 11.5  
Smoke Area (%A\*min): 297.8  
Unrounded FSI: 21.2  
Unrounded SDI: 166.4

**CALIBRATION DATA . . .**

Time to Ignition of Last Red Oak (Sec): 42.0  
Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 3**

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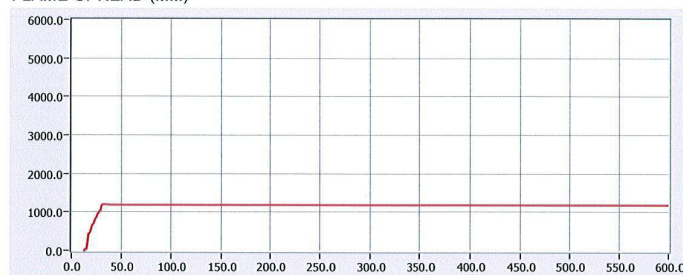
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

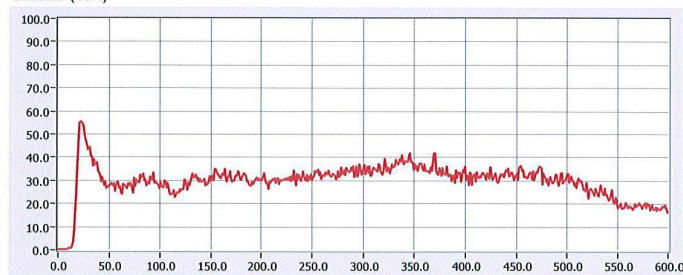
Test No.: 3

Standard: ULC S102

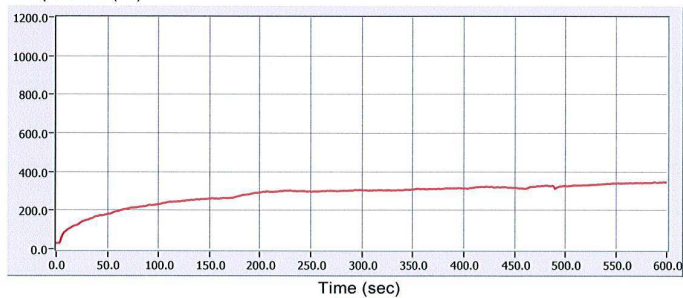
**FLAME SPREAD (MM)**



**Smoke (%A)**




**Temperature (°C)**



Time (sec)

600

Tested By: 

Reviewed By: 

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

# Primacoustic (a division of Radial Engineering Ltd.)

## TEST REPORT

### REPORT ISSUED TO

Primacoustic (a division of Radial Engineering Ltd.)

1588 Kebet Way

Port Coquitlam, BC V3C 5M5

### SCOPE OF WORK

Report of testing Black Primacoustic Broadway Fabric Wrapped Acoustical Panels 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.

### REPORT NUMBER

103113609COQ-001c

### ISSUE DATE

19-July-2017

### PAGES

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## TEST REPORT FOR PRIMACOUSTIC (A DIVISION OF RADIAL ENGINEERING LTD.)

Report No.: 103113609

Date: July 19 2017

1500 Brigantine Drive  
Coquitlam, BC, V3K 7C1

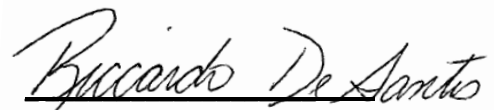
Telephone: 604-520-3321  
Facsimile: 604-524-9186  
www.intertek.com

### CONCLUSION

The samples Black Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00), submitted by Primacoustic (a division of Radial Engineering Ltd.), were tested in accordance with CAN/ULC S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

The product test results are presented in Section 7 of this report.

  
Greg Philp  
TECHNICIAN  
BUILDING PRODUCTS

  
Riccardo DeSantis  
MANAGER  
BUILDING PRODUCTS CANADA

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## **SECTION 2**

### **OBJECTIVE**

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Primacoustic (a division of Radial Engineering Ltd.), to evaluate the surface burning characteristics of Black Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00). 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 July 18, 2017 and was completed July 19, 2017.

## **SECTION 3**

### **SAMPLE SELECTION**

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. The sample panels were received at the Evaluation Center on July 11, 2017.

## **SECTION 4**

### **SAMPLE ASSEMBLY AND 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 Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00). Each panel measured 2 in. thick by 24 in. wide by 4 ft. long and was Black in colour.

For each trial run, six 4 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 S102-10.

## **SECTION 5**

### **TESTING AND EVALUATION METHODS**

#### **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 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 6

### RESULTS AND OBSERVATIONS

#### (A) Flame Spread

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)	Flame Spread	Flame Spread Rating
Run 1	22	25
Run 2	23	
Run 3	25	

#### (B) Smoke Developed

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)	Smoke Developed	Smoke Developed Classification
Run 1	209	180
Run 2	154	
Run 3	179	

#### (C) Observations

During the test runs, surface ignition occurred at 1 second. 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.

## **SECTION 7**

### **CONCLUSION**

The samples of Black Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00) submitted by Primacoustic (a division of Radial Engineering Ltd.), exhibited the following flame spread characteristics when tested in accordance with CAN/ULC S102-10, 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.

<b>Sample Material</b>	<b>Flame Spread Rating</b>	<b>Smoke Developed Classification</b>
Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)	25	180

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.

## **SECTION 8**

### **APPENDIX A: TEST DATA (6 PAGES)**

## CAN/ULC S102.2-10 DATA SHEETS

### Run 1

Standard: ULC S102 Page 1 of 2

Client: Radial Engineering  
Date: 07 18 2017  
Project Number: 103113609  
Test Number: 1  
Operator: Greg Philp  
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-000

#### TEST RESULTS

FLAMESPREAD INDEX: 20  
SMOKE DEVELOPED INDEX: 210

#### SPECIMEN DATA . . .

Time to Ignition (sec): 1  
Time to Max FS (sec): 462  
Maximum FS (mm): 1320.9  
Time to 527 C (sec): Never Reached  
Time to End of Tunnel (sec): Never Reached  
Max Temperature (C): 355  
Time to Max Temperature (sec): 579  
Total Fuel Burned (cubic feet): 46.01  
  
FS\*Time Area (M\*min): 12.0  
Smoke Area (%A\*min): 374.5  
Unrounded FSI: 22.2  
Unrounded SDI: 209.2

#### CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0  
Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

## CAN/ULC S102.2-10 DATA SHEETS

### Run 1

Page 2 of 2

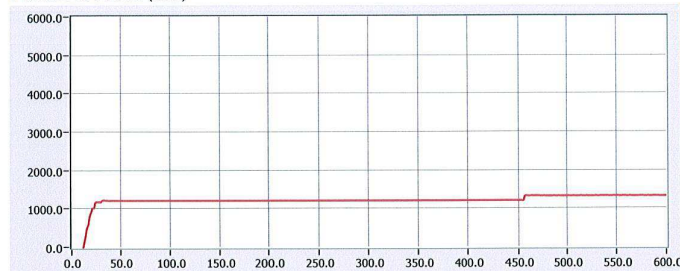
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

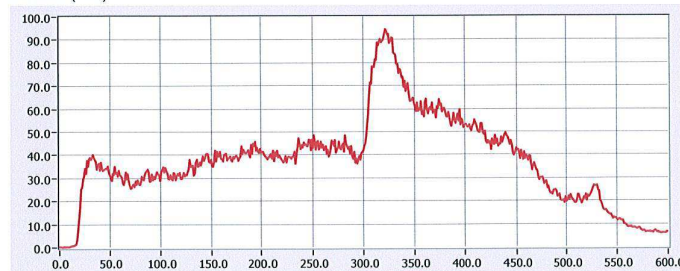
Test No.: 1

Standard: ULC S102

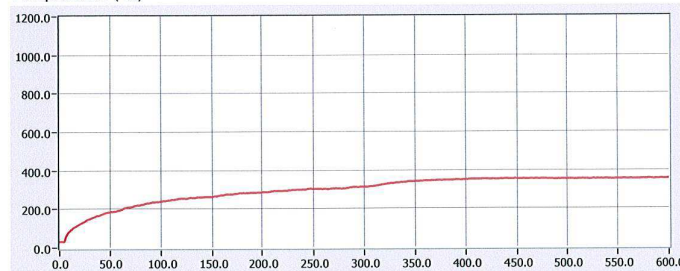
#### FLAME SPREAD (MM)



#### Smoke (%A)



#### Temperature (°C)



Time (sec)

600

Tested By: \_\_\_\_\_

Reviewed By: R.D.



**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 2**

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering  
Date: 07 19 2017  
Project Number: 103113609  
Test Number: 2  
Operator: Greg Philp  
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustical Panels F 102-2448-00  
(Black)

**TEST RESULTS**

**FLAMESPREAD INDEX: 25**

**SMOKE DEVELOPED INDEX: 155**

**SPECIMEN DATA . . .**

Time to Ignition (sec): 1  
Time to Max FS (sec): 31  
Maximum FS (mm): 1299.5  
Time to 527 C (sec): Never Reached  
Time to End of Tunnel (sec): Never Reached  
Max Temperature (C): 349  
Time to Max Temperature (sec): 598  
Total Fuel Burned (cubic feet): 46.01  
  
FS\*Time Area (M\*min): 12.6  
Smoke Area (%A\*min): 276.2  
Unrounded FSI: 23.4  
Unrounded SDI: 154.3

**CALIBRATION DATA . . .**

Time to Ignition of Last Red Oak (Sec): 42.0  
Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: 

## CAN/ULC S102.2-10 DATA SHEETS

### Run 2

Page 2 of 2

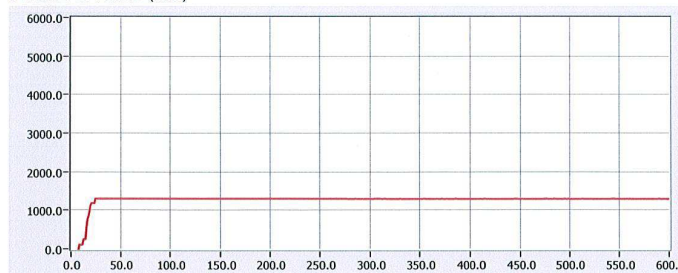
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

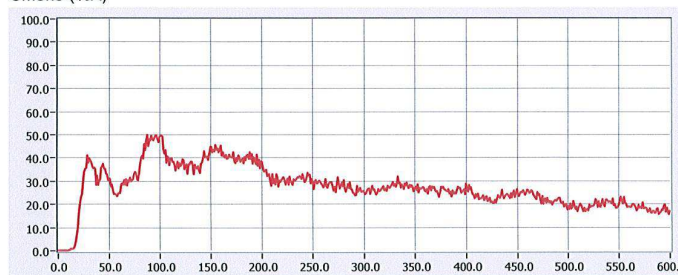
Test No.: 2

Standard: ULC S102

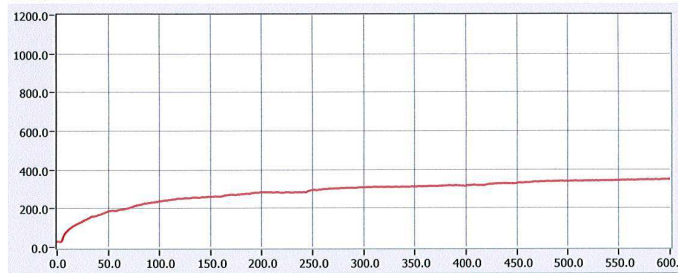
#### FLAME SPREAD (MM)



#### Smoke (%A)



#### Temperature (°C)



Time (sec)

600

Tested By: [Signature]

Reviewed By: R.D.

## CAN/ULC S102.2-10 DATA SHEETS

### Run 3

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering  
Date: 07 19 2017  
Project Number: 103113609  
Test Number: 3  
Operator: Greg Philp  
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustical Paels F 102-2448-00  
(Black)

#### TEST RESULTS

FLAMESPREAD INDEX: 25

SMOKE DEVELOPED INDEX: 180

#### SPECIMEN DATA . . .

Time to Ignition (sec): 1  
Time to Max FS (sec): 30  
Maximum FS (mm): 1404.5  
Time to 527 C (sec): Never Reached  
Time to End of Tunnel (sec): Never Reached  
Max Temperature (C): 344  
Time to Max Temperature (sec): 599  
Total Fuel Burned (cubic feet): 46.01  
FS\*Time Area (M\*min): 13.6  
Smoke Area (%A\*min): 320.6  
Unrounded FSI: 25.2  
Unrounded SDI: 179.1

#### CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0  
Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

## CAN/ULC S102.2-10 DATA SHEETS

### Run 3

Page 2 of 2

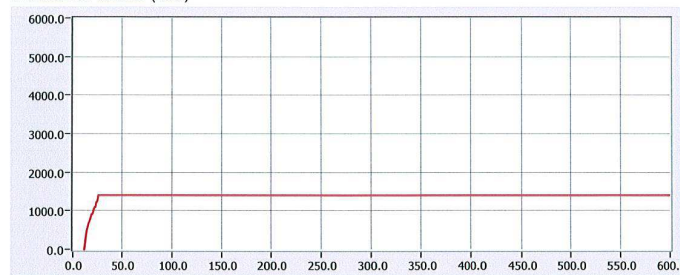
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

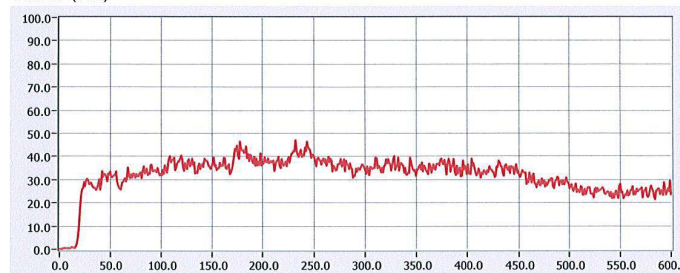
Test No.: 3

Standard: ULC S102

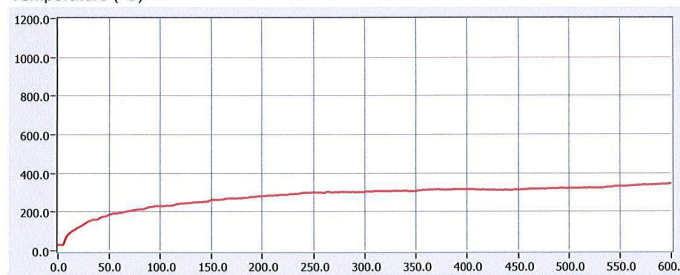
#### FLAME SPREAD (MM)



#### Smoke (%A)



#### Temperature (°C)



Time (sec)

600

Tested By: [Signature]

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

# Primacoustic (a division of Radial Engineering Ltd.)

## TEST REPORT

### REPORT ISSUED TO

Primacoustic (a division of Radial Engineering Ltd.)

1588 Kebet Way

Port Coquitlam, BC V3C 5M5

### SCOPE OF WORK

Report of testing Grey Primacoustic Broadway Fabric Wrapped Acoustical Panels 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.

### REPORT NUMBER

103113609COQ-001b

### ISSUE DATE

18-July-2017

### PAGES

14

### DOCUMENT CONTROL NUMBER

GFT-OP-10b (13-March-2017)

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Total Quality. Assured.

## TEST REPORT FOR PRIMACOUSTIC (A DIVISION OF RADIAL ENGINEERING LTD.)

Report No.: 103113609

Date: July 18 2017

1500 Brigantine Drive  
Coquitlam, BC, V3K 7C1

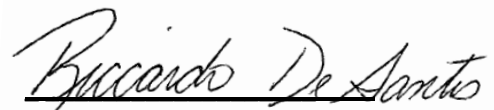
Telephone: 604-520-3321  
Facsimile: 604-524-9186  
www.intertek.com

### CONCLUSION

The samples Grey Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08), submitted by Radial Engineering Ltd., were tested in accordance with CAN/ULC S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

The product test results are presented in Section 7 of this report.

  
Greg Philp  
TECHNICIAN  
BUILDING PRODUCTS

  
Riccardo DeSantis  
MANAGER  
BUILDING PRODUCTS CANADA

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## SECTION 1

### INDEX

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Sample and Assembly Description	4
Testing and Evaluation Methods	5
Results and Observations	6
Conclusion	7
APPENDIX –A TEST DATA	6 Pages

## **SECTION 2**

### **OBJECTIVE**

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Primacoustic (a division of Radial Engineering Ltd.), to evaluate the surface burning characteristics of Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08). 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 July 18, 2017 and was completed July 18, 2017.

## **SECTION 3**

### **SAMPLE SELECTION**

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. The sample panels were received at the Evaluation Center on July 11, 2017.

## **SECTION 4**

### **SAMPLE ASSEMBLY AND 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 Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08). Each panel measured 2 in. thick by 24 in. wide by 4 ft. long and was Grey in colour.

For each trial run, six 4 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 S102-10.



## **SECTION 5**

### **TESTING AND EVALUATION METHODS**

#### **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 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 6

### RESULTS AND OBSERVATIONS

#### (A) Flame Spread

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)	Flame Spread	Flame Spread Rating
Run 1	16	25
Run 2	31	
Run 3	30	

#### (B) Smoke Developed

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

Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)	Smoke Developed	Smoke Developed Classification
Run 1	139	145
Run 2	149	
Run 3	145	

#### (C) Observations

During the test runs, surface ignition occurred at 1 second. 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.

## **SECTION 7**

### **CONCLUSION**

The samples of Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08) submitted by Primacoustic (a division of Radial Engineering Ltd.), exhibited the following flame spread characteristics when tested in accordance with CAN/ULC S102-10, 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.

<b>Sample Material</b>	<b>Flame Spread Rating</b>	<b>Smoke Developed Classification</b>
Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)	25	145

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.

## **SECTION 8**

### **APPENDIX A: TEST DATA (6 PAGES)**

## CAN/ULC S102.2-10 DATA SHEETS

### Run 1

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering

Date: 07 18 2017

Project Number: 103113609

Test Number: 1

Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-008  
(Grey)

#### TEST RESULTS

FLAMESPREAD INDEX: 15

SMOKE DEVELOPED INDEX: 140

#### SPECIMEN DATA . . .

Time to Ignition (sec): 1

Time to Max FS (sec): 35

Maximum FS (mm): 889.5

Time to 527 C (sec): Never Reached

Time to End of Tunnel (sec): Never Reached

Max Temperature (C): 352

Time to Max Temperature (sec): 581

Total Fuel Burned (cubic feet): 46.01

FS\*Time Area (M\*min): 8.6

Smoke Area (%A\*min): 248.4

Unrounded FSI: 16.0

Unrounded SDI: 138.7

#### CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0

Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

## CAN/ULC S102.2-10 DATA SHEETS

### Run 1

Page 2 of 2

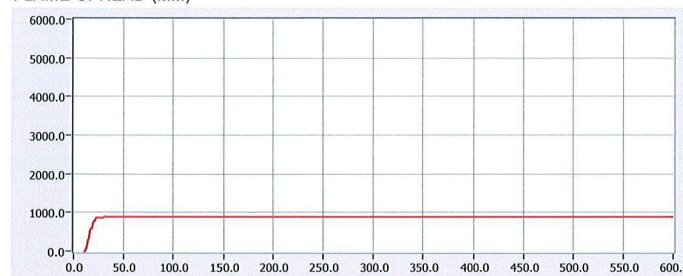
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

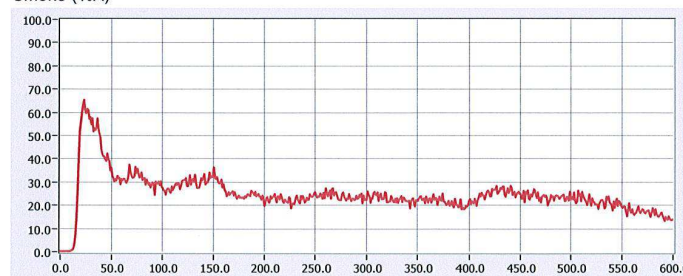
Test No.: 1

Standard: ULC S102

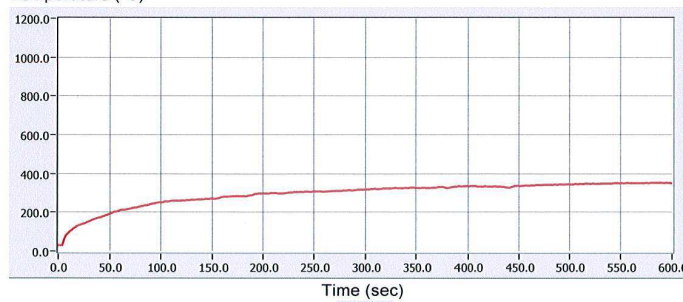
FLAME SPREAD (MM)



Smoke (%A)



Temperature (°C)



Time (sec)

600

Tested By: [Signature]

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 2**

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering

Date: 07 18 2017

Project Number: 103113609

Test Number: 2

Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-008  
(Grey)

**TEST RESULTS**

**FLAMESPREAD INDEX: 30**

**SMOKE DEVELOPED INDEX: 150**

**SPECIMEN DATA . . .**

Time to Ignition (sec): 1

Time to Max FS (sec): 46

Maximum FS (mm): 1746.7

Time to 527 C (sec): Never Reached

Time to End of Tunnel (sec): Never Reached

Max Temperature (C): 351

Time to Max Temperature (sec): 592

Total Fuel Burned (cubic feet): 46.01

FS\*Time Area (M\*min): 16.9

Smoke Area (%A\*min): 267.2


Unrounded FSI: 31.3

Unrounded SDI: 149.3

**CALIBRATION DATA . . .**

Time to Ignition of Last Red Oak (Sec): 42.0

Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety

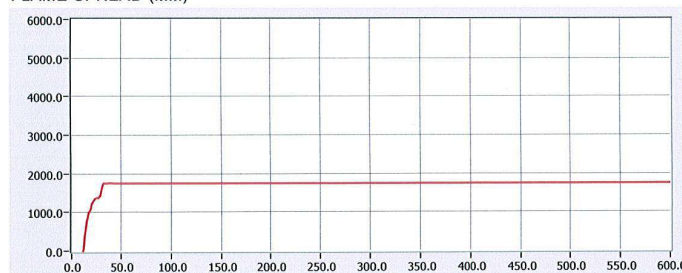
## CAN/ULC S102.2-10 DATA SHEETS

### Run 2

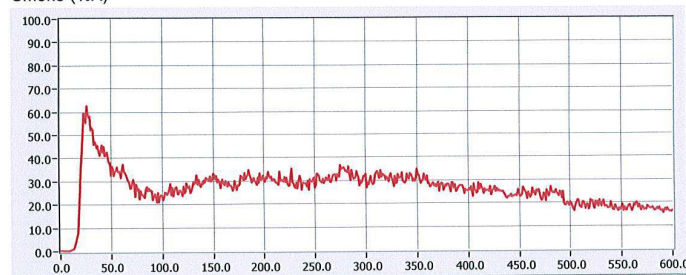
Page 2 of 2

Client: Radial Engineering Specimen ID: Primacoustic Broadway Fabric Wrapped  
Test No.: 2 Standard: ULC S102

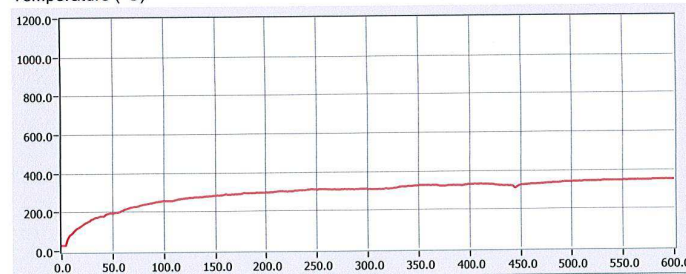
#### FLAME SPREAD (MM)



#### Smoke (%A)



#### Temperature (°C)



Time (sec)

600

Tested By: 

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety



**CAN/ULC S102.2-10 DATA SHEETS**  
**Run 3**

Standard: ULC S102

Page 1 of 2

Client: Radial Engineering

Date: 07 18 2017

Project Number: 103113609

Test Number: 3

Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2448-008  
(Grey)

**TEST RESULTS**

**FLAMESPREAD INDEX: 30**

**SMOKE DEVELOPED INDEX: 145**

**SPECIMEN DATA . . .**

Time to Ignition (sec): 1

Time to Max FS (sec): 36

Maximum FS (mm): 1675.5

Time to 527 C (sec): Never Reached

Time to End of Tunnel (sec): Never Reached

Max Temperature (C): 343

Time to Max Temperature (sec): 597

Total Fuel Burned (cubic feet): 46.01

FS\*Time Area (M\*min): 16.2

Smoke Area (%A\*min): 259.2

Unrounded FSI: 30.0

Unrounded SDI: 144.8

**CALIBRATION DATA . . .**

Time to Ignition of Last Red Oak (Sec): 42.0

Red Oak Smoke Area (%A\*min): 179.0

Tested By: 

Reviewed By: 

## CAN/ULC S102.2-10 DATA SHEETS

### Run 3

Page 2 of 2

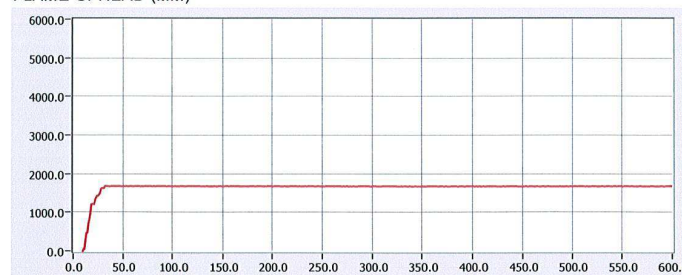
Client: Radial Engineering

Specimen ID: Primacoustic Broadway Fabric Wrapped

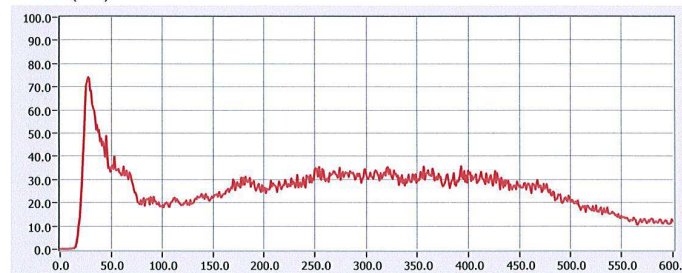
Test No.: 3

Standard: ULC S102

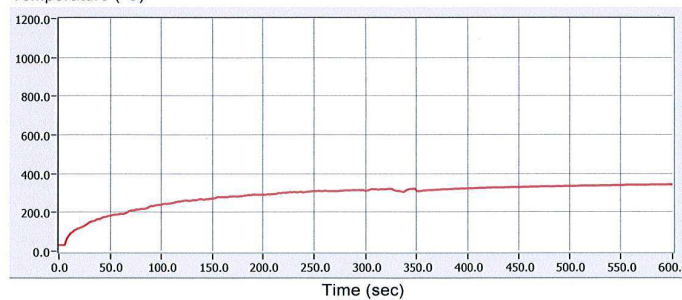
#### FLAME SPREAD (MM)



#### Smoke (%A)



#### Temperature (°C)



Time (sec)

600

Tested By: [Signature]

Reviewed By: R.D.

Benchmark and Non-standard Test Report: Report must be reproduced in its entirety