Flame Spread and Smoke Density

CAN ULC S102

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1. Beige
2. Black
3. Grey

Tested By

Intertek
Total Quality. Assured.
Flame Spread and Smoke Density

CAN ULC S102

Test Results
Beige Fabric Wrap

Tested By

intertek
Total Quality. Assured.
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

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PAGES
14

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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
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 ± 3°C (73.4 ± 5°F) and 50 ± 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)

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)</th>
<th>Flame Spread</th>
<th>Flame Spread Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Run 2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Run 3</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

(B) Smoke Developed

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

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)</th>
<th>Smoke Developed</th>
<th>Smoked Developed Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td>144</td>
<td>145</td>
</tr>
<tr>
<td>Run 2</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>Run 3</td>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>

(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.

<table>
<thead>
<tr>
<th>Sample Material</th>
<th>Flame Spread Rating</th>
<th>Smoke Developed Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 03)</td>
<td>15</td>
<td>145</td>
</tr>
</tbody>
</table>

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

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): 83.1
- Time to 527 C (sec): Never Reached
- Time to End of Tunnel (sec): Never Reached
- Max Temperature (C): 346
- Time to Max Temperature (sec): 596
- Total Fuel Burned (cubic feet): 48.01
- FS*Time Area (M^2*min): 8.1
- Smoke Area (%A/min): 245.3
- Unrounded FS: 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: RD
CAN/ULC S102.2-10 DATA SHEETS

Run 1

Client: Radial Engineering
Specimen ID: Primacoustic Broadway Fabric wrapped
Standard: ULC S102

FLAME SPREAD (MM)

Smoke (%NA)

Temperature (°C)

Time (sec)

600

Tested By: 
Reviewed By: R.D.
CAN/ULC S102.2-10 DATA SHEETS
Run 2

Standard: ULC S102

Client: Radial Engineering
Date: 07 17 2017
Project Number: 193113609
Test Number: 2
Operator: Greg Phlip
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-244B-03 (Beige)

TEST RESULTS

FLAMESPREAD INDEX: 10
SMOKE DEVELOPED INDEX: 125

SPECIMEN DATA . . .

Time to Ignition (sec): 1
Time to Max FS (sec): 96
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): 819
Total Fuel Burned (cubic feet): 46.91

FS*Time Area (M*ft/min): 5.6
Smoke Area (%A*ft/min): 319.8
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*ft/min): 179.0

Tested By: [Signature]
Reviewed By: R D.
CAN/ULC S102.2-10 DATA SHEETS
Run 2

FLAME SPREAD (MM)

Smoke (%A)

Temperature (°C)

Time (sec)

Tested by:  Reviewed by: R.D.
CAN/ULC S102.2-10 DATA SHEETS

Run 3

Standard: ULC S102

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

Specimen ID: Primacoustic Broadway Fabric Wrap Acoustic Panel F102-2448-03 (Beige)

TEST RESULTS

FLAMESPREAD INDEX: 20
SMOKE DEVELOPED INDEX: 165

SPECIMEN DATA . . .

Time to Ignition (sec): 6
Time to Max FS (sec): 37
Maximum FS (mm): 1100.2
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 346
Time to Max Temperature (sec): 496
Total Fuel Burned (cubic feet): 45.01

FS*Time Area (M^2min): 11.5
Smoke Area (%A^2min): 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^2min): 179.0

Tested By: ___________________________ Reviewed By: R. D.
CAN/ULC S102.2-10 DATA SHEETS
Run 3

Test No.: 3

Smoke (%NA)

Temperature (°C)

Tested By: [Signature]
Reviewed By: [Signature]
Flame Spread and Smoke Density

CAN ULC S102

Test Results
Black Fabric Wrap

Tested By

intertek
Total Quality. Assured.
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
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19-July-2017

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14

DOCUMENT CONTROL NUMBER
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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.
SECTION 1

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<tr>
<td>APPENDIX –A TEST DATA</td>
<td>6 Pages</td>
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</tbody>
</table>
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 ± 3°C (73.4 ± 5°F) and 50 ± 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:

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)</th>
<th>Flame Spread</th>
<th>Flame Spread Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Run 2</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Run 3</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

(B) Smoke Developed

The areas beneath the smoke developed curve and the related classifications are as follows:

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)</th>
<th>Smoke Developed</th>
<th>Smoked Developed Classification</th>
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</thead>
<tbody>
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<td>Run 1</td>
<td>209</td>
<td>180</td>
</tr>
<tr>
<td>Run 2</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>Run 3</td>
<td>179</td>
<td></td>
</tr>
</tbody>
</table>

(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.

<table>
<thead>
<tr>
<th>Sample Material</th>
<th>Flame Spread Rating</th>
<th>Smoke Developed Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 00)</td>
<td>25</td>
<td>180</td>
</tr>
</tbody>
</table>

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

Client: Radial Engineering
Date: 07 18 2017
Project Number: 103113609
Test Number: 1
Operator: Greg Phip

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels P102-2448-000

TEST RESULTS
FLAMESPREAD INDEX: 20
SMOKE DEVELOPED INDEX: 210

SPECIMEN DATA . . .

Time to Ignition (sec): 1
Time to Max FSI (sec): 492
Maximum FSI (mm): 1309.9
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 356
Time to Max Temperature (sec): 579
Total Fuel Burned (cubic feet): 46.61
FSI Time Area (M²*min): 12.0
Smoke Area (NA*min): 374.5
Unrounded FSI: 22.2
Unrounded SSI: 399.2

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

Client: Radial Engineering
Specimen ID: Primacoustic Broadway Fabric Wrapped
Standard: ULC S1002

FLAME SPREAD (MM)

Smoke (%A)

Temperature (°C)

Reviewed By: [Signature]

Tested By: [Signature]
CAN/ULC S102.2-10 DATA SHEETS
Run 2

Standard:
ULC S102

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

TEST RESULTS

FLAMESPREAD INDEX: 25
SMOKE DEVELOPED INDEX: 165

SPECIMEN DATA...

Time to Ignition (sec): 1
Time to Max FS (sec): 31
Maximum FS (mm): 129.5
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 349
Time to Max Temperature (sec): 300
Total Fuel Burned (cubic feet): 46.01
FS"Time Area (M²/min): 12.6
Smoke Area (%A²/min): 270.2
Unrounded FSI: 23.4
Unrounded SDF: 164.3

CALIBRATION DATA...

Time to Ignition of Last Red Oak (Sec): 42.0
Red Oak Smoke Area (%A²/min): 179.0

Tested By: 
Reviewed By: R.D.
CAN/ULC S102.2-10 DATA SHEETS
Run 2

Client: Radial Engineering
Specimen ID: Primacoustic Broadway Fabric Wrapped
Standard: ULC 5180

FLAME BPREAD (MM)

Smoke (%IA)

Temperature (°C)

Time (sec)

600

Tested By:  
Reviewed By: R.D.
CAN/ULC S102.2-10 DATA SHEETS
Run 3

Standard: ULC S102

Client: Radial Engineering
Date: 07 10 2017
Project Number: 103113609
Test Number: 3
Operator: Greg Philp
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustical Panels F 102-2448-00 (Black)

TEST RESULTS
FLAMESPREAD INDEX: 26
SMOKE DEVELOPED INDEX: 180

SPECIMEN DATA . . .
Time to Ignition (sec): 1
Time to Max FS (sec): 30
Maximum FS (min): 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 Ft Burned (cubic feet): 46.01
FS*Time Area (M*min): 13.6
Smoke Area (%A*min): 309.6
Unrounded FS: 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: RD.
CAN/ULC S102.2-10 DATA SHEETS
Run 3

[Graphs showing flame spread, smoke, and temperature over time.]

Tested By: [Signature]
Reviewed By: [Signature]

Date: July 19, 2017
Flame Spread and Smoke Density

CAN ULC S102

Test Results
Grey Fabric Wrap

Tested By

Intertek
Total Quality. Assured.
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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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.
SECTION 1

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<td>6 Pages</td>
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</tbody>
</table>
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 ± 3°C (73.4 ± 5°F) and 50 ± 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)

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)</th>
<th>Flame Spread</th>
<th>Flame Spread Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Run 2</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>Run 3</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

(B) Smoke Developed

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

<table>
<thead>
<tr>
<th>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)</th>
<th>Smoke Developed</th>
<th>Smoked Developed Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td>139</td>
<td>145</td>
</tr>
<tr>
<td>Run 2</td>
<td>149</td>
<td></td>
</tr>
<tr>
<td>Run 3</td>
<td>145</td>
<td></td>
</tr>
</tbody>
</table>

(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.

<table>
<thead>
<tr>
<th>Sample Material</th>
<th>Flame Spread Rating</th>
<th>Smoke Developed Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primacoustic Broadway Fabric Wrapped Acoustical Panels (F102 2448 08)</td>
<td>25</td>
<td>145</td>
</tr>
</tbody>
</table>

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

Client: Radial Engineering
Date: 07 18 2017
Project Number: 103113609
Test Number: 1
Operator: Greg Phlp
Specimen ID: Primacoustic Broadway Fabric-Wrapped Acoustic Panels F102-2445-006 (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): 88.5
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 392
Time to Max Temperature (sec): 581
Total Fuel Burned (cubic feet): 46.91
FS*Time Area (M^2*min): 5.6
Smoke Area (%A*min): 344.4
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 2

Standard: ULC S102

Client: Radial Engineering
Date: 07 18 2017
Project Number: 103113609
Test Number: 2
Operator: Greg Philp

Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panels F102-2445-008 (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'°m/min): 16.9
Smoke Area (%A°m/min): 260.2
Unrounded PSI: 31.3
Unrounded SDI: 149.3

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 42.0
Red Oak Smoke Area (%A°m/min): 179.0

Tested By: ________________________  Reviewed By: ________________________

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

Tested By:  
Reviewed By: R.D.
CAN/ULC S102.2-10 DATA SHEETS
Run 3

Standard: ULC S102

Client: Radial Engineering
Date: 07 10 2017
Project Number: 103113609
Test Number:
Operator: Greg Philp
Specimen ID: Primacoustic Broadway Fabric Wrapped Acoustic Panel F102-2448-003 (Grey)

TEST RESULTS

FLAMESPREAD INDEX: 30
SMOKE DEVELOPED INDEX: 145

SPECIMEN DATA . . .

Time to Ignition (sec): 1
Time to Max FS (sec): 95
Maximum FS (mm): 1675.5
Time to 527 C (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (C): 943
Time to Max Temperature (sec): 997
Total Fuel Burned (cubic feet): 46.01

FS*Time Area (M^2*min): 10.2
Smoke Area (%A*min): 219.3
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: R.D.
CAN/ULC S102.2-10 DATA SHEETS
Run 3

Client: Radial Engineering
Specimen ID: Primacoustic Broadway Fabric Wrapped
Test No.: 3
Standard: ULC S102

FLAME SPREAD (MM)

Smoke (%A)

Temperature (°C)

Time (sec)

Tested By: ___________________ Reviewed By: ___________