

**Tested For:** Lone Henriksen  
 Kvadrat A/S  
 Lundbergsvej 10 DK-8400 Ebeltøft  
 Denmark

**Phone:** 011 45 89 53 18 60  
**Fax:**  
**Mobile:**  
**PO#:**  
**Email:** lh@kvadrat.dk

**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** M  
**Test Report:** 3-45692-0

**Key Test:** CAN/ULC-S102

3072

**Client's Identification:**

Style: Ease. Composition: 100% Polyester FR. Weight: 11 g/m<sup>2</sup>.

LE: 2018 V 7/21 DK      PC: ME      CODE: I=1444 F=3072 CLEAN=1050 /dv

**TEST PERFORMED:** CAN/ULC-S102-10 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

**TEST CONDUCTED:**

- Indicative
- Formal

**PRODUCT CATEGORY:**  Composite Panel Material

**BRIEF DESCRIPTION OF TEST METHOD:** The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

**SUMMARY OF TEST PROCEDURE:** The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling above the floor and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m<sup>2</sup>min, FSV=1.85·AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

The results contained in this report relate only to the item(s) tested. The test report shall not be reproduced except in full, without written approval from SGS North America.

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**Completed:** 11/3/2021  
**Code:** M  
**Test Report:** 3-45692-0

**Key Test:** CAN/ULC-S102

3072

**SAMPLE PREPARATION:**

- The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.
- Other: The sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. The specimen was laid over 2" hexagonal wire mesh screen and ¼" rods.

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):

Flame Spread Value (FSV):  
 Smoke Developed Value (SDV):

- FORMAL (Average Value of three replicate tests rounded to the nearest multiple of five points):

Flame Spread Rating (FSR): 0  
 Smoke Developed Classification (SDC): 10

**RESULTS:**

| Specimen # | Flame Spread Value | Smoke Developed Value | Burn Distance (meters) | Time (seconds) |
|------------|--------------------|-----------------------|------------------------|----------------|
| 1          | 0                  | 13                    | 0                      | 0              |
| 2          | 0                  | 10                    | 0                      | 0              |
| 3          | 0                  | 8                     | 0                      | 0              |

**OBSERVATIONS:**

1. No unusual observations
2. No unusual observations
3. No unusual observations

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**Key Test:** CAN/ULC-S102

3072

REMARKS: None.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/jab/dv

NOV 11 2021

Enclosure: 3 Graph Chart (Formal)

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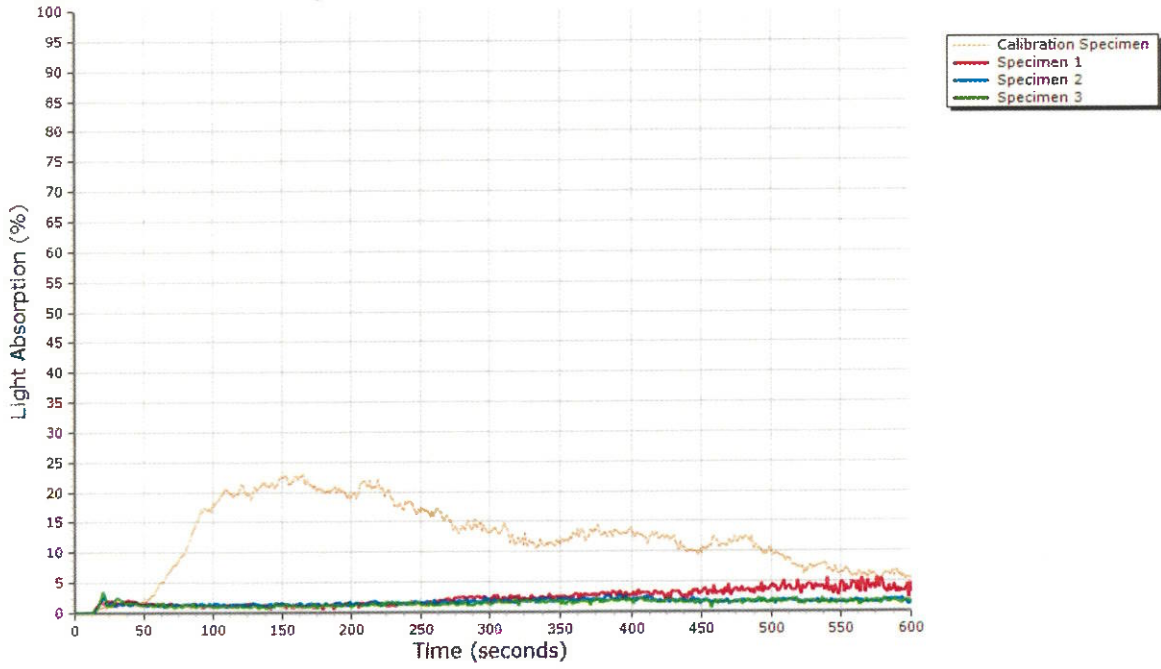
Test Method : CAN S-102  
 Test Report # : 3-45692-0-M  
 Date : 11/3/2021  
 Client : Kvadrat A/S  
 Operator : Jillian Guillem  
 Details of Preparation : The test sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. The specimen was laid over 2" hexagonal wire mesh screen and 1/4" rods.  
 Observations : No unusual observations

|                                    | Specimen 1         | Specimen 2         | Specimen 3         |
|------------------------------------|--------------------|--------------------|--------------------|
| Area Under Flame Curve (m min)     | 0.00               | 0.00               | 0.00               |
| Raw Flame Spread Value (m min)     | 0.00               | 0.00               | 0.00               |
| Rounded Flame Spread Value (m min) | <b>0</b>           | <b>0</b>           | <b>0</b>           |
| Ignition Time                      | <b>00:11 mm:ss</b> | <b>00:10 mm:ss</b> | <b>00:15 mm:ss</b> |
| Area Under Smoke Curve (%A min)    | 16.40              | 11.92              | 9.41               |
| Raw Smoke Developed Value          | 13.27              | 9.64               | 7.62               |
| Rounded Smoke Developed Value      | <b>13</b>          | <b>10</b>          | <b>8</b>           |
| Total Gas Flow(L)                  | 1287.1             | 1287.1             | 1287.2             |
| Total Gas Flow(ft <sup>3</sup> )   | 45.5               | 45.5               | 45.5               |
| Maximum Flame Front Achieved(m)    | 0 (@0s)            | 0 (@0s)            | 0 (@0s)            |

**Flame Spread Rating** : **0**  
**Smoke Developed Classification** : **10**

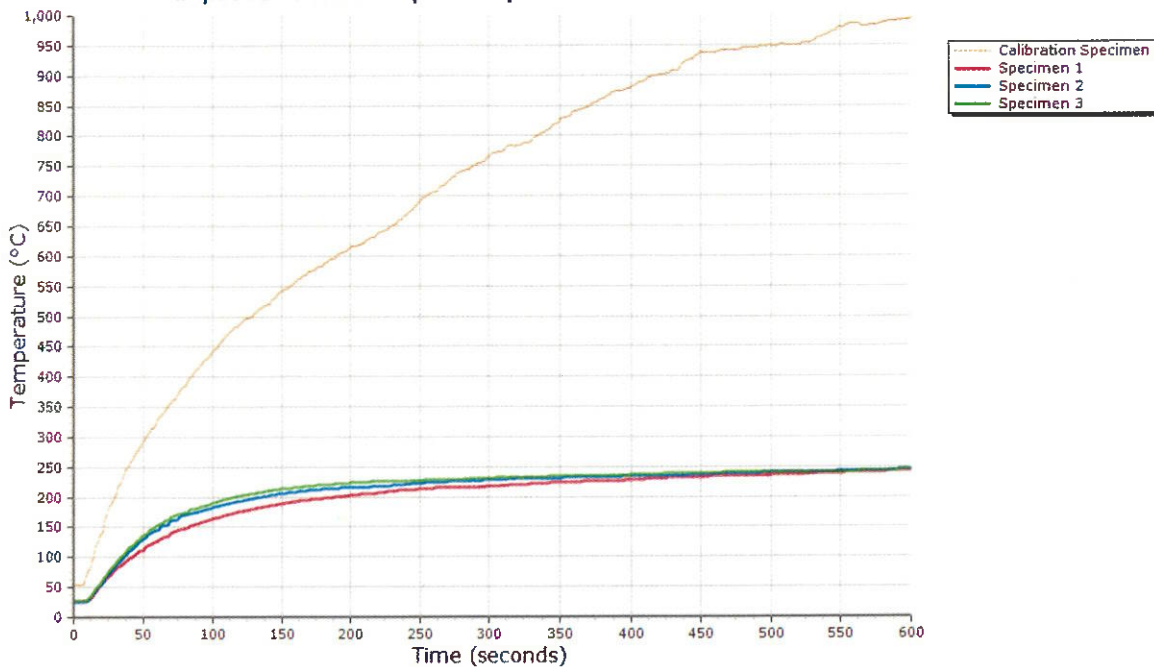
Test Method : CAN S-102  
Test Report # : 3-45692-0-M

**Light Absorption vs. Time**

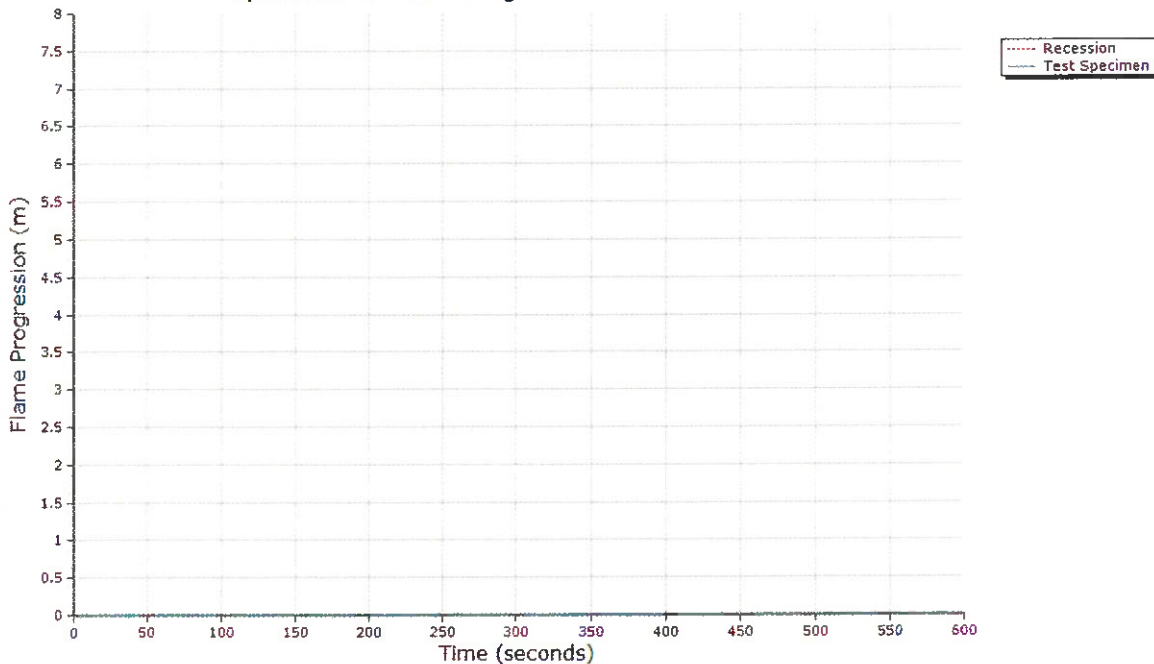


Test Method : CAN S-102  
Test Report # : 3-45692-0-M

### Exposed Thermocouple Temperature vs. Time

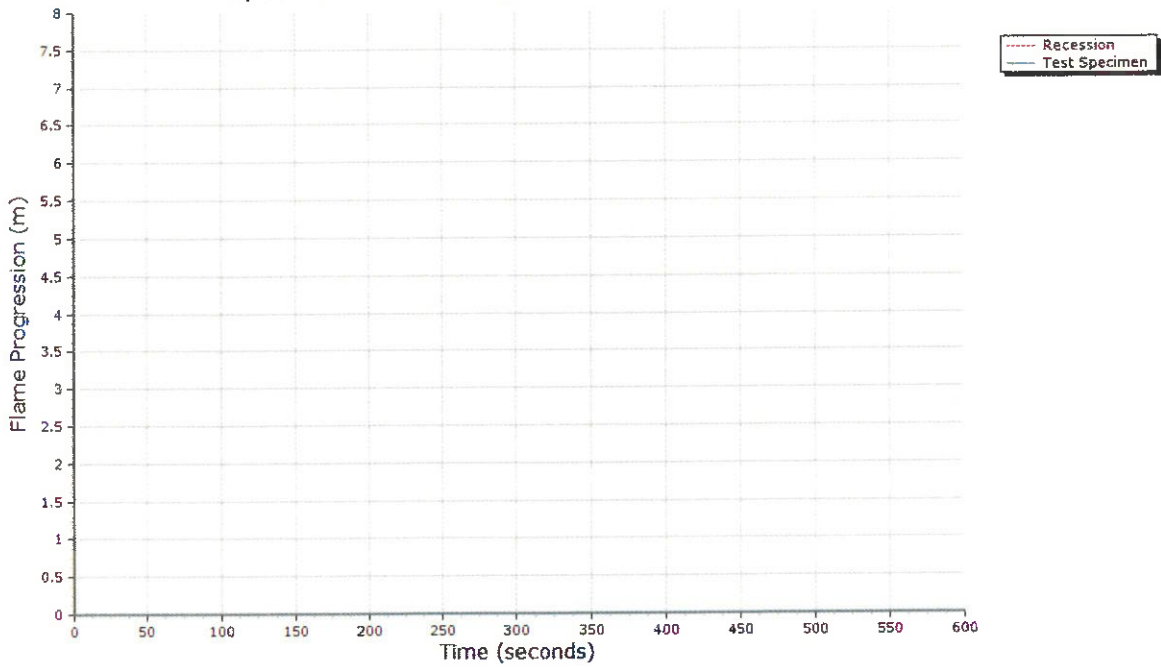


### Specimen 1: Flame Progression vs. Time



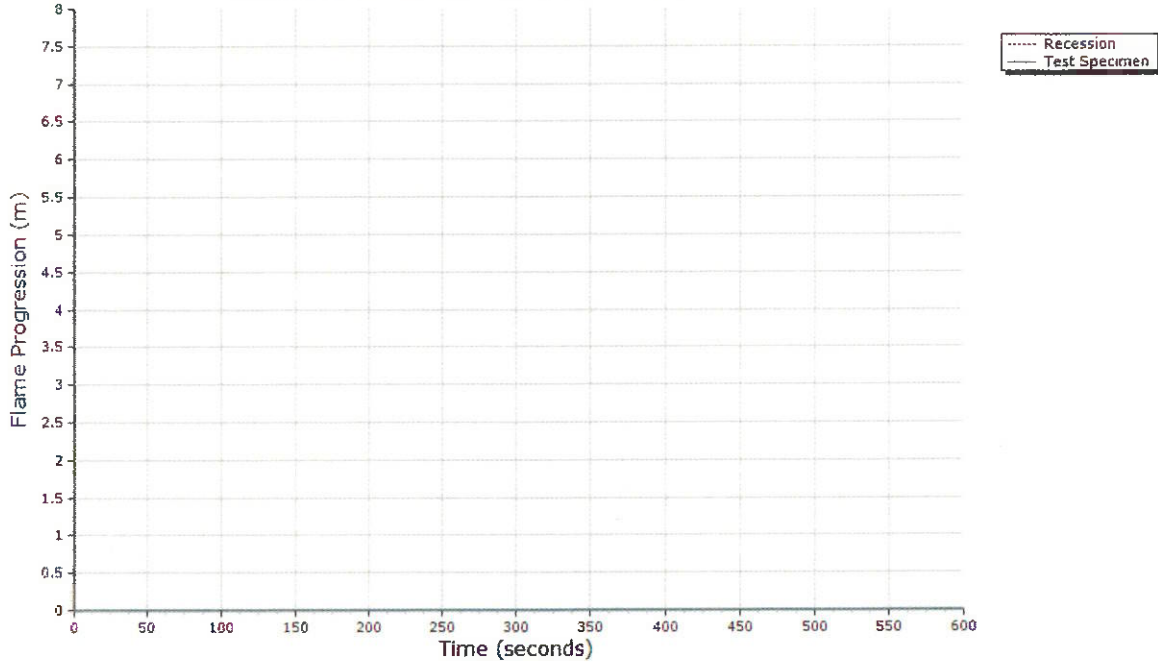
Test Method : CAN S-102  
Test Report # : 3-45692-0-M

**Specimen 2: Flame Progression vs. Time**



Test Method : CAN S-102  
Test Report # : 3-45692-0-M

**Specimen 3: Flame Progression vs. Time**





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**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** N  
**Test Report:** 3-45693-0

**Key Test:** CAN/ULC-S102

1444

**Client's Identification:**

Style: Sosa. Composition: 100% Polyester FR. Weight: 586 g/m<sup>2</sup>.

LE: 2018 V 7/21 DK      PC: ME      CODE: I=1444 F=3072 CLEAN=1050 /dv

**TEST PERFORMED:** CAN/ULC-S102-10 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

**TEST CONDUCTED:**

- Indicative
- Formal

**PRODUCT CATEGORY:**  Composite Panel Material

**BRIEF DESCRIPTION OF TEST METHOD:** The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

**SUMMARY OF TEST PROCEDURE:** The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling above the floor and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m<sup>2</sup>min, FSV=1.85·AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

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**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** N  
**Test Report:** 3-45693-0

**Key Test:** CAN/ULC-S102

1444

**SAMPLE PREPARATION:**

- The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.
- Other: The test sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. Test specimen was laid over 2" hexagonal wire mesh and 1/4" steel rods.

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):

Flame Spread Value (FSV): 0  
 Smoke Developed Value (SDV): 90

- FORMAL (Average Value of three replicate tests rounded to the nearest multiple of five points):

Flame Spread Rating (FSR):  
 Smoke Developed Classification (SDC):

**RESULTS:**

| Specimen # | Flame Spread Value | Smoke Developed Value | Burn Distance (meters) | Time (seconds) |
|------------|--------------------|-----------------------|------------------------|----------------|
| 1          | 0                  | 90                    | 0                      | 0              |
| 2          | NT                 | NT                    | NT                     | NT             |
| 3          | NT                 | NT                    | NT                     | NT             |

**OBSERVATIONS:**

1. Flaming drip and burning on chamber floor.
2. NT
3. NT

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**Code:** N  
**Test Report:** 3-45693-0

**Key Test:** CAN/ULC-S102

1444

REMARKS: NT = Not tested.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

*Theresa MacMillan*  
AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/jab /dv

*Theresa MacMillan*

NOV 11 2021

Enclosure: 3 Graph Chart (Formal)

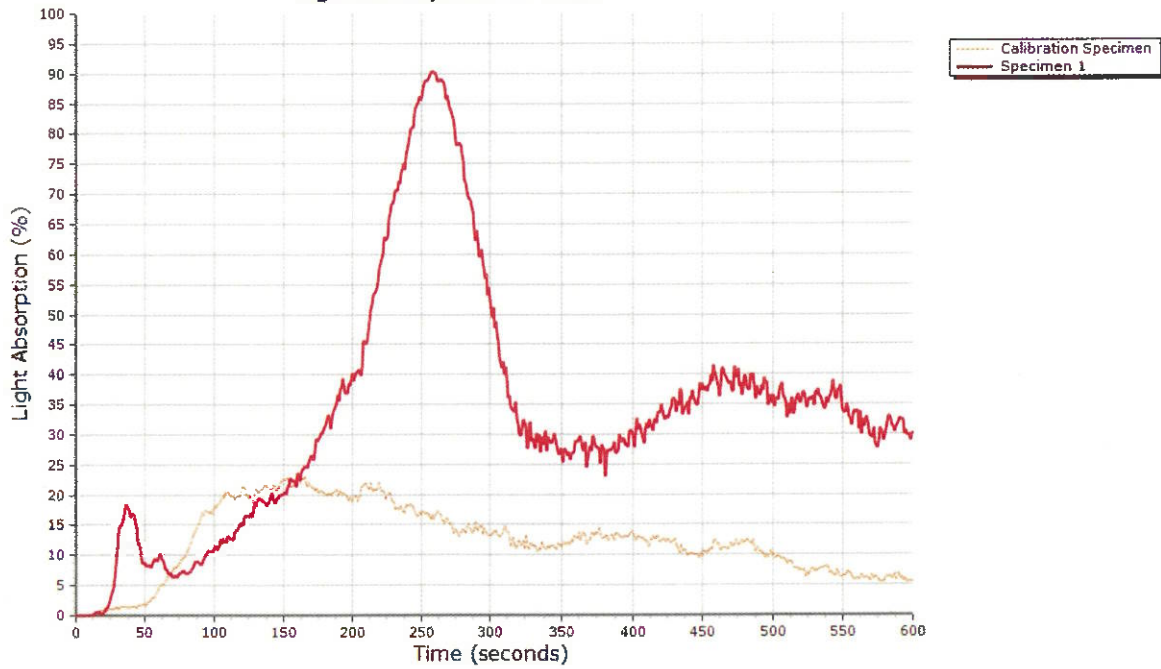
Test Method : CAN S-102  
 Test Report # : 3-45693-0-N  
 Date : 11/3/2021  
 Client : Kvadrat A/S  
 Operator : Andrew Niemczyk  
 Details of Preparation : The test sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. The specimen was laid over 2" hexagonal wire mesh screen and 1/4" rods.  
 Observations : Flaming drip and burning on chamber floor

|                                    | <b>Specimen 1</b>  |
|------------------------------------|--------------------|
| Area Under Flame Curve (m min)     | 0.00               |
| Raw Flame Spread Value (m min)     | 0.00               |
| Rounded Flame Spread Value (m min) | <b>0</b>           |
| Ignition Time                      | <b>00:07 mm:ss</b> |
| Area Under Smoke Curve (%A min)    | 333.12             |
| Raw Smoke Developed Value          | 269.46             |
| Rounded Smoke Developed Value      | <b>269</b>         |
| Total Gas Flow(L)                  | 1287               |
| Total Gas Flow(ft <sup>3</sup> )   | 45.5               |
| Maximum Flame Front Achieved(m)    | 0 (@0s)            |

**Flame Spread Rating : 0**  
**Smoke Developed Classification : 90**

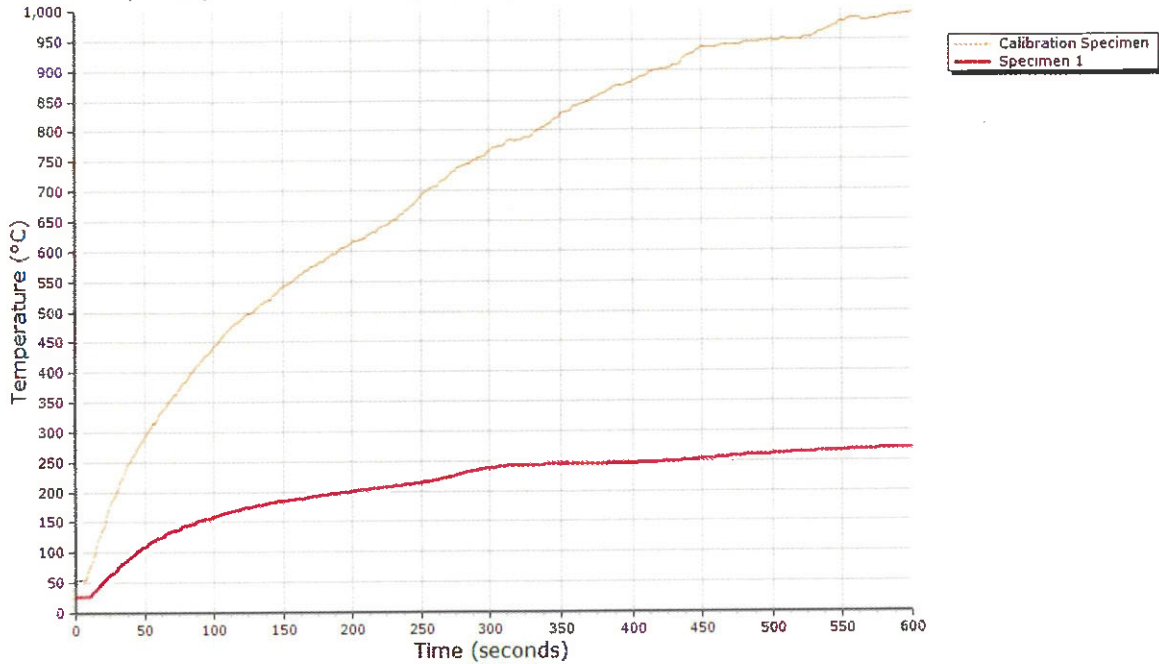
Test Method : CAN S-102  
Test Report # : 3-45693-0-N

**Light Absorption vs. Time**

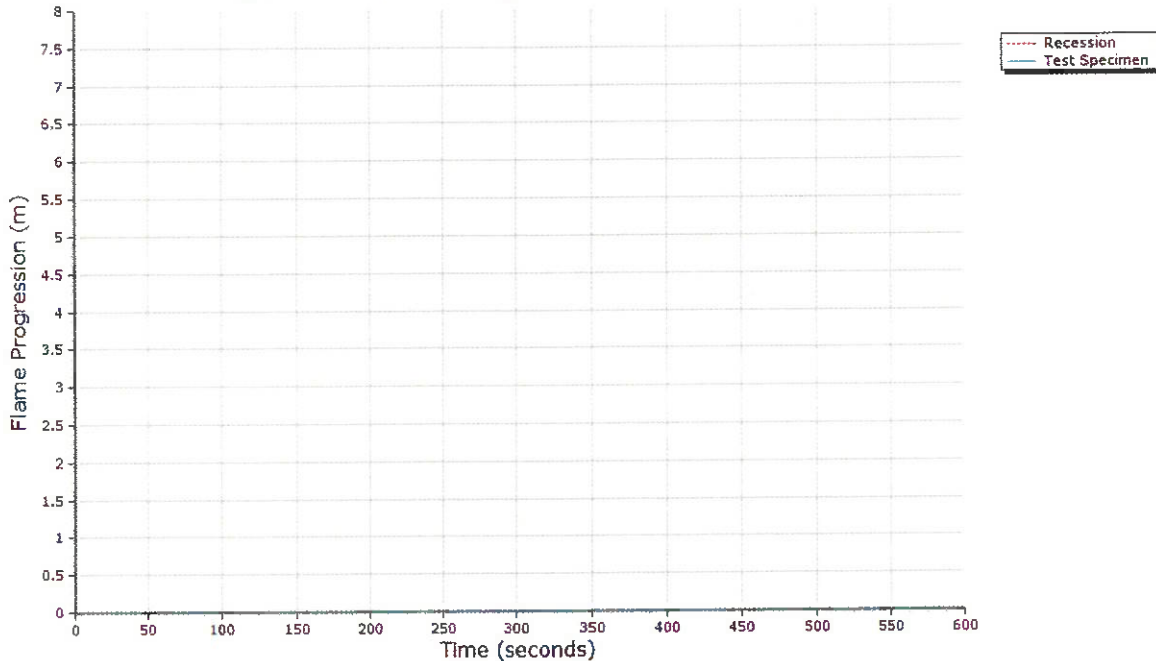


Test Method : CAN S-102  
 Test Report # : 3-45693-0-N

**Exposed Thermocouple Temperature vs. Time**



**Specimen 1: Flame Progression vs. Time**



|   |   |  |
|---|---|--|
| <b>Tested For:</b> Lone Henriksen<br>Kvadrat A/S<br>Lundbergsvej 10 DK-8400 Ebeltoft<br><br>Denmark | <b>Phone:</b> 011 45 89 53 18 60<br><b>Fax:</b><br><b>Mobile:</b><br><b>PO#:</b><br><b>Email:</b> lh@kvadrat.dk | <b>Received:</b> 10/28/2021<br><b>Completed:</b> 11/4/2021<br><b>Code:</b> N1<br><b>Test Report:</b> 3-45693-1 |
|---|---|--|

**Key Test:** CAN/ULC-S102.2 3072

**Client's Identification:**

Style: Sosa. Composition: 100% Polyester FR. Weight: 586 g/m<sup>2</sup>.

LE: 2018 V 09/18      PC: ME      CODE: I=1375 F=2925 CLEAN=1000      /rb /dv

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

TEST CONDUCTED:

- Indicative
- Formal

PRODUCT CATEGORY:  Composite Panel Material

**BRIEF DESCRIPTION OF TEST METHOD:** The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

**SUMMARY OF TEST PROCEDURE:** The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the floor of the tunnel so as to form a continuous surface and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m<sup>2</sup>min, FSV=1.85·AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

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**Received:** 10/28/2021  
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**Code:** N1  
**Test Report:** 3-45693-1

**Key Test:** CAN/ULC-S102.2

3072

**SAMPLE PREPARATION:**

- The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.
- Other: The specimen was laid on the oven floor. The 7315 mm length was consisted of three 2438 mm sections butted end to end.

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):  
 Flame Spread Value (FSV):  
 Smoke Developed Value (SDV):
- FORMAL (Average Value of three replicate tests):  
 Flame Spread Rating (FSR): 5  
 Smoke Developed Classification: 115

**RESULTS:**

| Specimen # | Flame Spread Value | Smoke Developed Value | Burn Distance (meters) | Time (seconds) |
|------------|--------------------|-----------------------|------------------------|----------------|
| 1          | 5                  | 97                    | 0.5                    | 274            |
| 2          | 9                  | 126                   | 0.6                    | 149            |
| 3          | 7                  | 121                   | 0.6                    | 299            |

**OBSERVATIONS:**

1. No unusual observations
2. No unusual observations
3. No unusual observations

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**Test Report:** 3-45693-1

**Key Test:** CAN/ULC-S102.2

3072

REMARKS: None.

ACCEPTANCE CRITERIA: None cited.

CONCLUSION: Not applicable.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/jab /dv

NOV 11 2021

Enclosure: Graphs

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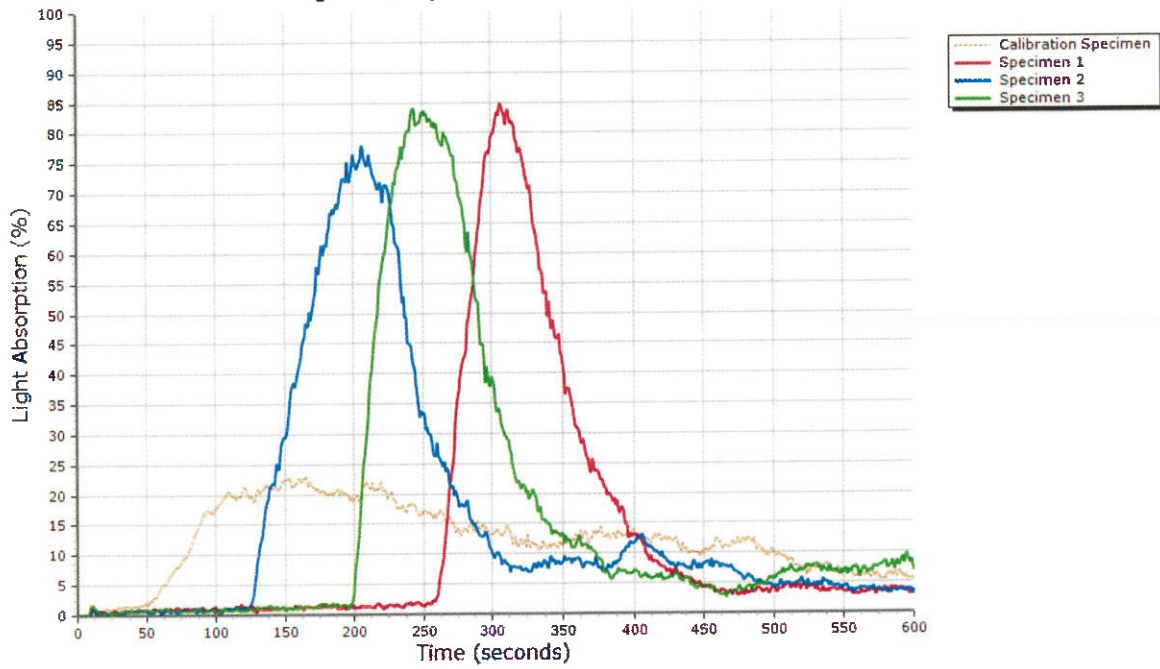
Test Method : CAN S-102  
 Test Report # : 3-45693-1-N1  
 Date : 11/4/2021  
 Client : Kvadrat A/S  
 Operator : Joe Philippas  
 Details of Preparation : The specimen was laid on the oven floor. The 7315 mm length consisted of three 2438 mm sections butted end to end.  
 Observations : No unusual observations.

|                                    | Specimen 1  | Specimen 2  | Specimen 3  |
|------------------------------------|-------------|-------------|-------------|
| Area Under Flame Curve (m min)     | 2.62        | 4.70        | 4.02        |
| Raw Flame Spread Value (m min)     | 4.85        | 8.69        | 7.44        |
| Rounded Flame Spread Value (m min) | 5           | 9           | 7           |
| Ignition Time                      | 04:16 mm:ss | 02:20 mm:ss | 03:17 mm:ss |
| Area Under Smoke Curve (%A min)    | 120.29      | 155.22      | 149.87      |
| Raw Smoke Developed Value          | 97.30       | 125.55      | 121.23      |
| Rounded Smoke Developed Value      | 97          | 126         | 121         |
| Total Gas Flow(L)                  | 1287.9      | 1287.9      | 1288.3      |
| Total Gas Flow(ft <sup>3</sup> )   | 45.5        | 45.5        | 45.5        |
| Maximum Flame Front Achieved(m)    | 0.5 (@274s) | 0.6 (@149s) | 0.6 (@299s) |

**Flame Spread Rating** : 5  
**Smoke Developed Classification** : 115

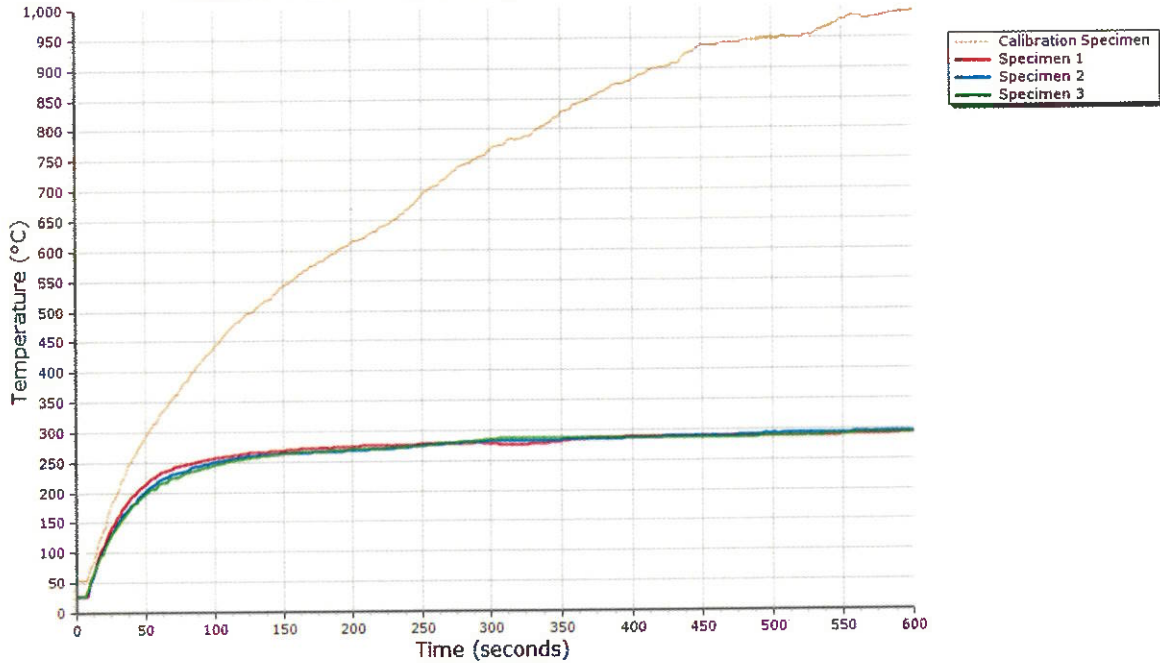
Test Method : CAN S-102  
Test Report # : 3-45693-1-N1

**Light Absorption vs. Time**

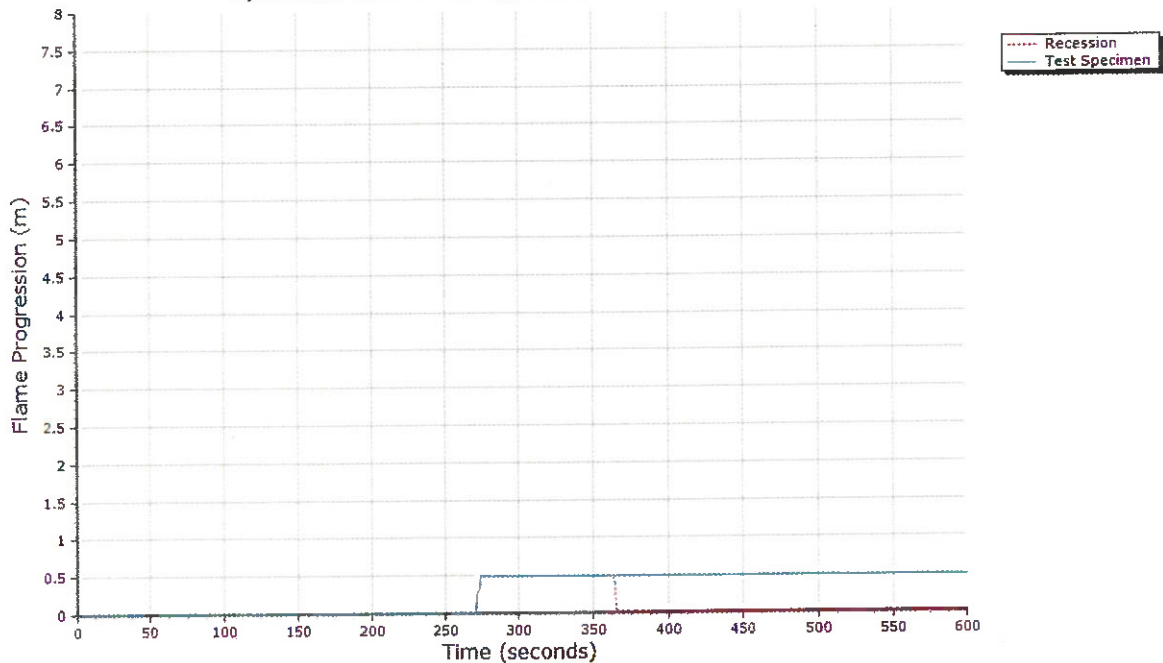


Test Method : CAN S-102  
 Test Report # : 3-45693-1-N1

Exposed Thermocouple Temperature vs. Time

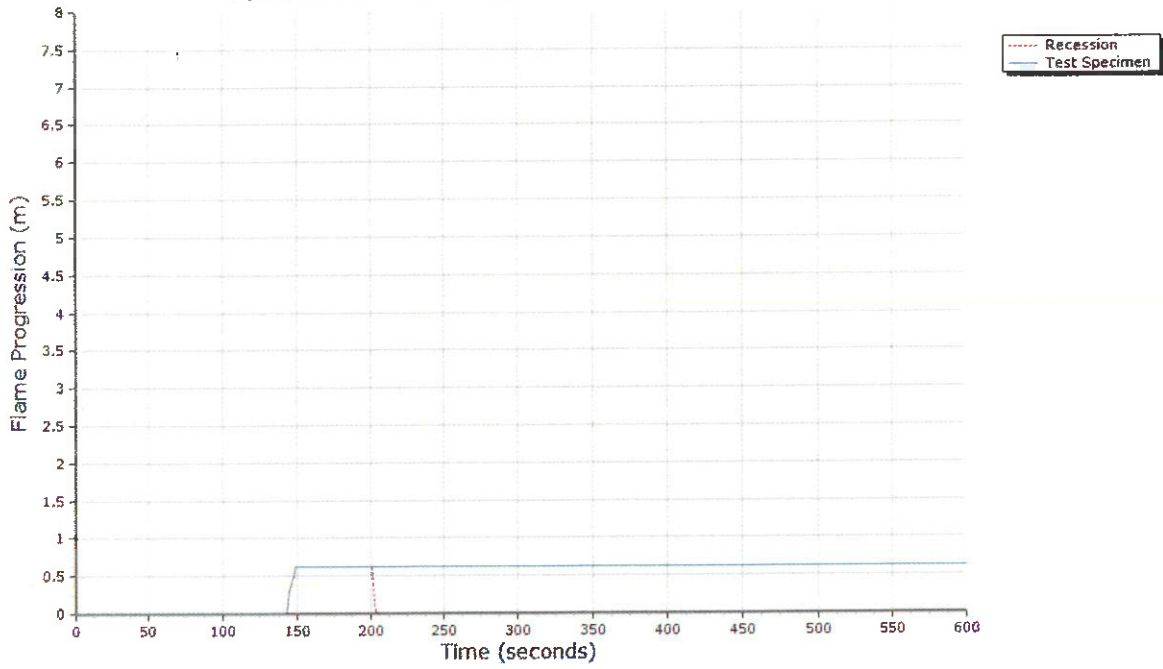


Specimen 1: Flame Progression vs. Time



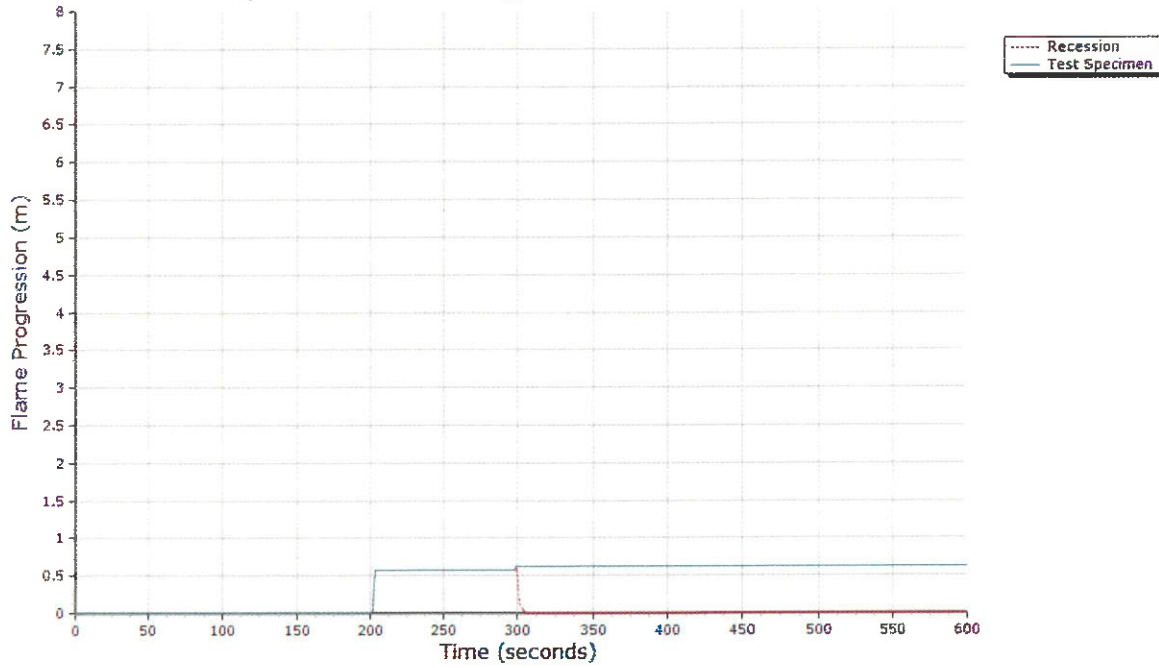
Test Method : CAN S-102  
Test Report # : 3-45693-1-N1

**Specimen 2: Flame Progression vs. Time**



Test Method : CAN S-102  
Test Report # : 3-45693-1-N1

**Specimen 3: Flame Progression vs. Time**



**Tested For:** Lone Henriksen  
 Kvadrat A/S  
 Lundbergsvej 10 DK-8400 Ebeltoft  
 Denmark

**Phone:** 011 45 89 53 18 60  
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**PO#:**  
**Email:** lh@kvadrat.dk

**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** 0  
**Test Report:** 3-45694-0

**Key Test:** CAN/ULC-S102

1444

**Client's Identification:**

Style: Mountain. Composition: 100% Polyester FR. Weight: 286 g/m<sup>2</sup>.

LE: 2018 V 7/21 DK      PC: ME      CODE: I=1444 F=3072 CLEAN=1050 /dv

**TEST PERFORMED:** CAN/ULC-S102-10 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

**TEST CONDUCTED:**

- Indicative
- Formal

**PRODUCT CATEGORY:**  Composite Panel Material

**BRIEF DESCRIPTION OF TEST METHOD:** The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

**SUMMARY OF TEST PROCEDURE:** The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling above the floor and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m<sup>2</sup>min, FSV=1.85·AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

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**Tested For:** Lone Henriksen  
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**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** 0  
**Test Report:** 3-45694-0

**Key Test:** CAN/ULC-S102

1444

**SAMPLE PREPARATION:**

- The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.
- Other: The test sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. The test specimen was laid over 2" hexagonal wire mesh and ¼" steel rods.

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):

Flame Spread Value (FSV): 0  
 Smoke Developed Value (SDV): 35

- FORMAL (Average Value of three replicate tests rounded to the nearest multiple of five points):

Flame Spread Rating (FSR):  
 Smoke Developed Classification (SDC):

**RESULTS:**

| Specimen # | Flame Spread Value | Smoke Developed Value | Burn Distance (meters) | Time (seconds) |
|------------|--------------------|-----------------------|------------------------|----------------|
| 1          | 0                  | 35                    | 0                      | 0              |
| 2          | NT                 | NT                    | NT                     | NT             |
| 3          | NT                 | NT                    | NT                     | NT             |

**OBSERVATIONS:**

1. Flaming drip and burning on chamber floor.
2. NT
3. NT



**Tested For:** Lone Henriksen  
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**Received:** 10/28/2021  
**Completed:** 11/3/2021  
**Code:** 0  
**Test Report:** 3-45694-0

**Key Test:** CAN/ULC-S102

1444

REMARKS: NT = Not tested.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

*Theresa MacMillan*  
AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/jab /dv

*Theresa MacMillan*

NOV 11 2021

Enclosure: 3 Graph Chart (Formal)

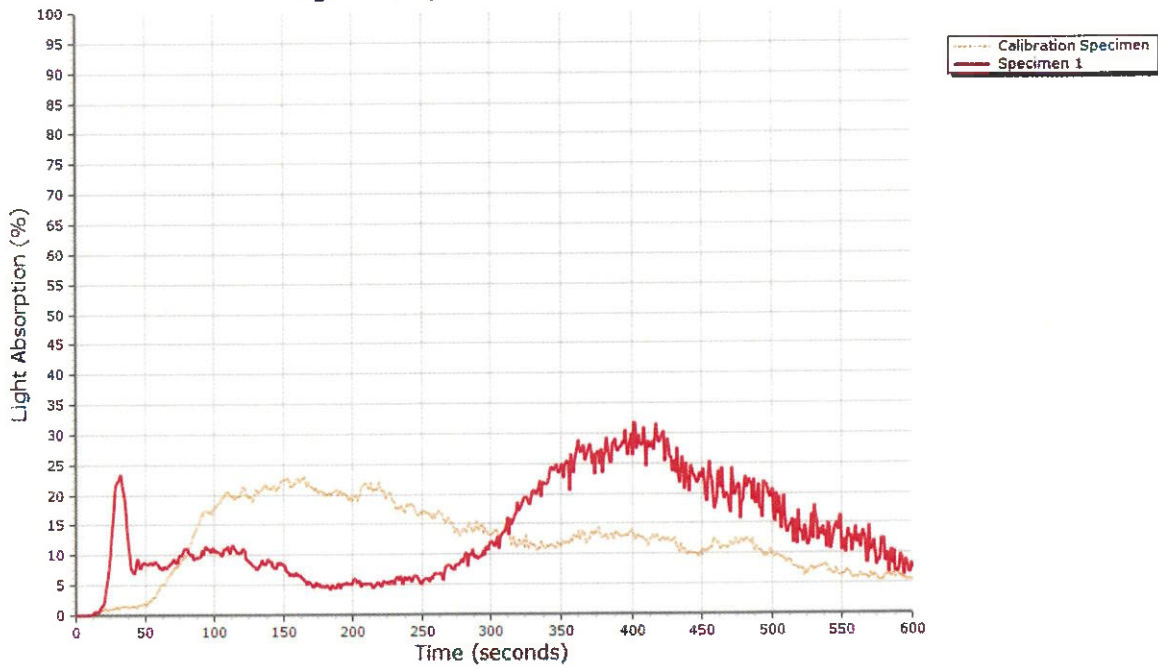
Test Method : CAN S-102  
 Test Report # : 3-45694-0-0  
 Date : 11/3/2021  
 Client : Kvadrat A/S  
 Operator : Andrew Niemczyk  
 Details of Preparation : The test sample consisted of three 8 ft. sections butted end to end to make the 24 ft. length. The specimen was laid over 2" hexagonal wire mesh screen and 1/4" rods.  
 Observations : Flaming drip and burning on chamber floor

|                                    | <b>Specimen 1</b>  |
|------------------------------------|--------------------|
| Area Under Flame Curve (m min)     | 0.00               |
| Raw Flame Spread Value (m min)     | 0.00               |
| Rounded Flame Spread Value (m min) | <b>0</b>           |
| Ignition Time                      | <b>00:09 mm:ss</b> |
| Area Under Smoke Curve (%A min)    | 134.79             |
| Raw Smoke Developed Value          | 109.03             |
| Rounded Smoke Developed Value      | <b>109</b>         |
| Total Gas Flow(L)                  | 1287.7             |
| Total Gas Flow(ft <sup>3</sup> )   | 45.5               |
| Maximum Flame Front Achieved(m)    | 0 (@0s)            |

**Flame Spread Rating** : **0**  
**Smoke Developed Classification** : **35**

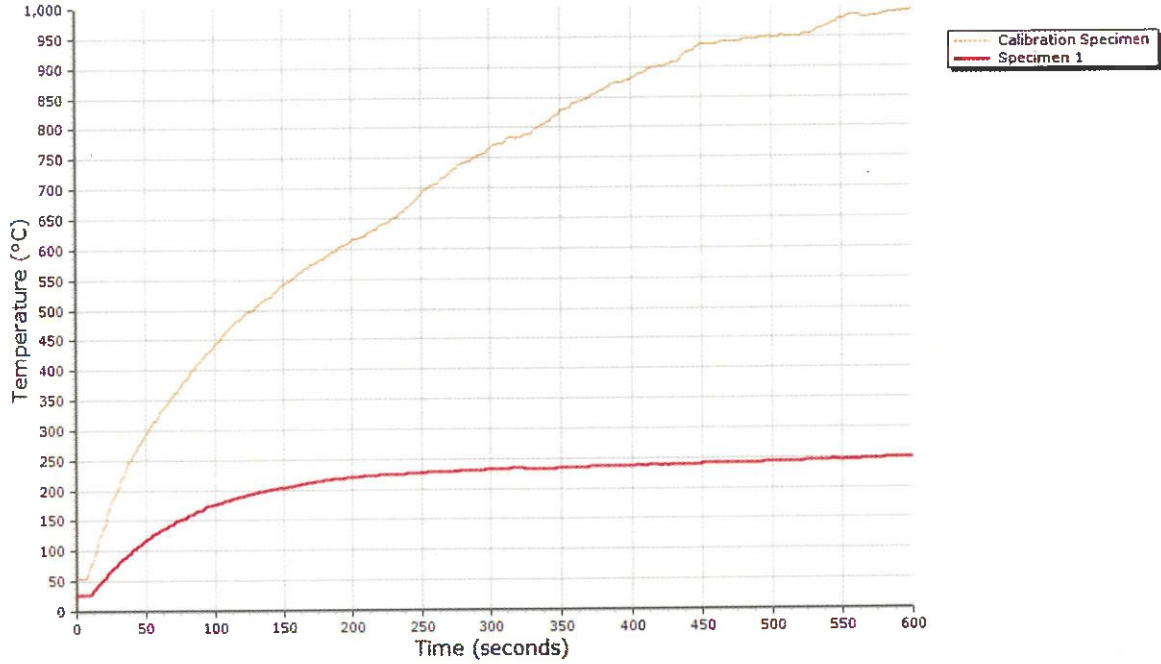
Test Method : CAN S-102  
Test Report # : 3-45694-0-0

**Light Absorption vs. Time**

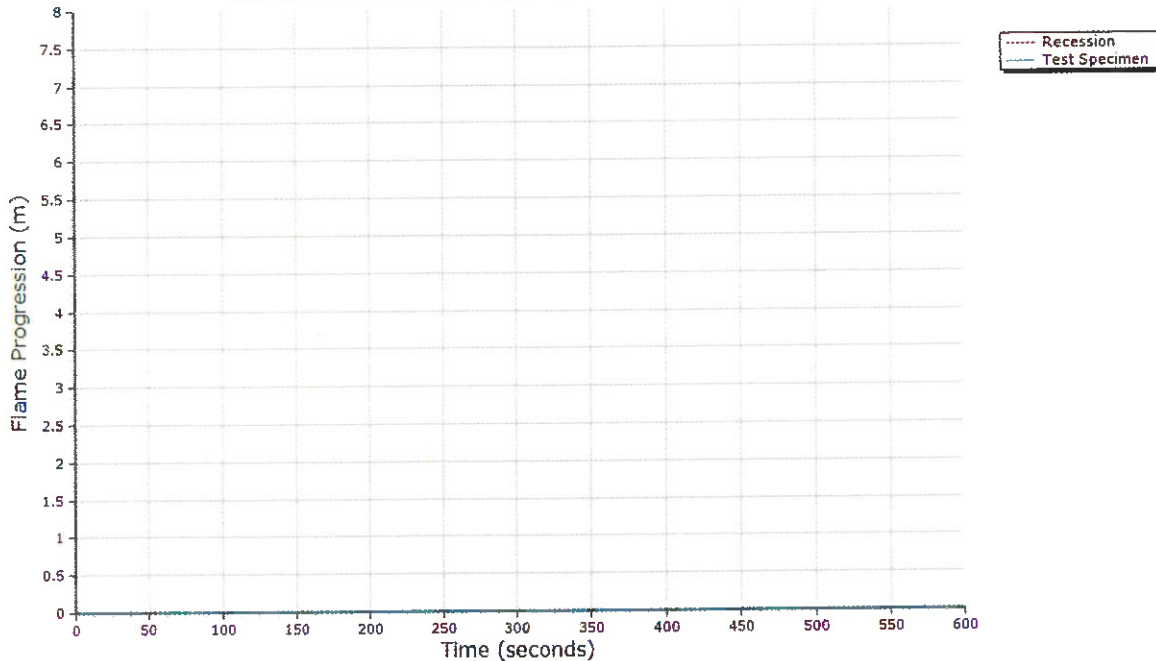


Test Method : CAN S-102  
 Test Report # : 3-45694-0-0

**Exposed Thermocouple Temperature vs. Time**



**Specimen 1: Flame Progression vs. Time**



**Tested For:** Lone Henriksen  
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**Email:** lh@kvadrat.dk

**Received:** 10/28/2021  
**Completed:** 11/10/2021  
**Code:** 01  
**Test Report:** 3-45694-1

**Key Test:** CAN/ULC-S102.2

3072

**Client's Identification:**

Style: Mountain. Composition: 100% Polyester FR. Weight: 286 g/m<sup>2</sup>.

LE: 2018 V 09/18

PC: ME

CODE: I=1375 F=2925 CLEAN=1000

/rb /dv

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

TEST CONDUCTED:

- Indicative  
 Formal

PRODUCT CATEGORY:  Composite Panel Material

**BRIEF DESCRIPTION OF TEST METHOD:** The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

**SUMMARY OF TEST PROCEDURE:** The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the floor of the tunnel so as to form a continuous surface and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m<sup>2</sup>min, FSV=1.85·AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

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**Tested For:** Lone Henriksen  
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**Received:** 10/28/2021  
**Completed:** 11/10/2021  
**Code:** 01  
**Test Report:** 3-45694-1

**Key Test:** CAN/ULC-S102.2

3072

**SAMPLE PREPARATION:**

- The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.
- Other: The sample consisted of three sections butted end to end to make the 7316 mm length that was tested in the flooring configuration due to melting and dripping when tested in the ceiling configuration.

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):  
 Flame Spread Value (FSV):  
 Smoke Developed Value (SDV):
- FORMAL (Average Value of three replicate tests):  
 Flame Spread Rating (FSR): 0  
 Smoke Developed Classification: 70

**RESULTS:**

| Specimen # | Flame Spread Value | Smoke Developed Value | Burn Distance (meters) | Time (seconds) |
|------------|--------------------|-----------------------|------------------------|----------------|
| 1          | 0                  | 65                    | 0                      | 0              |
| 2          | 0                  | 66                    | 0                      | 0              |
| 3          | 0                  | 72                    | 0                      | 0              |

**OBSERVATIONS:**

1. Specimen melted away then ignited.
2. Specimen melted away then ignited.
3. Specimen melted away then ignited.

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**Tested For:** Lone Henriksen  
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**Received:** 10/28/2021  
**Completed:** 11/10/2021  
**Code:** 01  
**Test Report:** 3-45694-1

Denmark

**Key Test:** CAN/ULC-S102.2


3072

REMARKS: None.

ACCEPTANCE CRITERIA: None cited.

CONCLUSION: Not applicable.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

  
AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/jab /dy



NOV 11 2021

Enclosure: Graphs

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Test Method : CAN S-102  
 Test Report # : 3-45694-1-Q1  
 Date : 11/10/2021  
 Client : Kvadrat A/S  
 Operator : Andrew Niemczyk  
 Details of Preparation : The sample consisted of three sections butted end to end to make the 7316 mm length that was tested in the flooring configuration due to melting and dripping when tested in the ceiling configuration.  
 Observations : Specimen melted away then ignited

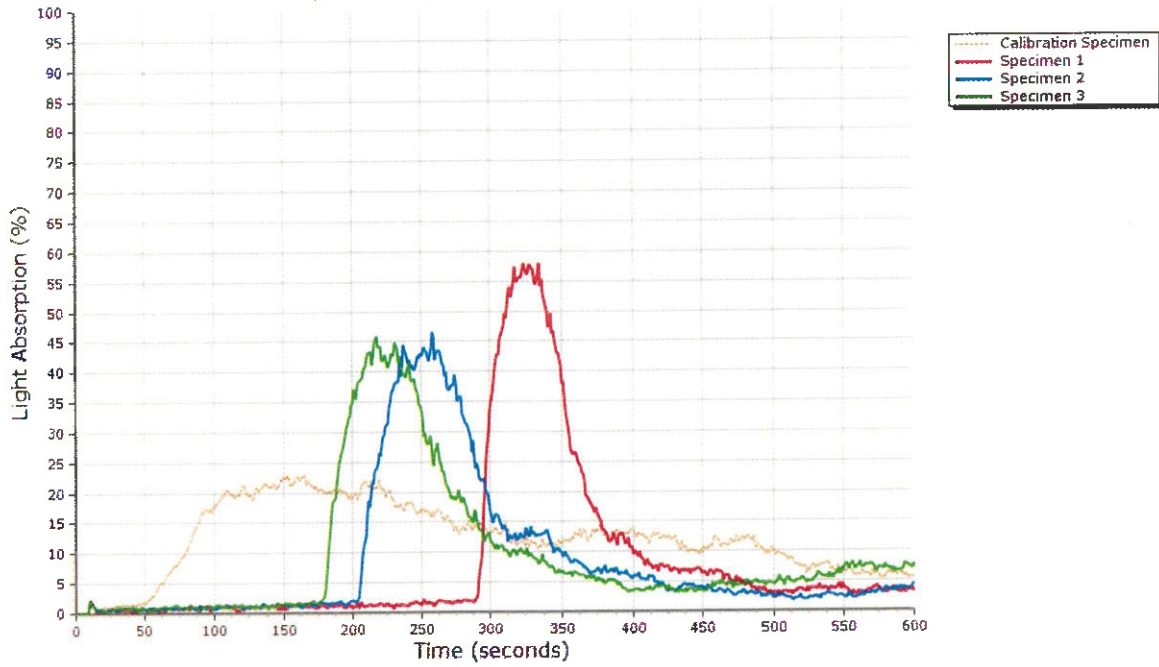
|                                    | Specimen 1         | Specimen 2         | Specimen 3         |
|------------------------------------|--------------------|--------------------|--------------------|
| Area Under Flame Curve (m min)     | 0.00               | 0.00               | 0.00               |
| Raw Flame Spread Value (m min)     | 0.00               | 0.00               | 0.00               |
| Rounded Flame Spread Value (m min) | <b>0</b>           | <b>0</b>           | <b>0</b>           |
| Ignition Time                      | <b>04:15 mm:ss</b> | <b>03:20 mm:ss</b> | <b>03:15 mm:ss</b> |
| Area Under Smoke Curve (%A min)    | 79.94              | 81.53              | 89.04              |
| Raw Smoke Developed Value          | 64.67              | 65.95              | 72.02              |
| Rounded Smoke Developed Value      | <b>65</b>          | <b>66</b>          | <b>72</b>          |
| Total Gas Flow(L)                  | 1287.9             | 1287.8             | 1287.8             |
| Total Gas Flow(ft <sup>3</sup> )   | 45.5               | 45.5               | 45.5               |
| Maximum Flame Front Achieved(m)    | 0 (@0s)            | 0 (@0s)            | 0 (@0s)            |

**Flame Spread Rating** : **0**  
**Smoke Developed Classification** : **70**



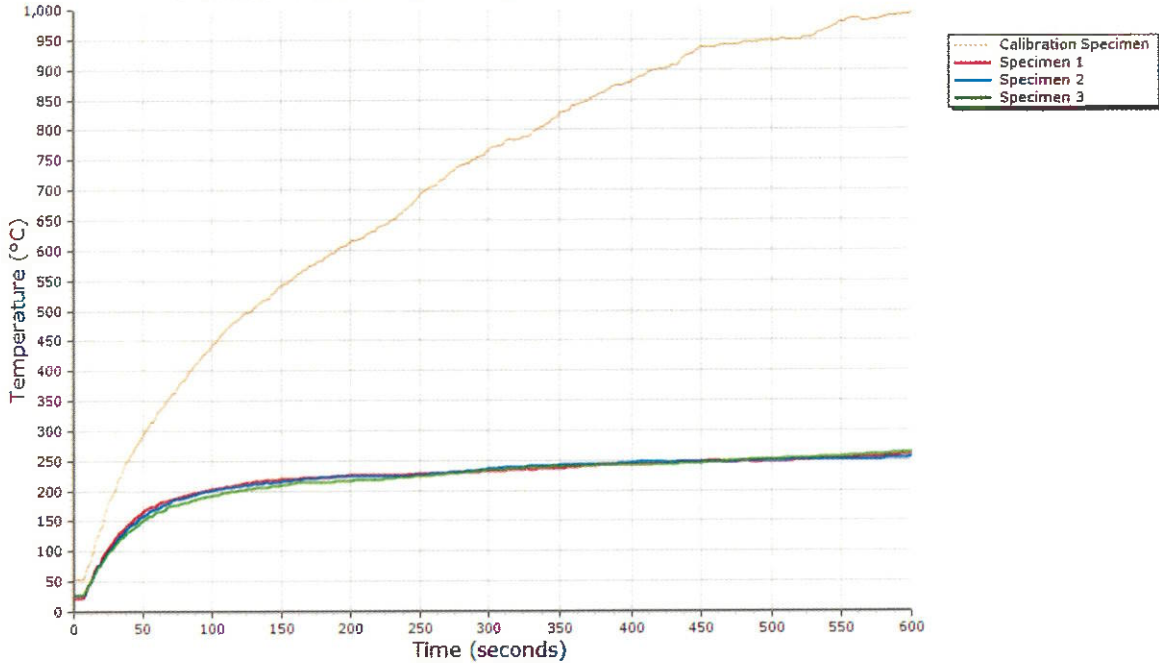
Test Method : CAN S-102  
Test Report # : 3-45694-1-Q1

**Light Absorption vs. Time**

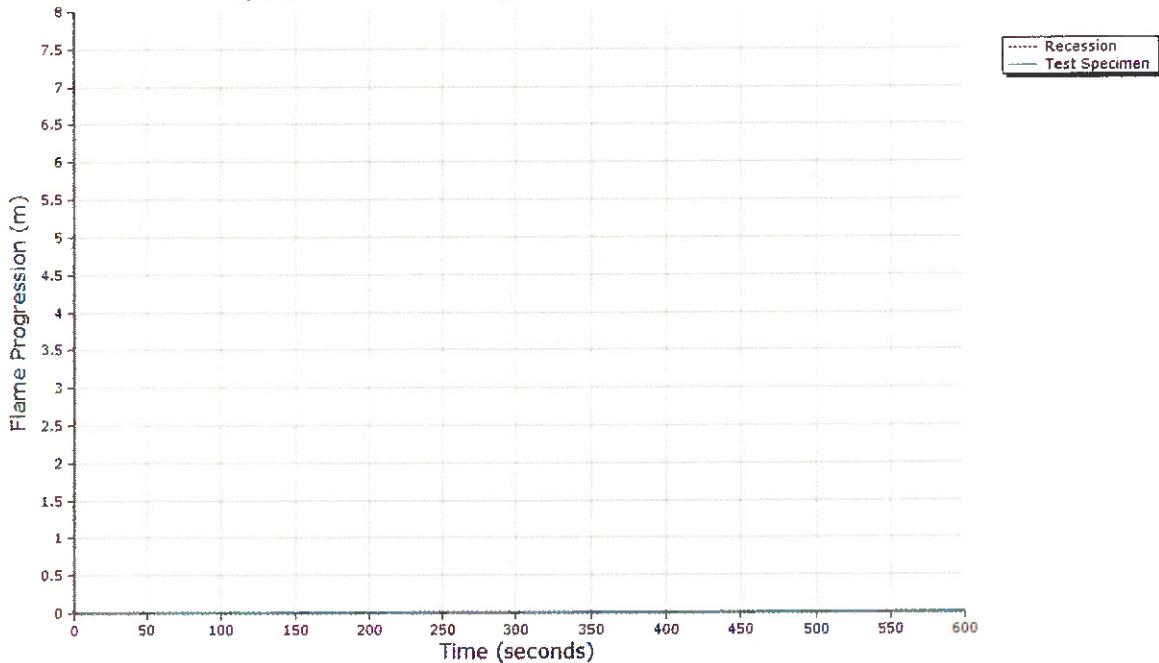


Test Method : CAN S-102  
 Test Report # : 3-45694-1-Q1

**Exposed Thermocouple Temperature vs. Time**

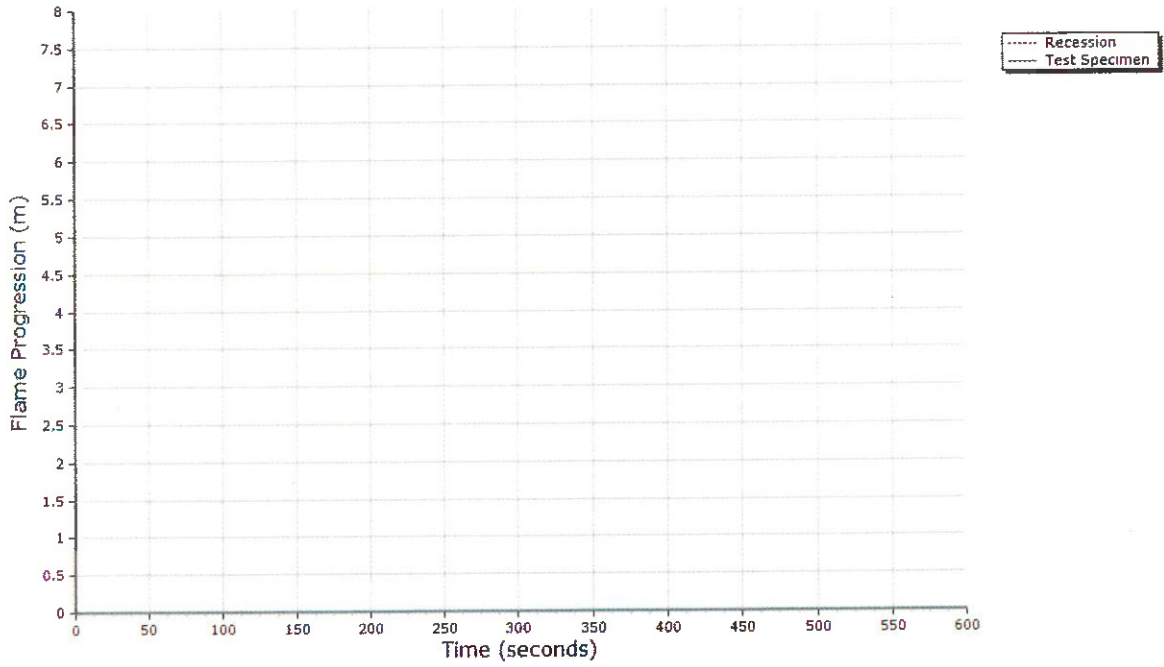


**Specimen 1: Flame Progression vs. Time**



Test Method : CAN S-102  
Test Report # : 3-45694-1-Q1

**Specimen 2: Flame Progression vs. Time**



Test Method : CAN S-102  
Test Report # : 3-45694-1-Q1

**Specimen 3: Flame Progression vs. Time**

