



<b>Tested For:</b> Lone Henriksen Kvadrat A/S Lundbergsvej 10 DK-8400 Ebeltoft  Denmark	<b>Phone:</b> 011 45 89 53 18 80 <b>Fax:</b> <b>Mobile:</b> <b>PO#:</b> 06164621 <b>Email:</b> lh@kvadrat.dk	<b>Received:</b> 2/13/2023 <b>Completed:</b> 2/21/2023 <b>Code:</b> L2 <b>Test Report:</b> 3-50500-2-RV
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**Key Test:** CAN/ULC-S102

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**Client's Identification:**

Style: Balboa - Item 600187. Composition: 100% Polyester FR. Width: 140cm /55 inches. Finish: None. Weight: App. 685g/m<sup>2</sup>. Thickness: 2-3mm. Product End Use: Upholstery/Curtain

LE: 2018 V 02/23 BG

PC: ME

CODE: I=1520 F=3230 CLEAN=1105 /dv

TEST PERFORMED: CAN/ULC-S102-18 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

## TEST CONDUCTED:

- Indicative  
 Formal

PRODUCT CATEGORY:  Composite Panel Material  
 Textile Type Product  
 Vinyl Type Product

**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.

Ver. 2021-03-09 10:35

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

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**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.
- Adhered to IRC: The test specimen was bonded to ¼" Inorganic Reinforced Cement (IRC) boards.
- Adhered to Gypsum: The test specimen was bonded to 5/8" thick Type X gypsum board.
- Other: The test specimen was laid over a 2" hexagonal wire mesh and ¼" rods. The 7,315 mm specimen was comprised of three 2,438 mm sections butted end to end.

ADHESIVE (applied by SGS North America):  No  
 Yes – specify:

**REPORTED AS:**

- INDICATIVE (Single Specimen Test):

Flame Spread Value (FSV): 8.9  
Smoke Developed Value (SDV): 209.4

- 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	8.9	209.4	0.5	00:37
2	NT	NT	NT	NT
3	NT	NT	NT	NT

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

0

**OBSERVATIONS:**

1. Specimen melted and dripped onto tunnel floor, causing it to pool and ignite at around the 6 min mark during the test
2. NT
3. NT

**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.

DocuSigned by:  
  
3/15/2023  
9BDDEBF6E2740A  
AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/ab/gb

RV.03.15.23 /gb

Enclosure: 3 Graph Chart (Formal)



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Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102  
 Report # : 3-50500-2-L2 -RV  
 Test Date : 2/21/2023  
 Client : Kvadrat A/S  
 Operator : John Tighe  
 Details of Preparation : The test specimen was laid over a 2" hexagonal wire mesh and 1/4" rods. The 7,315mm specimen was comprised of three 2,438mm sections butted end to end.  
 Observations : Specimen melted and dripped onto tunnel floor causing it to pool and ignite at around 6 min mark during the test.

	Specimen 1
Area Under Flame Curve (m min)	4.8
Flame Spread Value	8.9
Ignition Time (mm:ss)	00:15
Area Under Smoke Curve (%A min)	112.0
Smoke Developed Value	209.4
Total Gas Flow (L)	1608.2
Maximum Flame Front Achieved (m)	0.5 @ 37s

Flame Spread Rating : 10  
 Smoke Developed Classification : 210

CERTIFICATION : I certify that the above results were obtained after testing the specimens in accordance with the procedures and equipment specified by CAN S-102

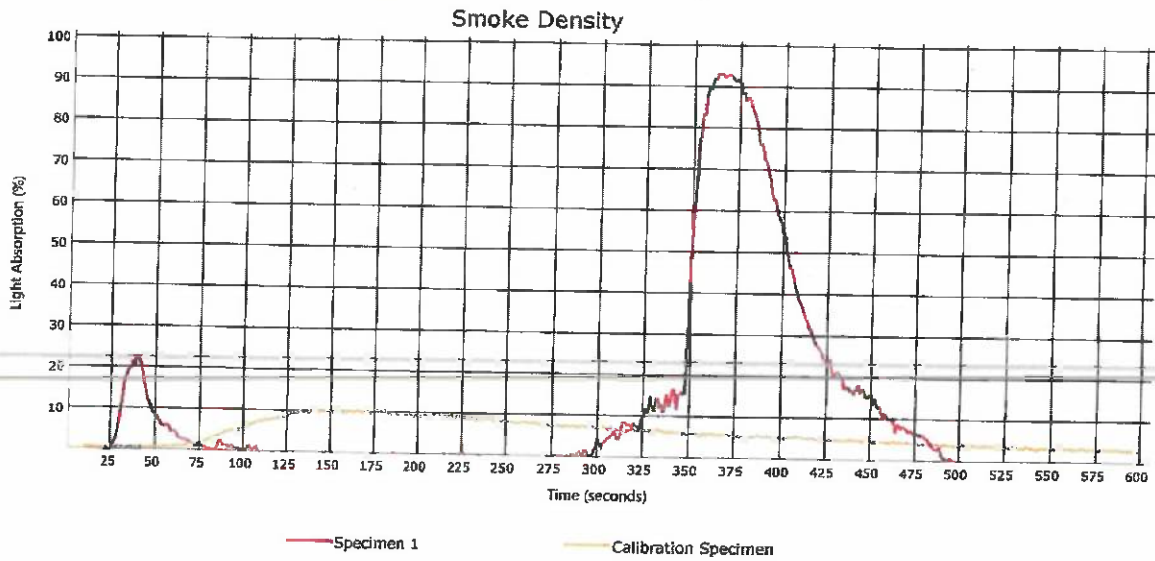
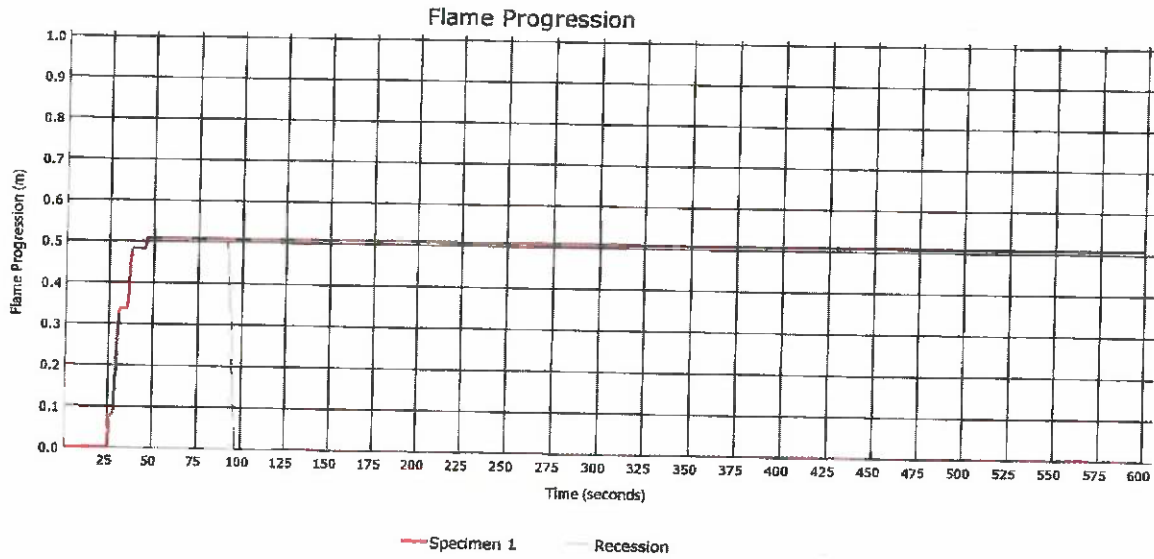
*John Tighe*

AUTHORIZED SIGNATURE



Program: Steiner Tunnel (Version 1.0.1.0)

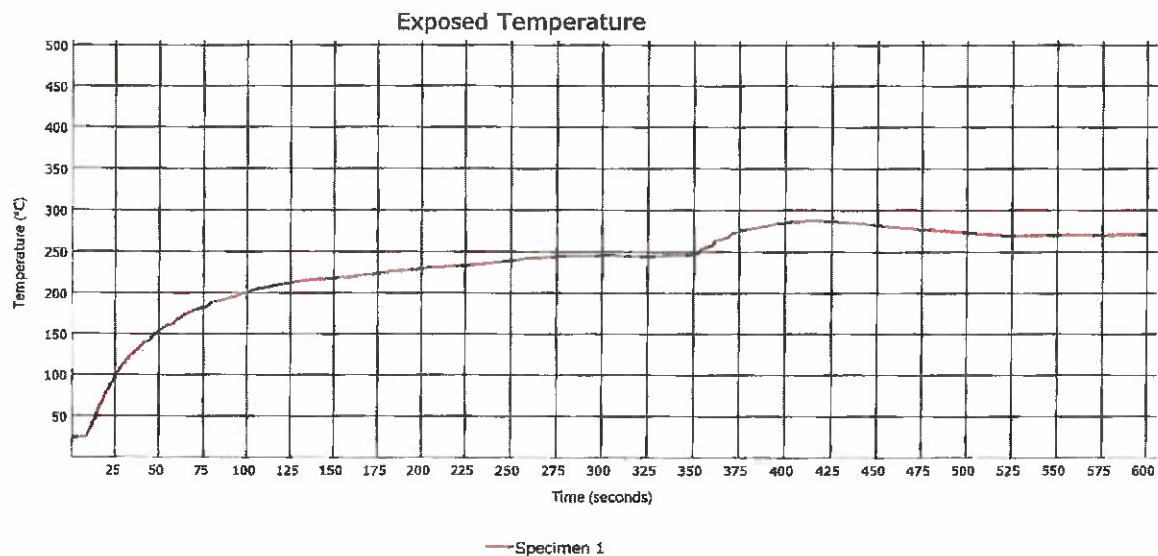
Test Method : CAN S-102  
Test Report # : 3-50500-2-L2 -RV





Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN 5-102  
Test Report # : 3-50500-2-L2 -RV





<b>Tested For:</b>	<b>Lone Henriksen</b>	<b>Phone:</b>	<b>011 45 89 53 18 80</b>	<b>Received:</b>	<b>2/13/2023</b>
	<b>Kvadrat A/S</b>	<b>Fax:</b>		<b>Completed:</b>	<b>2/24/2023</b>
	<b>Lundbergsvej 10 DK-8400 Ebeltoft</b>	<b>Mobile:</b>		<b>Code:</b>	<b>L4</b>
		<b>PO#:</b>	<b>06164621</b>	<b>Test Report:</b>	<b>3-50500-4-RV</b>
	<b>Denmark</b>	<b>Email:</b>	<b>lh@kvadrat.dk</b>		

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

0

**Client's Identification:**

Style: Balboa - Item 600187. Composition: 100% Polyester FR. Width: 140cm /55 inches. Finish: None. Weight: App. 685g/m<sup>2</sup>. Thickness: 2-3mm. Product End Use: Upholstery/Curtain

LE: 2018 V 02/23 BG

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  
 Textile Type Product  
 Vinyl Type Product

**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

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

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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.

**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.
- Adhered to IRC: The test specimen was bonded to 1/4" Inorganic Reinforced Cement (IRC) boards.
- Adhered to Gypsum: The test specimen was bonded to 5/8" thick Type X gypsum board.
- Other: \_\_\_\_\_

ADHESIVE (applied by SGS North America):  No  
 Yes - specify

**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): 70  
Smoke Developed Classification: 675

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

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## RESULTS:

Specimen #	Flame Spread Value	Smoke Developed Value	Burn Distance (meters)	Time (seconds)
1	93.4	621.8	5.9	03:36
2	52.0	601.8	3.9	04:48
3	63.8	795.7	5.8	07:25

## OBSERVATIONS:

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

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.

DocuSigned by:

BRANDEN GAULGHER

3/15/2023

RV.03.15.23 /gb

9BDDEBFF6E2740A...

AUTHORIZED SIGNATURE  
SGS NORTH AMERICA  
/ab/gb

Enclosure: Graphs



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Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102  
 Report # : 3-50500-4-L4 -RV  
 Test Date : 2/24/2023  
 Client : Kvadrat A/S  
 Operator : Chris Gangi  
 Details of Preparation : The sample consisted of three sections of materials, each approximately 445 mm in width by 2438 mm in length butted together to form the requisite specimen length.  
 Observations : No unusual observations.

	Specimen 1	Specimen 2	Specimen 3
Area Under Flame Curve (m min)	41.8	28.1	33.7
Flame Spread Value	93.4	52.0	63.8
Ignition Time (mm:ss)	01:09	00:48	00:56
Area Under Smoke Curve (%A min)	332.6	321.9	425.6
Smoke Developed Value	621.8	601.8	795.7
Total Gas Flow (L)	1608.4	1608.4	1605.9
Maximum Flame Front Achieved (m)	5.9 @ 216s	3.9 @ 288s	5.8 @ 445s

Flame Spread Rating : 70  
 Smoke Developed Classification : 675

CERTIFICATION : I certify that the above results were obtained after testing the specimens in accordance with the procedures and equipment specified by CAN S-102

*Chris Gangi*

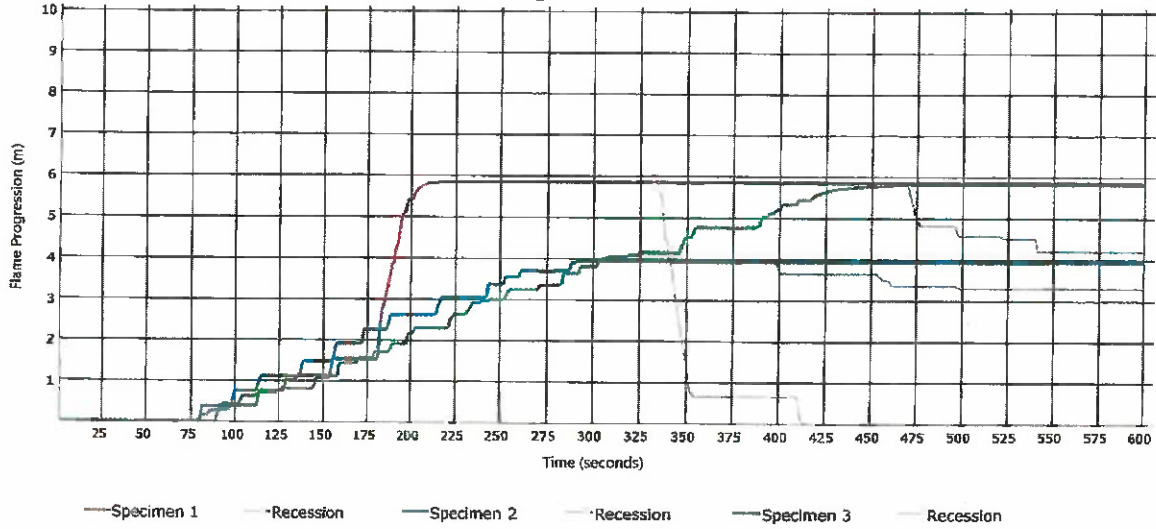
AUTHORIZED SIGNATURE



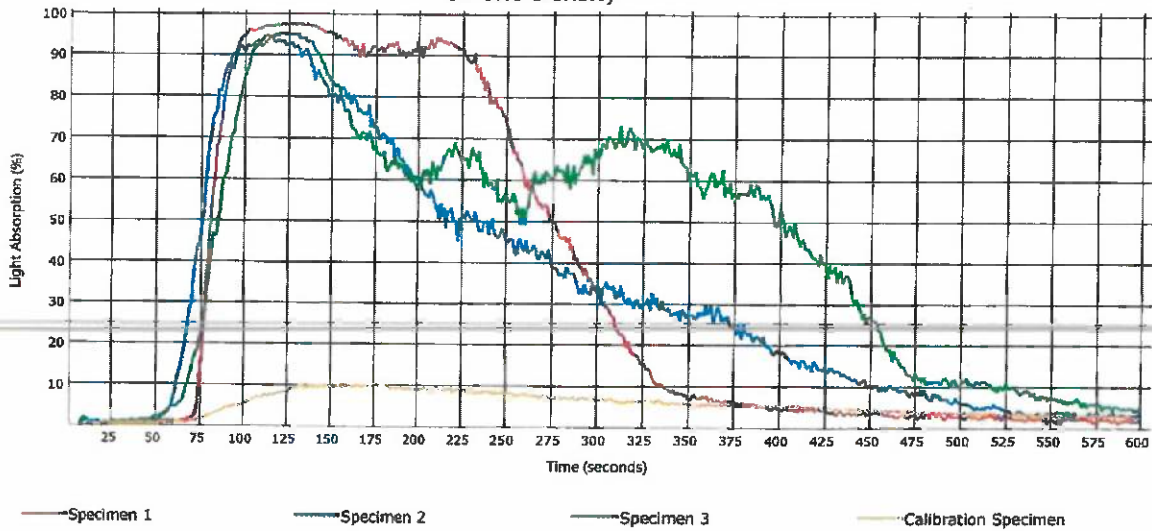
Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102  
Test Report # : 3-50500-4-L4 -RV

### Flame Progression



### Smoke Density





Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102  
Test Report # : 3-50500-4-L4 -RV

