



Tested For: Lone Henriksen	Phone: 011 45 89 53 18 60	Received: 2/13/2023
Kvadrat A/S	Fax:	Completed: 2/21/2023
Lundbergsvej 10 DK-8400 Ebeltoft	Mobile:	Code: K2
Denmark	PO#: 06164621	Test Report: 3-50499-2
	Email: lh@kvadrat.dk	

Key Test: CAN/ULC-S102

1520

Client's Identification:

Style: Avalon 2 - Item 600689. Composition: 100% Trevira CS. Width: 140cm /55 inches. Finish: None. Weight: App. 510g/m². 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 m²min, 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.

JT

Ver. 2021-03-09 10:35

Page 1 of 3

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**Tested For:** Lone Henriksen

Kvadrat A/S

Lundbergsvej 10 DK-8400 Ebeltoft

Denmark

Phone: 011 45 89 53 18 60**Fax:****Mobile:****PO#:** 06164621**Email:** lh@kvadrat.dk**Received:** 2/13/2023**Completed:** 2/21/2023**Code:** K2**Test Report:** 3-50499-2**Key Test:** CAN/ULC-S102

1520

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 screen and ¼" rods. The 7,314 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): 6.0
 Smoke Developed Value (SDV): 239.7

- 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	6.0	239.7	0.3	00:33
2	NT	NT	NT	NT
3	NT	NT	NT	NT

JT

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Tested For: Lone Henriksen Kvadrat A/S Lundbergsvej 10 DK-8400 Ebeltoft Denmark	Phone: 011 45 89 53 18 60 Fax: Mobile: PO#: 06164621 Email: lh@kvadrat.dk	Received: 2/13/2023 Completed: 2/21/2023 Code: K2 Test Report: 3-50499-2
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Key Test: CAN/ULC-S102

1520

OBSERVATIONS:

1. Dripping pooled on floor and ignited burning on tunnel floor.
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:

Bobby Brown

3/7/2023

B50EB94D593C454...

AUTHORIZED SIGNATURE
SGS NORTH AMERICA
/ab/gb

Enclosure: 3 Graph Chart (Formal)



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Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
 Report # : 3-50499-2
 Test Date : 2/21/2023
 Client : Kvadrat A/S
 Operator : John Tighe
 Details of Preparation : Three 8' x 24" pieces butted end to end laid over chicken wire and rods
 Observations : dripping pooled on floor and burned on tunnel floor

	Specimen 1
Area Under Flame Curve (m min)	3.2
Flame Spread Value	6.0
Ignition Time (mm:ss)	00:13
Area Under Smoke Curve (%A min)	128.2
Smoke Developed Value	239.7
Total Gas Flow (L)	1608.2
Maximum Flame Front Achieved (m)	0.3 @ 33s

Flame Spread Rating : 5
 Smoke Developed Classification : 240

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

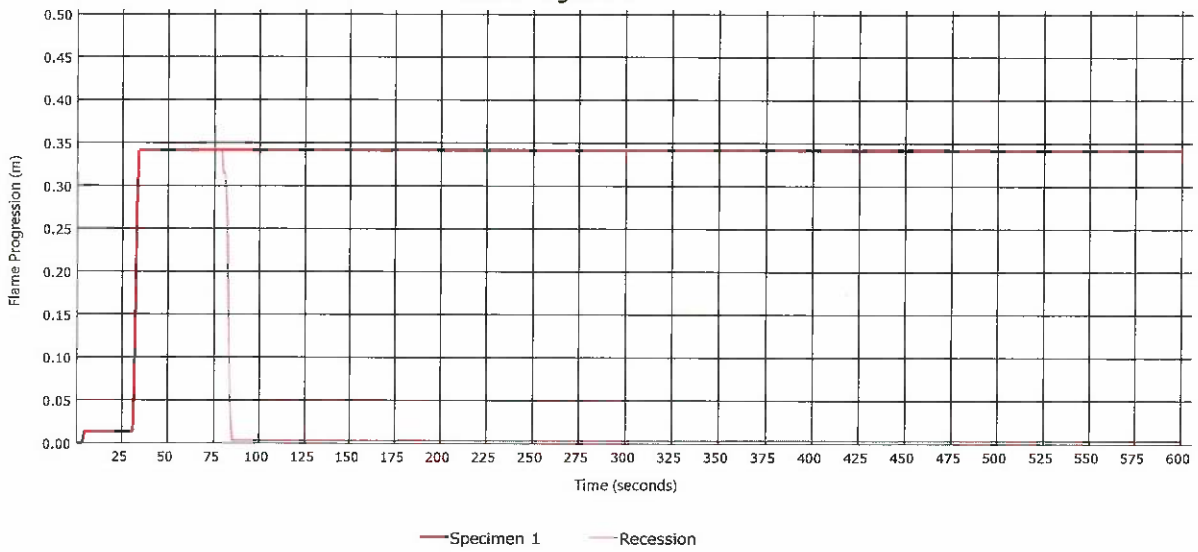
AUTHORIZED SIGNATURE



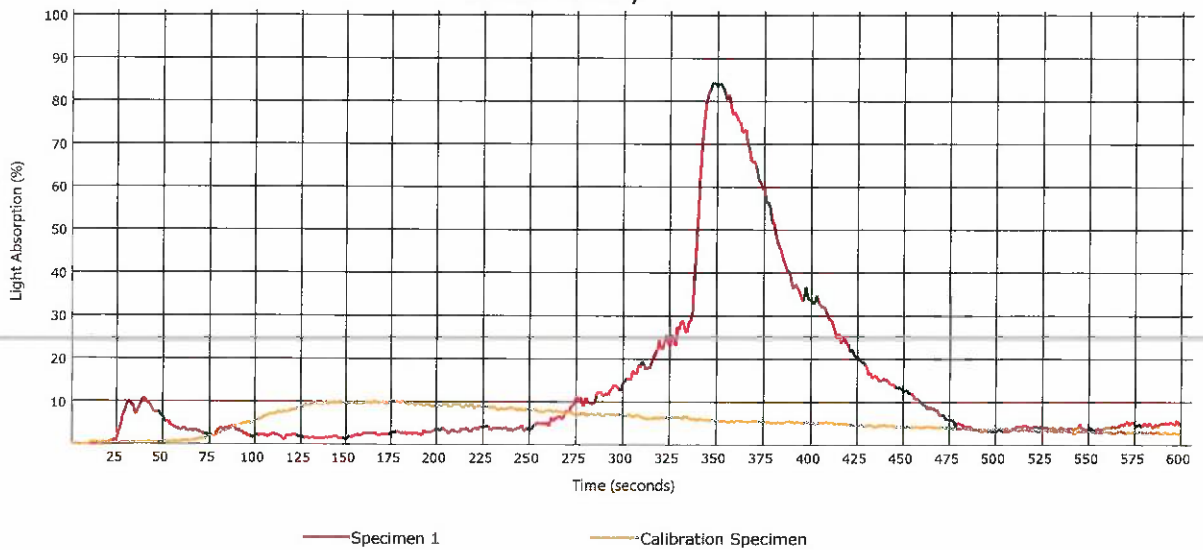
Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
Test Report # : 3-50499-2

Flame Progression



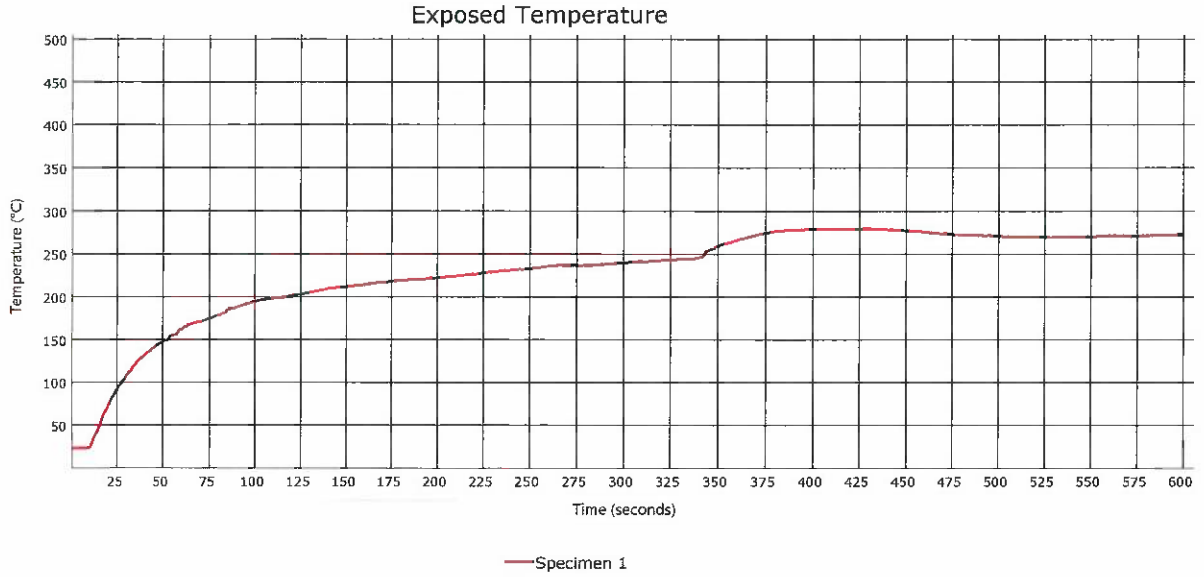
Smoke Density





Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
Test Report # : 3-50499-2





Tested For:	Lone Henriksen	Phone:	011 45 89 53 18 60	Received:	2/13/2023
	Kvadrat A/S	Fax:		Completed:	2/22/2023
	Lundbergsvej 10 DK-8400 Ebeltoft	Mobile:		Code:	K3
	Denmark	PO#:	06164621	Test Report:	3-50499-3
		Email:	lh@kvadrat.dk		

Key Test: CAN/ULC-S102.2

3395

Client's Identification:

Style: Avalon 2 - Item 600689. Composition: 100% Trevira CS. Width: 140cm /55 inches. Finish: None. Weight: App. 510g/m². 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 m²min, 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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	Kvadrat A/S	Fax:		Completed:	2/22/2023
	Lundbergsvej 10 DK-8400 Ebeltoft	Mobile:		Code:	K3
	Denmark	PO#:	06164621	Test Report:	3-50499-3
		Email:	lh@kvadrat.dk		

Key Test: CAN/ULC-S102.2

3395

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): 10
Smoke Developed Classification: 260

RESULTS:

Specimen #	Flame Spread Value	Smoke Developed Value	Burn Distance (meters)	Time (seconds)
1	9.1	236.2	0.8	07:11
2	9.7	222.5	0.8	06:44
3	8.8	327.4	0.8	03:21

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	Denmark	PO#:	06164621	Test Report:	3-50499-3
		Email:	lh@kvadrat.dk		

Key Test: CAN/ULC-S102.2

3395

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:

Bobby Brown

B50EB94D593C454...

3/7/2023

AUTHORIZED SIGNATURE
SGS NORTH AMERICA
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Enclosure: Graphs



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Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
 Report # : 350499-3-k3
 Test Date : 2/22/2023
 Client : Kvadrat A/S
 Operator : John Tighe
 Details of Preparation : The sample consisted of two sections of materials, each approximately 445mm in width by 3658mm in length butted together to form the requisite length. The specimen was fire laid (no adhesive) on top of a 6mm fiberglass reinforced cement board substrate.
 Observations : No unusual observations.

	Specimen 1	Specimen 2	Specimen 3
Area Under Flame Curve (m min)	4.9	5.2	4.8
Flame Spread Value	9.1	9.7	8.8
Ignition Time (mm:ss)	01:33	02:04	01:32
Area Under Smoke Curve (%A min)	126.3	119.0	175.1
Smoke Developed Value	236.2	222.5	327.4
Total Gas Flow (L)	1608.2	1608.2	1605.9
Maximum Flame Front Achieved (m)	0.8 @ 431s	0.8 @ 404s	0.6 @ 201s

Flame Spread Rating : 10
 Smoke Developed Classification : 260

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

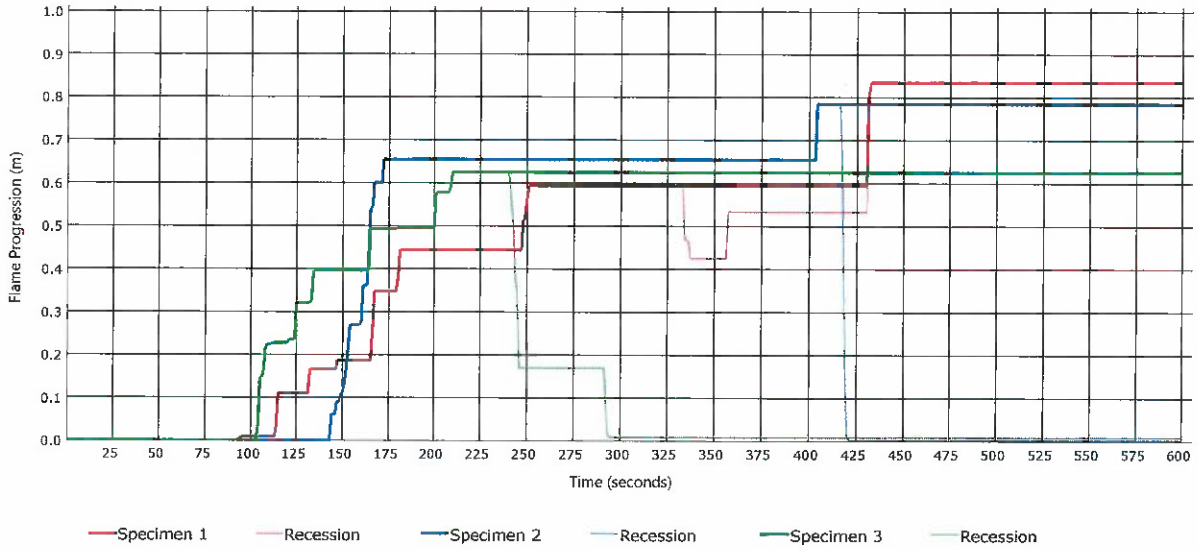
AUTHORIZED SIGNATURE



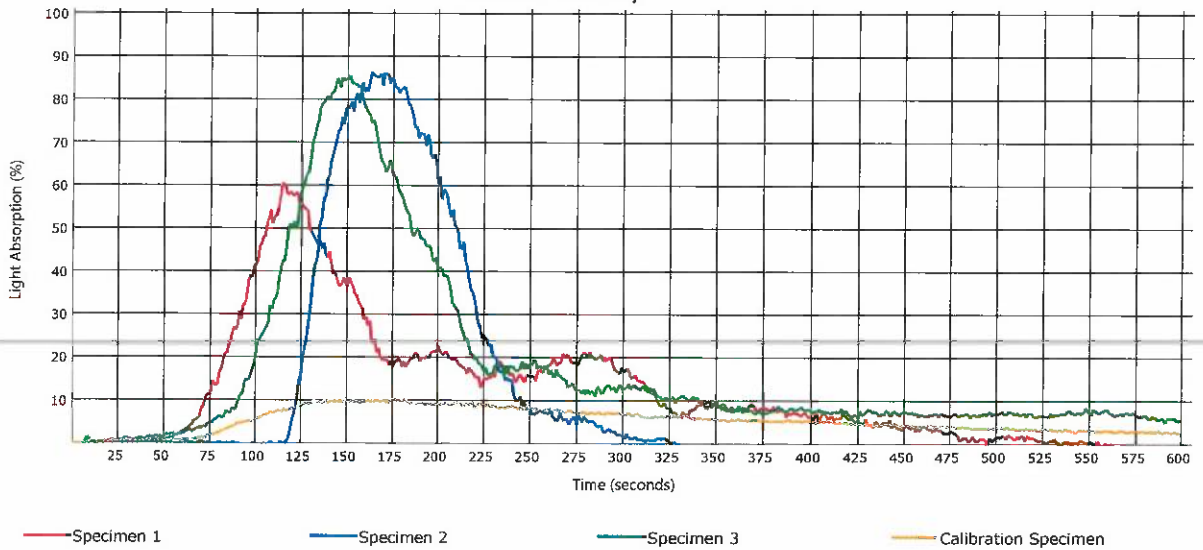
Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
Test Report # : 350499-3-k3

Flame Progression



Smoke Density





Program: Steiner Tunnel (Version 1.0.1.0)

Test Method : CAN S-102
Test Report # : 350499-3-k3

