

QUANTUM TECHNICAL SERVICES LTD.

TEST REPORT

REPORT ISSUED TO

Quantum Technical Service Ltd.
15 Riel Drive
St Albert, AB Canada T8N 3Z2

SCOPE OF WORK

Testing of 100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment for compliance with the applicable requirements of the following criteria: *CAN/ULC S109-14, Standard for Flame Tests of Flame-Resistant Fabrics and Films.*

REPORT NUMBER: 104359969COQ-001

ISSUE DATE
29-June-2020

PAGES
7

DOCUMENT CONTROL NUMBER
GFT-OP-10b (13-March-2017)
© 2017 INTERTEK



TEST REPORT FOR QUANTUM TECHNICAL SERVICES LTD.

Report No.: 104359969COQ-001

Date: June 29, 2020

Telephone: 604-520-3321

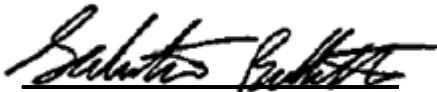
Facsimile: 604-524-9186

www.intertek.com

CONCLUSION

The samples of 100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment submitted by Quantum Technical Services Ltd., were tested in accordance with **CAN/ULC S109-14**, *Standard for Flame Tests of Flame-Resistant Fabrics and Films*.

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



Salvatore Balletta
TECHNICIAN
BUILDING PRODUCTS



Greg Philp
REVIEWER
BUILDING PRODUCTS CANADA

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute Intertek's Reports and then only in their entirety, and the Client shall not use the Reports in a misleading manner. In the event any portion of this report becomes public, including but not limited to press releases, articles, and marketing material, without prior written consent from Intertek, Intertek may enforce the reproduction of the report in its entirety by making the full report public. Client further agrees and understands that reliance upon the Reports is limited to the representations made therein. In the event any portion of this report becomes public, including but not limited to press releases, articles, and marketing material, without prior written consent from Intertek, Intertek will enforce the reproduction of the report in its entirety by making the full report public. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. Should Customer use an Intertek Report, in whole or in part, in such a manner as to involve Intertek in legal controversy or to adversely affect Intertek's reputation, it shall be Intertek's right to utilize any and all Customer information, including, but not limited to, data, records, instructions, notations, samples or documents within Intertek's custody and control which relate to the customer for the purpose of offering any necessary defense or rebuttal to such circumstances. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT FOR QUANTUM TECHNICAL SERVICES LTD.

Report No.: 104359969COQ-001

Date: June 29, 2020

SECTION 1

INDEX

SECTION NAMES	PAGE
Objective	4
Sample Selection	4
Sample and Assembly Description	4
Testing and Evaluation Methods	5
Results and Observations	5
Conclusion	6
Revision Summary	

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute Intertek's Reports and then only in their entirety, and the Client shall not use the Reports in a misleading manner. In the event any portion of this report becomes public, including but not limited to press releases, articles, and marketing material, without prior written consent from Intertek, Intertek may enforce the reproduction of the report in its entirety by making the full report public. Client further agrees and understands that reliance upon the Reports is limited to the representations made therein. In the event any portion of this report becomes public, including but not limited to press releases, articles, and marketing material, without prior written consent from Intertek, Intertek will enforce the reproduction of the report in its entirety by making the full report public. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. Should Customer use an Intertek Report, in whole or in part, in such a manner as to involve Intertek in legal controversy or to adversely affect Intertek's reputation, it shall be Intertek's right to utilize any and all Customer information, including, but not limited to, data, records, instructions, notations, samples or documents within Intertek's custody and control which relate to the customer for the purpose of offering any necessary defense or rebuttal to such circumstances. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Date: June 29, 2020

SECTION 2

OBJECTIVE

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Quantum Technical Services Ltd., on 100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment to determine whether the submitted samples would meet the small flame test requirements of CAN/ULC S109-14, *Standard for Flame Tests of Flame-Resistant Fabrics and Films*. This evaluation began June 26, 2020 and was completed June 26, 2020

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 materials were received at the Evaluation Center on June 15, 2020.

SECTION 4

SAMPLE ASSEMBLY AND DESCRIPTION

4.1.1. Material Specifications

Small Flame Test

A total of ten samples were supplied by the client and were identified as 100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment, each sample measured 250 mm. in length and 90 mm. in width.

4.1.2. Sample Mounting

Small Flame Test

The test samples were placed in the specimen holder, with clamps along each edge of the sample, leaving the ends free and exposing a surface area 50 mm. wide by 250 mm. long. The holder was then placed in the test apparatus.

The sample material was placed in a conditioning room at 20°C and 50% relative humidity for a minimum of 12 hours and then tested in accordance with CAN/ULC S109-14, *Standard for Flame Tests of Flame-Resistant Fabrics and Films*.

Ten trial runs were conducted for the small flame samples.

Date: June 29, 2020

SECTION 5**TESTING AND EVALUATION METHODS****SMALL FLAME TEST**

Once the specimen holder was in place, it was held 20mm above the centre of the opening of a Bunsen burner. The burner was supported such that it was 25° from the vertical. The burner supplied a flame 40 mm. long, with the intake air supply shut off. The flame impinged the sample for a period of 12 seconds.

ACCEPTANCE CRITERIA

A sample will meet the requirements of CAN/ULC S109 if the following criteria are met:

➤ *Small Flame Samples*

- Portions or residues from the test specimen which break or drip from the sample during the test shall not continue to burn for more than two seconds on the floor of the test apparatus.
- The vertical spread of flame and smouldering combustion shall not exceed 190mm on any one specimen and shall not exceed 165mm on an average of ten specimens.

SECTION 6**RESULTS AND OBSERVATIONS****6.1.1. Small Flame Test Results**

Sample No.	Fabric Direction	After Burn (sec.)	Damaged Length (mm)	Flaming Drip (Y/N)	Floor Burn (sec)
1	Weft	0	88	No	None
2	Weft	0	93	No	None
3	Weft	0	87	No	None
4	Weft	0	91	No	None
5	Weft	0	80	No	None
6	Warp	0	140	No	None
7	Warp	0	146	No	None
8	Warp	0	137	No	None
9	Warp	0	142	No	None
10	Warp	0	140	No	None
Average		0	114	No	None

Observations

No portions of or residues from the test specimens fell and burned on the floor of the test apparatus for more than 2 seconds.

Date: June 29, 2020

SECTION 7**CONCLUSION**

The submitted samples of 100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment submitted by Quantum Technical Services Ltd therefore, meet the requirements of CAN/ULC-S109-14, *Standard for Flame Tests of Flame-Resistant Fabrics and Films*, small flame test.

100% cotton fabric treated with SafeCoat® FR-31 Fabric Treatment	Maximum Damaged Length	Average Damaged Length	Burning on Floor of Apparatus
Small Flame Samples	146 mm	114 mm	No

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.

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	06/29/20	7	Original Report Issue