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CAN/ULC-S109 Large-Flame Resistance of "OS-PROTECT-FR101-FABRIC"

A Report To:	**On-Site Services US, Inc.** 35246 US Hwy 19N, Unit #141 Palm Harbor, FL 34684 USA
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Submitted by:	Element Fire Testing
Report No.	23-002-041(B)(Revision 1) 3 pages
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1.0 ACCREDITATION

ISO/IEC 17025 for a defined Scope of Testing by the American Association for Laboratory Accreditation (A2LA), Certificate Number: 6524.03.

2.0 SPECIFICATIONS OF ORDER

Determine flame resistance in accordance with CAN/ULC-S109-14 Large-Flame Test only, as per On-Site Services US, Inc. reference Purchase Order No. 1001 and Element Quotation No. 23-002-419087 dated January 25, 2023.

2.1 History of Report Revision

This report supersedes Element Test Report No. 23-002-041(B), originally issued on February 21, 2023. It is revised by request to change the sample identification.

3.0 SAMPLE IDENTIFICATION (Element sample identification number 23-002-S0041-2)

Material described as, "Woven Black Cotton Poly Blended Fabric", and identified as: "OS-PROTECT-FR101-FABRIC"

4.0 SUMMARY OF TEST PROCEDURE

If the material can be hung in natural folds, four specimens, each 625 mm wide x 750 mm long are cut, with two in the warp (machine) direction and two in the weft (cross) direction, where applicable. If the material cannot be folded, or otherwise does not meet the criteria to be tested in folds, then ten specimens, each 125 x 750 mm are cut, with five in the warp (machine) direction and five in the weft (cross) direction. Specimens are conditioned at 105 ± 2°C for 30 minutes or, if distortion or melting occurs at these temperatures, then they are conditioned at 20 ± 2°C, and at 25 to 50% relative humidity for at least 12 hours, or by drying in an oven for 1 hour at 60°C.

Additional conditioning requirements such as water leaching and/or accelerating weathering could apply for materials that are intended for outdoor use. In such cases, a material should be tested "as received", "after leaching", and "after accelerated weathering".

The specimens are removed from the conditioning chamber and suspended in the test apparatus, which is comprised of a 310 mm square by 2130 mm high steel stack. The stack is open at the top and bottom and is supported 300 mm above the floor. For conducting flame tests on fabrics hung in folds, each specimen is folded longitudinally to form four folds. For conducting flame tests on flat sheets, each specimen is hung so that the widest surface faces the test flame.

In either configuration, the lower edge of the specimen is positioned 100 mm above the top of a gas burner which is inclined at 25° to the vertical. The burner, which has been adjusted to yield a flame 280 mm in height is ignited and inserted directly beneath the specimen for a period of 2 minutes. Char length is measured from the tip of the flame, upwards.

5.0 FLAME RESISTANCE REQUIREMENTS (Reference Clause 6.3):

	Maximum Char Length or Damaged Material Length (mm)	Maximum Flaming Time for Residue on Floor of Tester (s)
Folded	635	2.0
Single sheets	250	2.0

Flame-resistant fabrics and films shall comply with the performance requirements of both the Small-Flame and the Large-Flame Test.

6.0 TEST RESULTS

CAN/ULC-S109-14 Large-Flame Test

Standard Methods of Tests for Flame-Resistant Textiles and Films

SAMPLE: "OS-PROTECT-FR101-FABRIC"

Test Specimen	Damaged Length (mm)	Afterflame Time (s)	Flaming Dripping (s)	Result
Machine Direction 1:	120	0.0	0.0	Pass
" 2:	180	0.0	0.0	Pass
Cross Direction 3:	205	0.0	0.0	Pass
" 4:	228	0.0	0.0	Pass
Maximum Specified Individual:	635	-	2.0	-

6.1 Test Notes

Specimens were cut from a supplied batch, were tested "as-received" & in folded sheet configuration

Measured Sample Weight: 421 g/m^2

7.0 CONCLUSIONS

When tested "as-received", the material identified in this report would meet the flame resistance requirements of CAN/ULC-S109-14 Large-Flame test.

Robert A. Carleton,
Technician.

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