

### EDUCATIONAL INSIGHTS/LEARNING RESOURCES

152W. WALNUT STREET, SUITE 201, GARDENA CA 90248/380 N FAIRWAY DRIBE. VERNON HILLS.  
ILLINOIS 60061

The following sample(s) was / were submitted and identified on behalf of the client as:

**Sample Description:** LIGHT FILTER

**Type/Style:** EI-1230, EI-1231, EI-1232

**Country of Origin:** CHINA

**Country of Destination:** US, CANADA

### Test Requested:

CAN/ULC-S109-14 STANDARD METHOD FOR FLAME TESTS OF FLAME-RESISTANT  
FABRICS AND FILMS

**Test Results:** -- See attached sheet --

**Conclusion:** The test samples **meet** the requirements of CAN/ULC-S109-14 in "As Received".

### Test Period:

Sample Receiving Date : DEC.05, 2014

Test Performing Date : DEC.05, 2014 TO DEC.31, 2014

Signed for and on behalf of  
SGS-CSTC Co., Ltd. Anji Branch

Allen Zou  
Technical Manager



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**Details of product**

Sample description / Color	FABRIC / Sample A: Blue; Sample B: Beige; Sample C: Blue
Products configuration	Single layer; Unfolded
Density	Sample A: About 88g/m <sup>2</sup> ; Sample B: About 85g/m <sup>2</sup> ; Sample C: About 88/m <sup>2</sup>
Specimen size	250mm×90mm (CAN/ULC-S109-14 small-flame test) 1200mm×125mm(CAN/ULC-S109-14 large-flame test)

**1. Small-Flame Test**

**I. Test conducted**

This test is conducted according to CAN/ULC-S109-14 Flame Tests of Flame-Resistant Fabrics and Films clause 4.3 SMALL-FLAME TEST.

Conditioning: Prior to testing, the sample was conditioned half an hour at 105°C±3°C.

**II. Test Results**

**Sample A**

Specimen No.		After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time (fall to the floor)
Lengthwise	1	0	0	103	0
	2	4.9	0	119	0
	3	0	0	137	0
	4	5.4	0	120	0
	5	0	0	121	0
Widthwise	6	8.0	0	101	0
	7	0	0	100	0
	8	0	0	99	0
	9	0	0	106	0
	10	3.5	0	102	0
Average		2.2	0	111	0

To be continued...



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**Sample B**

Specimen No.		After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time (fall to the floor)
Lengthwise	1	0	0	126	0
	2	0	0	157	0
	3	0	0	115	0
	4	0	0	129	0
	5	0	0	137	0
Widthwise	6	0	0	90	0
	7	0	0	119	0
	8	0	0	105	0
	9	0	0	113	0
	10	0	0	107	0
Average		0	0	120	0

**Sample C**

Specimen No.		After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time (fall to the floor)
Lengthwise	1	3.2	0	128	0
	2	2.1	0	126	0
	3	0	0	138	0
	4	0	0	127	0
	5	2.5	0	131	0
Widthwise	6	4.8	0	119	0
	7	0	0	135	0
	8	21.3	0	148	0
	9	5.3	0	128	0
	10	0	0	123	0
Average		3.9	0	130	0

To be continued...



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**Small flame test performance requirements (Clause 6.1&6.2):**

- 1). Portions or residues of the material which break or drip from the test specimens shall not continue to flame for more than 2 s on the floor of the test cabinet.
- 2). The vertical spread of flame and afterglow (smouldering combustion) on the material as indicated by the damaged length shall not exceed 165 mm of maximum average damaged length (10 specimens), and 190 mm of maximum damaged length for any specimen.
- 3). Fabrics or films for interior uses shall comply with the foregoing requirements after being subjected to tencycles of the specific type or types of cleaning recommended by the manufacturer. Material indicated as being suitable for laundering or dry cleaning shall be subjected to the applicable requirements in Subsection 7.2, Laundering, and Subsection 7.3, Dry Cleaning.
- 4). Fabrics or films intended for exposure to the weather shall comply with the foregoing requirements after being subjected to the requirements in Subsection 7.4, Water Leaching, Subsection 7.5, Scrubbing, and Subsection 7.6, Accelerated Weathering.

**2). Large-Flame Test**

**I. Test conducted**

This test is conducted according to CAN/ULC-S109-14 Flame Tests of Flame-Resistant Fabrics and Films, clause 4.4 LARGE-FLAME TEST.

Conditioning: Prior to testing, the sample was conditioned half an hour at 105°C±3°C.

**II. Test Results**

**Sample A**

Specimen No. (Single-sheet specimens)	After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time(s) (falls to the floor)
Lengthwise	1	0	189	0
	2	0	200	0
	3	0	210	0
	4	0	195	0
	5	0	206	0
Widthwise	6	0	199	0
	7	0	193	0
	8	0	190	0
	9	0	203	0
	10	0	195	0
Average	0	0	198	0

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**Sample B**

Specimen No. (Single-sheet specimens)	After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time(s) (falls to the floor)
Lengthwise	1	0	212	0
	2	0	234	0
	3	0	225	0
	4	0	217	0
	5	0	219	0
Widthwise	6	0	198	0
	7	0	203	0
	8	0	211	0
	9	0	205	0
	10	0	199	0
Average	0	0	212	0

**Sample C**

Specimen No. (Single-sheet specimens)	After flame time (s)	Afterglow time (s)	Damage length (mm)	Drops burning time(s) (falls to the floor)
Lengthwise	1	0	211	0
	2	0	207	0
	3	0	209	0
	4	0	210	0
	5	0	205	0
Widthwise	6	0	215	0
	7	0	213	0
	8	0	206	0
	9	0	210	0
	10	0	209	0
Average	0	0	210	0

To be continued...



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### Large-flame test performance requirements (Clause 6.1&6.3):

- 1). Portions or residues of the material which break or drip from the test specimens shall not continue to flame for more than 2 s on the floor beneath the test enclosure.
  - 2). The surface spread of flame in folded specimens shall not exceed 635 mm above the tip of the test flame, but the afterglow may spread in the folds. This surface spread shall be measured as the distance from the tip of the test flame to a horizontal line above which all material is sound and in apparently original condition, except for possible smoke deposits.
  - 3). The vertical spread of flame and afterglow (smouldering combustion) in single-sheet specimens, as indicated by the damaged length above the tip of the test flame, shall not exceed 250 mm. The damaged length is the vertical distance from the tip of the test flame to a horizontal line above which all material is sound and in apparently original condition, except for possible smoke deposits.
- To be continued...
- 4). Fabrics or films for interior uses shall comply with the foregoing requirements after being subjected to tencycles of the specific type or types of cleaning recommended by the manufacturer. Material indicated as being suitable for laundering or dry cleaning shall be subjected to the applicable requirements in Subsection 7.2, Laundering, and Subsection 7.3, Dry Cleaning.
  - 5). Fabrics or films intended for exposure to the weather shall comply with the foregoing requirements after being subjected to the requirements in Subsection 7.4, Water Leaching, Subsection 7.5, Scrubbing, and Subsection 7.6, Accelerated Weathering.

### STATEMENTS:

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test. They are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The test results relate only to the specimens of the product in the form in which were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.

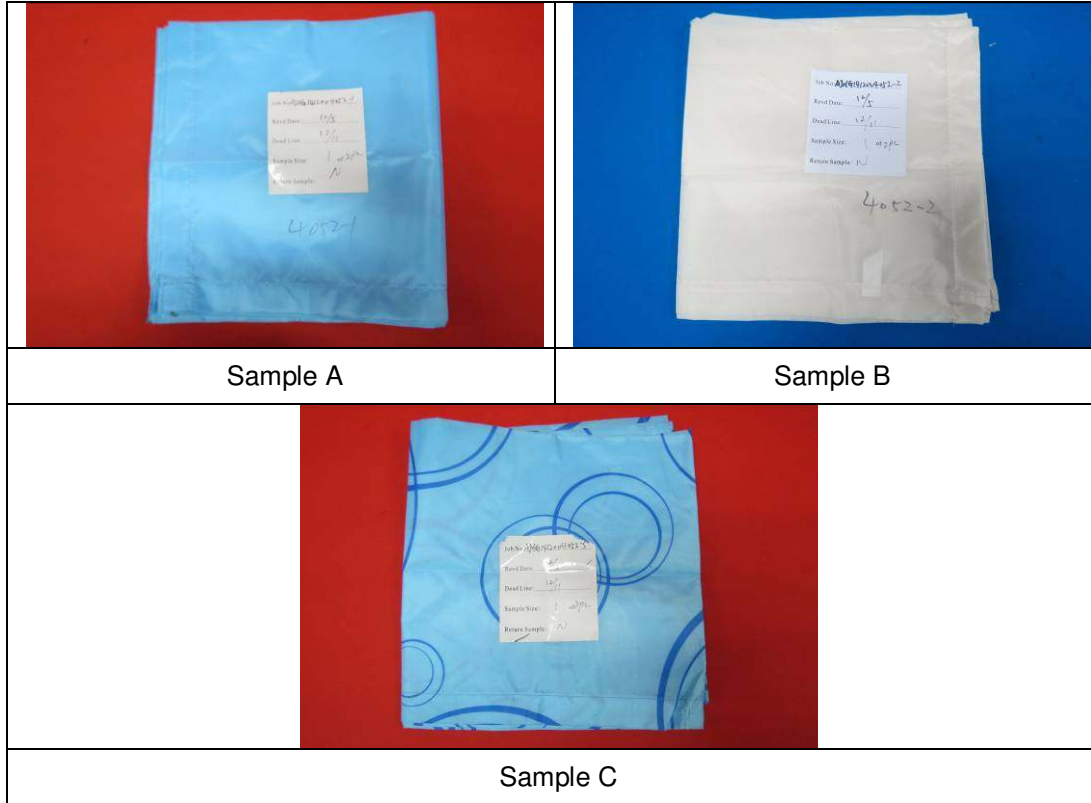
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\*\*\*End of Report\*\*\*



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