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6220 CULEBRA RD. 78238-5166 • P.O. DRAWER 28510 78228-0510 • SAN ANTONIO, TEXAS, USA • (210) 684-5111 • WWW.SWRI.ORG
CHEMISTRY AND CHEMICAL ENGINEERING DIVISION
DEPARTMENT OF FIRE TECHNOLOGY
WWW.FIRE.SWRI.ORG
FAX (210) 522-3377


**NFPA 701 - 2004**
**STANDARD METHODS OF FIRE TESTS FOR FLAME PROPAGATION OF TEXTILES AND FILMS (TEST METHOD 2)**
**MATERIAL ID: SHADESURE®**

**FINAL REPORT**
**Consisting of 3 Pages**
**SwRI Project No: 01.12693.01.223**
**Test Date: August 14, 2007**

**Report Date: August 16, 2007**

**Prepared for:**

**USA SHADE AND FABRIC STRUCTURES, INC.**
**8505 CHANCELLOR ROW**
**DALLAS, TX 75247**

Prepared by:

A. L. Sauceda

Anthony L. Sauceda
Senior Engineering Technologist
Material Flammability Section

Approved by:

Gladys M. Miller

Gladys M. Miller, M.S., M.B.A.
Assistant Director
Fire Technology Department

## INTRODUCTION

This report presents the results of NFPA 701 Test Method 2 on a specimen submitted by the Client, and tested at Southwest Research Institute's (SwRI's) Fire Technology Department, located in San Antonio, Texas. The test was conducted in accordance with the procedures outlined in *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films* (NFPA 701 Test Method 2, 2004).

This method is intended for use in determining the resistance of fabrics and films to propagation of flame beyond the area exposed to the source of ignition. This method shall apply to single layer fabric and multi layer curtain and drapery assemblies while suspended in a vertical configuration. However, where durability to cleaning or weathering is claimed, the fabric or material shall be tested for flame resistance as produced and after being subjected to the applicable cleaning or laundering procedure. The results of this test do not necessarily indicate whether the material tested will resist the propagation of flame under severe exposure or when used in a manner that differs substantially from the test conditions.

Ten individual test specimens shall be cut from a single piece of the material to be evaluated: for flat strips, a size 125 × 1200 mm (4.90 × 47.25 in.); for folds, a size of 610 × 1200 mm (24 × 47.25 in.), with the length parallel to the lengthwise direction of the material. Only specimens that cannot be folded shall be tested in the flat configuration.

Each specimen shall be conditioned in an oven at a temperature of 105 °C ± 3 °C for not less than 1 hour, no more than 3 hours before testing.

Each specimen is mounted on the support hanger in the test cabinet. The burner is placed 100 mm (3.94 in.) away from the specimen and with the center axis of the burner at a 25 degree angle and in line with the bottom of the center of the specimen and maintained for a 120 second exposure time.

The after flame time of the specimen (time of burning of the specimen after the gas flow is turned off) and the time of burning of material that falls to the bottom of the chamber shall be measured and recorded.

The requirements for acceptance of the NFPA 701 Test Method 2 are:

1. Where fragments or residues of specimens that fall to the floor of the test chamber continue to burn for more than 2 seconds, the material shall be recorded as failing the test.
2. Where the char length exceeds 435 mm (17.1 in.) for flat specimens or 1050 mm (41.3 in.) for fold specimens, the material shall be recorded as failing the test.
3. Where the after flame exceeds 2 seconds, the material shall be recorded as failing the test.
4. Where the specimens do not demonstrate performance in accordance with any of the conditions indicated in the above, the material shall be recorded as passing the test and shall be designated as flame resistant.

The results apply specifically to the specimens tested, in the manner tested, and not to the entire production of these or similar materials, nor to the performance when used in combination with other materials.

**This standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.**

**NFPA 701 TEST REPORT**
**(TEST METHOD 2)**

CLIENT: USA SHADE AND FABRIC STRUCTURES, INC.
SWRI PROJECT NO: 01.12693.01.223
TEST DATE: AUGUST 14, 2007

## MATERIAL DESCRIPTION

| | |
|---|---|
| Date Received: | July 24, 2007 |
| Material ID:* | Shadesure® |
| Description:* | High-density polyethylene fabric strips |
| Color: | Green |
| Specimen Size: | 5.0 in. wide × 47.25 in. long |
| Weight: | 34.5 g per strip (nominal) |
| Thickness: | 0.04 in. (nominal) |

* From Client's material description and/or instructions

Preparation: The specimens were placed in an oven and maintained at 105 °C for one hour before testing. The specimens were then removed from the conditioning chamber and secured into the test chamber and tested.

**TEST DATA** - Single Sheets (10 specimens)

| Specimen No. | Char Length (in.) | Afterflame Time (sec) | Burning On Floor (sec) | Pass/Fail |
|---|---|---|---|---|
| 1 | 3.0 | None | None | Pass |
| 2 | 3.0 | None | None | Pass |
| 3 | 2.0 | None | None | Pass |
| 4 | 2.5 | None | None | Pass |
| 5 | 2.0 | None | None | Pass |
| 6 | 4.0 | None | None | Pass |
| 7 | 3.5 | None | None | Pass |
| 8 | 3.0 | None | None | Pass |
| 9 | 3.0 | None | None | Pass |
| 10 | 2.0 | None | None | Pass |

## CONCLUSIONS

Based on the test results and the classification criteria, the specimen identified as Shadesure® meets the requirements established under the NFPA 701 Test Method 2.