

# SOUTHWEST RESEARCH INSTITUTE®

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION  
FIRE TECHNOLOGY DEPARTMENT  
WWW.FIRE.SWRI.ORG  
FAX (210) 522-3377



QUALITY SYSTEM  
REGISTERED TO  
ISO 9001:2000

**FIRE TEST EVALUATION IN GENERAL  
ACCORDANCE WITH SIA (SWISS ENGINEERS  
AND ARCHITECTS) TEST METHOD V280/12  
(1996), VERTICAL BURN TEST  
MATERIAL ID: "A," "B," AND "C"**

**FINAL REPORT**

**Consisting of 3 Pages**

**SwRI® Project No: 01.11810.01.241**

**Test Date: September 28, 2006**

**Report Date: October 25, 2006**

**Prepared for:**

**CHEMICAL FABRICS AND FILM ASSOCIATION (CFFA)  
1300 SUMNER AVENUE  
CLEVELAND, OH 44115**

Prepared by:

*D. E.*

*David Ewan*

David Ewan  
Engineer  
Material Flammability Section

Approved by:

*Gladys M. Miller*

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

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## INTRODUCTION

This report presents the results of three specimens submitted by the Client, tested at Southwest Research Institute's (SwRI's) Fire Technology Department, located in San Antonio, Texas. The (ad hoc) test was conducted in general accordance with the procedures outlined in SIA (Swiss Engineers and Architects) Test Method V280/12 (1996), Vertical Burn Test.

This test was intended for use in determining the combustibility of the specimens supplied by the Client. The test was performed as a comparison test and consisted of a specimen holder capable of holding three specimens. The three specimens were tested simultaneously and in duplicate. The results of this test do not necessarily indicate whether the specimens tested will resist the propagation of flame under severe exposure or when used in a manner that differs substantially from the test conditions.

Each specimen was inserted into the holder and a 20-mm Bunsen burner propane flame was applied vertically to the bottom end of each specimen, 10-mm from the top of the burner tube, for 15 seconds. The flame is then withdrawn away from the specimens and the duration of flaming of the specimens was noted.

The material undergoing the test is evaluated for "time" and "burning time." Time is the amount of time between the beginning of ignition and the moment when the flame reaches the upper edge of the specimen-clamp. Burning time is the time between the beginning of ignition and the moment when the flame goes out. Any unusual behavior of the sample during testing is also reported.

## CLASSIFICATION CRITERIA

Specimens are classified using the "time" and "burning time" of each specimen. The classification system is as follows:

Combustibility 3:	"Time" 5-20s
Combustibility 4:	"Time" and "Burning Time" > 20s
Combustibility 5:	The flame does not reach the upper edge of the specimen clamp (150mm) and "Burning Time" < 20s

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.

## SIA TEST METHOD V280/12, VERTICAL BURN TEST REPORT

CLIENT: CHEMICAL FABRICS AND FILM ASSOCIATION (CFFA)  
 SWRI PROJECT NO: 01.11810.01.241  
 TEST DATE: SEPTEMBER 28, 2006

### MATERIAL DESCRIPTIONS

Date Received: August 30, 2006

Material ID*	A	B	C
Description*	Class A Rated TPO	Class A Rated PVC	Class A Rated EPDM
Color	White front/black back	White front/grey back	Black
Nominal Size Received	21 x 22-in. sheet	21 x 23-in. sheet	27 x 27-in. sheet
Nominal Thickness	1.52 mm	1.52 mm	1.41 mm
Nominal Unit Weight	1.0 lbs/sheet	1.3 lbs/sheet	1.6 lbs/sheet

\* From Client's material description and/or instructions

### PREPARATION AND CONDITIONING

Preparation: The six specimens were cut to a nominal size of 75 x 170 mm, by SwRI staff on September 28, 2006.

Conditioning Time: The specimens were conditioned for 28 days at a temperature of approximately 70°F and a relative humidity of 50%.

### TEST RESULTS

Number of Runs: 2 (three specimens were tested simultaneously per run)

Test Room Temperature: 72°F

	Run 1			Run 2		
	A	B	C	A	B	C
Ignition (sec)	7	2	7	8	3	7
Burner Removed (sec)	15	15	15	15	15	15
Time (sec)	87	N/A	74	87	N/A	75
Burning Time (sec)	215	13	273	243	12	331
Flame Out on Floor* (sec)	252	N/A	Not recorded	382	N/A	178
Burn Length (mm)	150	3	150	150	3	150
Combustibility	4	5	4	4	5	4

\*At the Client's request, the time from ignition, when the flame on the floor went out, was recorded.

The test video is considered to be part of this report.