

**CLIENT: POLYGAL USA, INC.**  
P.O. Box 410592  
Charlotte, NC 28241-0592  
Ron Melvin

**Test Report No: 172155-2**

**Date: February 10, 2004**

**SAMPLE ID:** The Client submitted and identified the following test material as 6mm Standard Bronze Polygal Structured Polycarbonate sheet.

**DATE OF RECEIPT:** Entered into SGS USTC sample tracking system on June 23, 2003 as STN 36620.

**TESTING PERIOD:** November 10, 2003.

**AUTHORIZATION:** Testing authorized by Ron Melvin.

**TEST REQUESTED:** Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-01, "Standard Method of Test for Surface Burning Characteristics of Building Materials". The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

<b>TEST RESULTS:</b>	<b><u>Flame Spread</u></b>	<b><u>Smoke Density</u></b>
	10	180

For detailed results see page 3.

**Tested by**

**Signed for and on behalf of  
SGS U.S. Testing Company Inc.**

Brian Ortega  
Test Technician

Greg Banasky  
Supervisor Fire Technology

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**PREPARATION AND CONDITIONING:** The sample material was submitted in three pieces, 24" wide by 96" long, conforming to test chamber dimensions. The sample was supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at two foot intervals across the width of the test chamber.

Prior to testing, the specimen was placed in the conditioning room (maintained at  $73.4 \pm 5^\circ$  F and a relative humidity of  $50 \pm 5\%$ ) and allowed to reach moisture equilibrium.

**SUMMARY OF ASTM E84 RESULTS:** Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5.

<u>SAMPLE IDENTIFICATION</u>	<u>FLAME SPREAD</u>	<u>SMOKE DENSITY</u>
6mm Standard Bronze Polygal Structured Polycarbonate sheet	10	180

In order to obtain the Flame Spread Classification, the above results should be compared to the following table:

<u>NFPA CLASS</u>	<u>UBC CLASS</u>	<u>FLAME SPREAD</u>
A	I	0 through 25
B	II	26 through 75
C	III	76 through 200

**BUILDING CODES CITED:**

1. National Fire Protection Association, ANSI/NFPA No. 101, "Life Safety Code", 1994 Edition.
2. Uniform Building Code, 1994 Edition, Chapter 8, Interior Finishes, Sections 801-807.

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**E 84 TEST DATA SHEET:**

CLIENT: POLYGAL USA, INC. DATE: 11/10/03

SAMPLE: 6mm Standard Bronze Polygal Structured Polycarbonate sheet

THICKNESS: 6mm nominal

**FLAME SPREAD:**

IGNITION: 38 seconds

FLAME FRONT: 4 feet maximum

TIME TO MAXIMUM SPREAD: 8 minutes, 13 seconds

TEST DURATION: 10 minutes

CALCULATION: 21.86 X 0.515 = 11.25

**SUMMARY: FLAME SPREAD: 10 SMOKE DENSITY: 180**

**OBSERVATIONS:** Sample surface ignition was observed at 38 seconds. A flame front advance of 4 feet was observed at 8 minutes, 13 seconds.

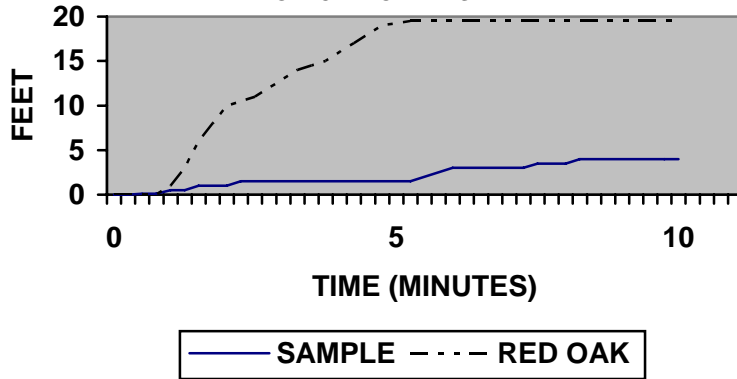
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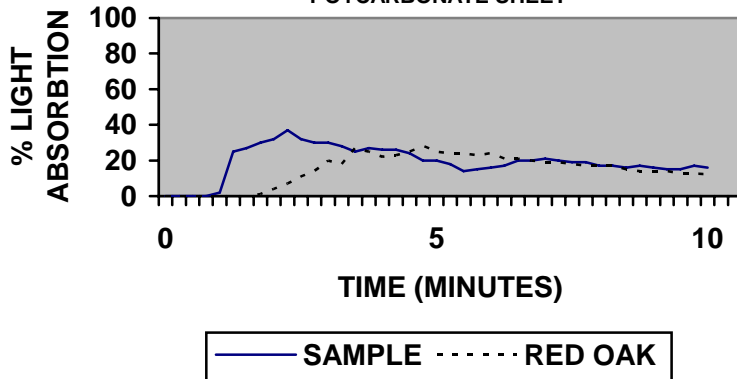
### FLAME SPREAD

6MM STANDARD BRONZE POLYAL STRUCTURED  
POLYCARBONATE SHEET



### SMOKE DEVELOPED

6MM STANDARD BRONZE POLYAL STRUCTURED  
POYCARBONATE SHEET



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End of Report