



**CLIENT:** Palram Americas Incorporated  
9735 Commerce Circle  
Arcadia West Industrial Park  
Kutztown, PA 19530  
Attn: Don Olson

Test Report No: 676900-01	Date: August 29, 2006
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The following sample was submitted by the Client as: 1 mm Palsun

**DATE OF RECEIPT:** July 6, 2006

**TESTING PERIOD:** August 17, 2006

**AUTHORIZATION:** Order Confirmation Number 676900, dated July 27, 2006

**TEST REQUESTED:** The submitted sample was tested for Surface Burning Characteristics in accordance with the procedures outlined in ASTM E84-05.

**TEST RESULTS:** Continued on the following pages

**PREPARED BY:**

*William G. Booth*

**William G. Booth, Technician  
Fire Technology**

**SIGNED FOR AND ON BEHALF OF  
SGS U.S. TESTING COMPANY INC.**

**Arthur D. Fiorino, Senior Technician  
Fire Technology**

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**RESULTS:**

**INTRODUCTION:**

This report presents test results of Flame Spread and Smoke Developed Values per ASTM E-84-05. The report also includes Material Identification, Method of Preparation, Mounting and Conditioning of the specimens.

The tests were performed in accordance with the specifications set forth in ASTM E-84-05, Standard Test Method for Surface Burning Characteristics of Building Materials, both as to equipment and test procedure. This test procedure is similar to UL-723, ANSI No. 2.5, NFPA No. 255 and UBC 42-1.

The test results cover two parameters: Flame Spread and Smoke Developed Values during a 10-minute fire exposure. Inorganic cement board and red oak flooring are used as comparative standards and their responses are assigned arbitrary values of 0 and 100, respectively.

**PREPARATION AND CONDITIONING:**

Six sheets of sample, supplied by the client was placed onto screen and rods for support and then placed into the fire chamber end to end to form a 21 inch wide X 24 foot long specimen for testing. Inorganic cement boards were placed over the sample prior to testing as a means of protecting the interior of the tunnel lid.

The sample was conditioned at  $73^{\circ} \pm 5^{\circ}$  Fahrenheit and  $50 \pm 5\%$  relative humidity.

**TEST PROCEDURE:**

The tunnel was thoroughly pre-heated by burning natural gas. When the brick temperature, sensed by a floor thermocouple, had reached the prescribed  $105^{\circ}$  Fahrenheit  $\pm 5^{\circ}$  Fahrenheit level, the sample was inserted in the tunnel and test conducted in accordance with the standard ASTM E-84-05 procedures.

The operation of the tunnel was checked by performing a 10-minute test with inorganic board on the day of the test.



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**RESULTS:**

**TEST RESULTS:**

The test results, calculated in accordance with ASTM E-84-05 for Flame Spread and Smoke Developed Values are as follows:

Test Specimen : 1 mm Palsun  
Flame Spread Index\* : 15  
Smoke Developed Value\* : 235

\*Rounded off to the nearest 5 units. Graphs of the Flame Spread, Smoke Developed and Time-Temperature are shown on the attached charts at the end of this report.

**OBSERVATIONS:**

Ignition occurred at 25-seconds. The following observations were noted:

- Charring
- Melting
- Dripping
- Flaming Dripping
- Warping
- Floor Burning

**RATING:**

The National Fire Protection Association Life Safety Code 101, Section 6-5.3, "Interior Wall and Ceiling Finish Classification", has a means of classifying materials with respect to Flame Spread and Smoke Developed when tested in accordance with NFPA 255, "Method of Test of Surface Burning Characteristics of Building Materials", (ASTM E-84).

The classifications are as follows:

Class A Interior Wall & Ceiling Finish:	Flame Spread -	0-25
	Smoke Developed -	0-450
Class B Interior Wall & Ceiling Finish:	Flame Spread -	26-75
	Smoke Developed -	0-450
Class C Interior Wall & Ceiling Finish:	Flame Spread -	76-200
	Smoke Developed -	0-450

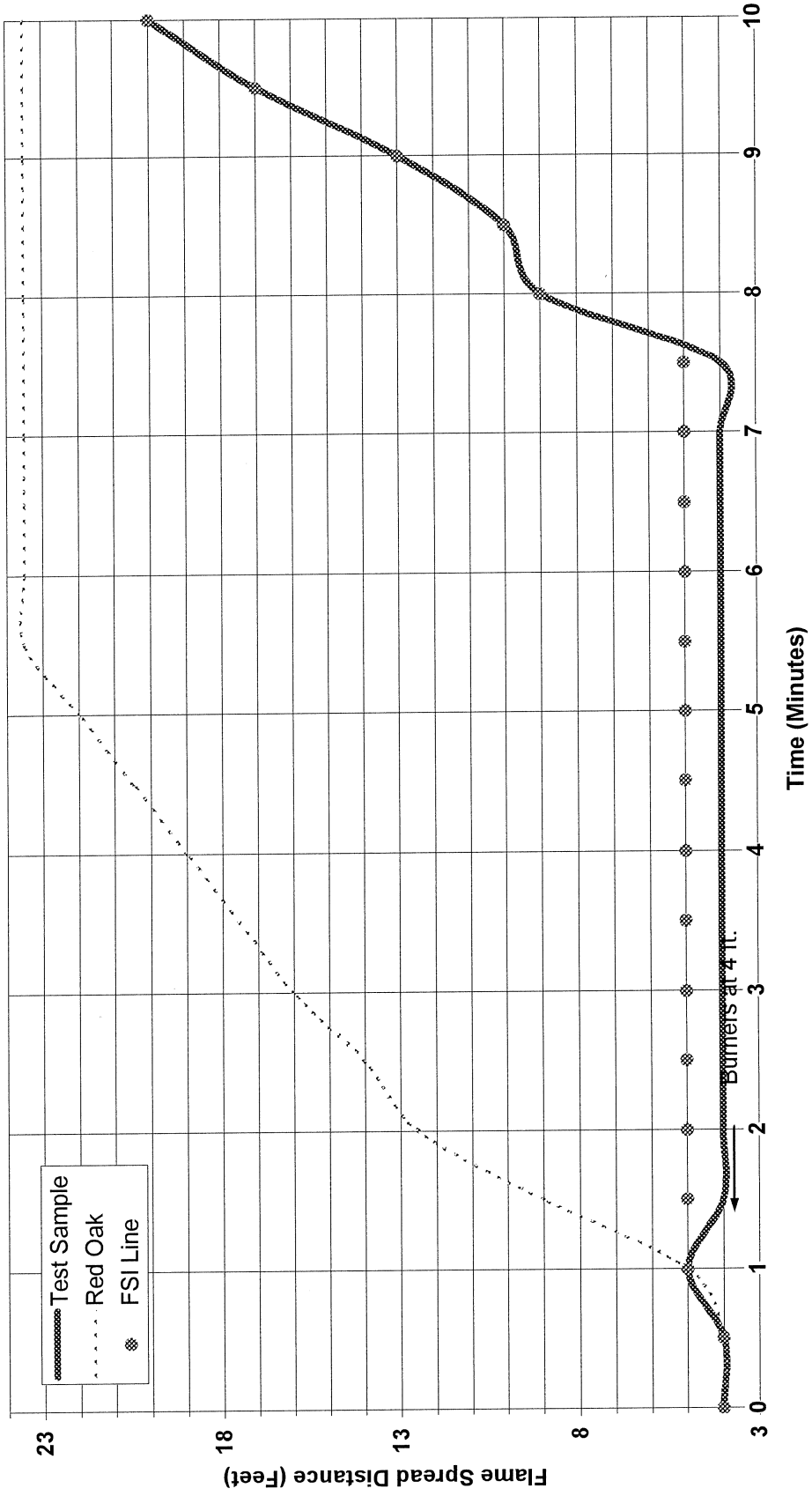
Since the sample received a Flame Spread of 15 and a Smoke Developed Value of 235, it would meet the parameters for a Class A Interior Wall & Ceiling Finish Category.

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**End of Report**

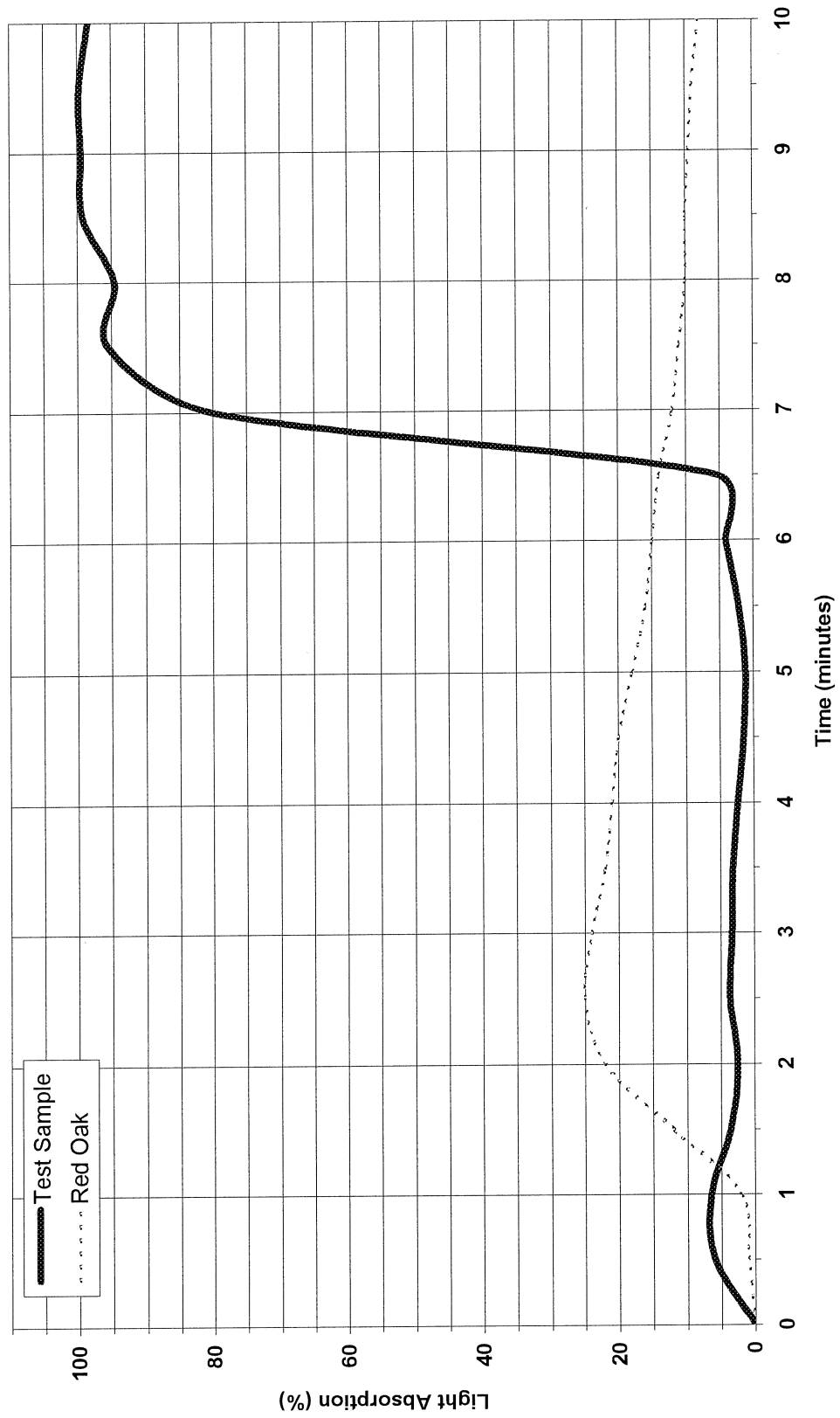
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## Flame Spread Chart



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## Smoke Developed Chart



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## Temperature - Time Curve

