



SGS U.S. Testing Company Inc.

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REPORT NUMBER: 123422-2
DATE: May 14, 1999
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REPORT OF TEST

CLIENT: Sequentia, Inc.
450 No. Highway 368
Grand Junction, TN 38039

SUBJECT: Surface Burning Characteristics of Building Materials

AUTHORIZATION: Client's purchase order number 1210 dated April 06, 1999.

SAMPLE ID: One (1) sample of panels was submitted on April 20, 1999 and identified by client as:

" STRUCTOGLAS, TOS 0.09" Liner Panel "

TEST PROCEDURE: The submitted sample was tested for Flammability in accordance with the procedures outlined in ASTM E-84-1998.

TEST DATE: May 14, 1999

PREPARED BY:

Nick Kitov
Technician, Fire Technology

SIGNED FOR THE COMPANY BY:

Hiten Pandya
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Member of the SGS Group

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CLIENT: Sequentia, Inc.

TEST PROCEDURE AND RESULTS

INTRODUCTION:

This report presents test results of Flame Spread and Smoke Developed Values per ASTM E-84-1998. 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-84-1998, 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:

Three (3) 2 feet x 8 feet sections of material were fitted end to end to form a 24" x 24'0" sample. The sample was laid on a 2 - inch galvanized hexagonal wire mesh supported by steel rods spanning the width of the tunnel. The sample was tested at a thickness of 0.09" .

The sample was conditioned at 73° ± 5° Fahrenheit and 50 ± 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° Fahrenheit ± 5° Fahrenheit level, the sample was inserted in the tunnel and test conducted in accordance with the standard ASTM E-84-1998 procedures.

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

CLIENT: Sequentia, Inc.

TEST RESULTS:

The test results, calculated in accordance with ASTM E-84-1998 for Flame Spread and Smoke Developed Values are as follows:

Test Specimen	STRUCTOGLAS, TOS 0.09" Liner Panel
Flame Spread Index*	165
Smoke Developed Value*	225

*Values are rounded-off to the nearest 5 units. The graphs of the Flame Spread, Smoke Developed and Time-Temperature are shown on the attached charts at the end of this report.

OBSERVATIONS:

Ignition was noted at 15 seconds along with charring of the specimen directly exposed to the flame. The flamefront advanced a maximum distance of 19.9 feet at 3 minutes and 29 seconds.

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

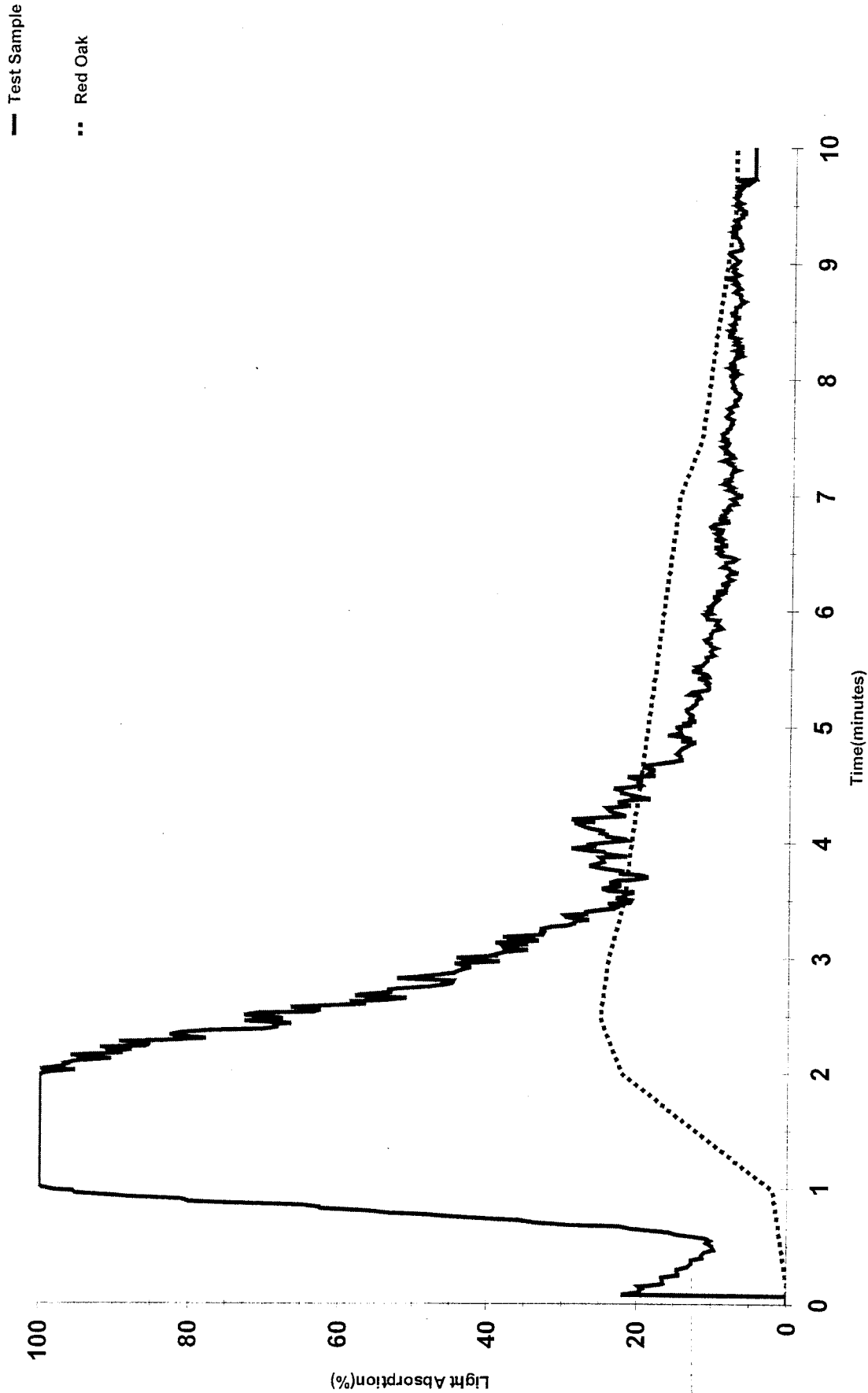
Since the sample received a Flame Spread of 165 and a Smoke Developed Value of 225, it would fall into the **Class C** of Interior Wall & Ceiling Finish Category.

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Smoke Developed Chart

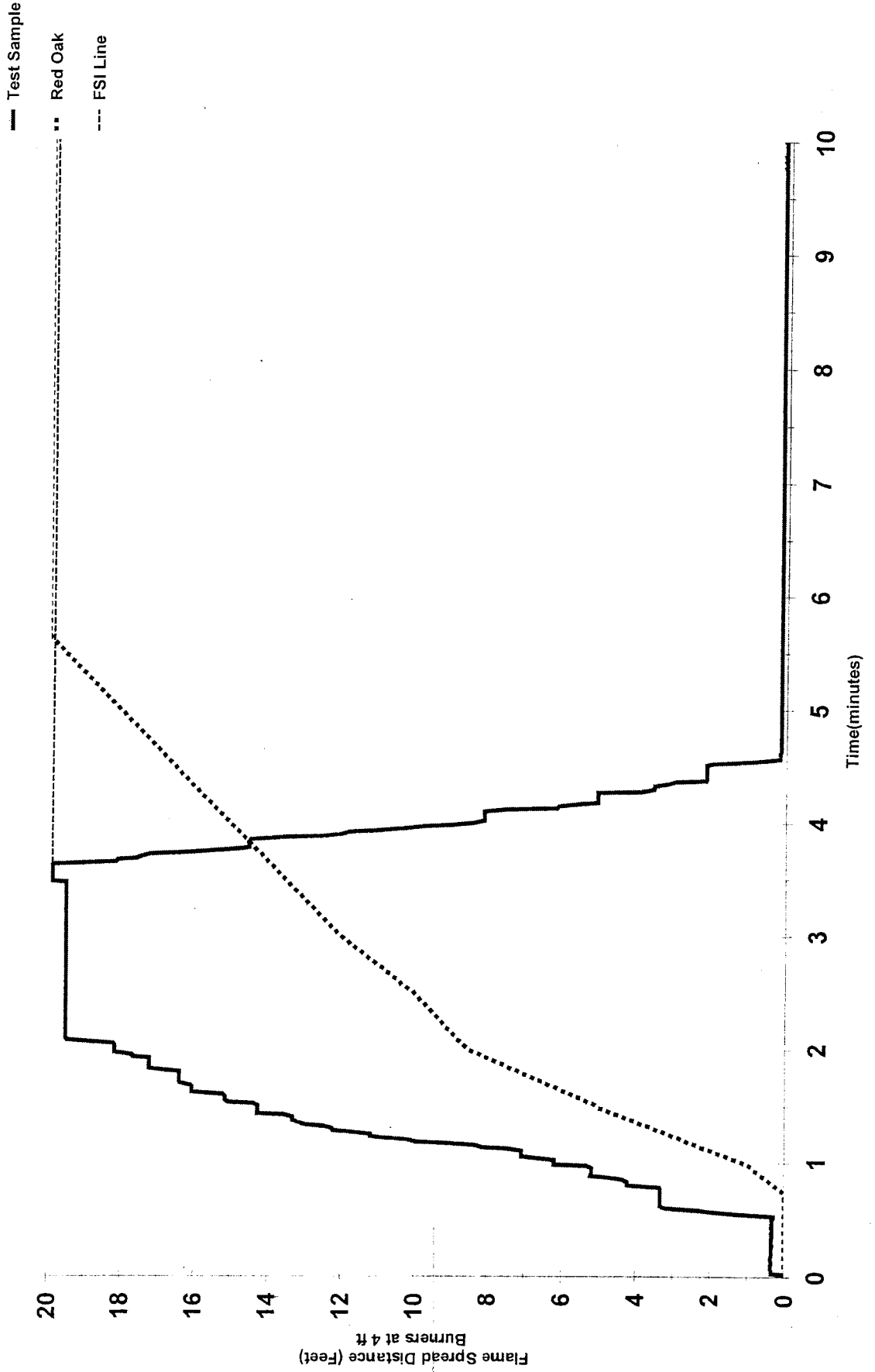
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Flame Spread Chart

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Temperature - Time Curve

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— Test Sample
·· Red Oak

