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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

FIRE TECHNOLOGY DEPARTMENT
WWW.FIRE.SWRI.ORG
FAX (210) 522-3377



STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS PERFORMED IN ACCORDANCE WITH ASTM E84-16

MATERIAL ID: B92 BLANC ALU 1044


FINAL REPORT
Consisting of 7 Pages

SwRI[®] Project No.: 01.23233.02.013
Test Date: October 24, 2017
Report Date: November 3, 2017

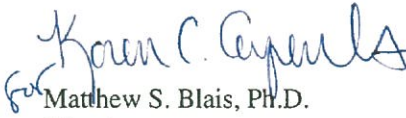
Prepared for:

Serge Ferrari
Zone Industrielle – B.P. 54
38352 La Tour-du-Pin Cedex
France

Submitted by:


Eugene F. Horton
Principal Engineering Technologist
Material Flammability Section

Approved by:


Matthew S. Blais, Ph.D.
Director
Fire Technology Department

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EXECUTIVE SUMMARY

This report presents the test results for a specimen submitted by Serge Ferrari, located in France, and tested at Southwest Research Institute's (SwRI's) Fire Technology Department, located in San Antonio, Texas. The test is conducted in accordance with the procedure outlined in ASTM E84-16, *Standard Test Method for Surface Burning Characteristics of Building Materials* (NFPA 255, ANSI/UL 723 and UBC 8-1).

Material ID: B92 Blanc ALU 1044

- Flame Spread Index (FSI): 20
- Smoke Developed Index (SDI): 450

Test Criteria.

Classification	Flame Spread Index	Smoke Developed Index
A	0 – 25	0 – 450
B	26 – 75	0 – 450
C	76 – 200	0 – 450

1.0 INTRODUCTION

The purpose of this test method is to determine the relative burning behavior according to the standard ASTM E84 of materials by observing the flame spread along the specimen. Flame Spread and Smoke Developed index are reported in Appendix A. However, there is not necessarily a relationship between these two measurements.

Test specimens are conditioned as appropriate in an atmosphere maintained between 68 and 78 °F and 45 to 55% relative humidity. Immediately prior to the test, the specimen is mounted in the furnace with the side to be tested facing the test flame. Cement board is placed on the unexposed side of the specimen to protect the furnace lid assembly. Sometimes, because of the nature of the material undergoing testing, additional support (e.g. wire, wire and rods, rods, and/or bars) is used to ensure that the specimen will remain in position during the test. The use of supporting materials on the underside of the test specimen may lower the Flame Spread Index from that which might be obtained if the specimen could be tested without such support, and the test results do not necessarily relate to indices obtained by testing materials without such support.

Two model building codes (2015 International Building Code[®], Chapter 8 *Interior Finishes*, Section 803 *Wall and Ceiling Finishes*; NFPA 5000, Chapter 10 *Interior Finish*, Section 10.3 *Interior Wall or Ceiling Finish Testing and Classification*) classify materials based on the Flame Spread and Smoke Developed indices.

This standard should be used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled 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 the test may be used as elements of a fire-hazard assessment or a fire-risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard or fire risk of a particular end use.

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. More detailed results with graphical illustrations may be found in Appendix A.

ASTM E84-16 REPORT

2.0 DESCRIPTION OF SPECIMEN

MATERIAL ID:*	<i>B92 Blanc ALU 1044</i>
DATE RECEIVED:	October 6, 2017
DESCRIPTION:*	Polyester yarns coated with PVC flame retardant on both sides and added on the back side of an opacifiant grey PVC FILM
THICKNESS:	0.60 mm+-10% (nominal)
WEIGHT:	12.7 kg (nominal)
DENSITY:*	650 g/m ² +-5%
COLOR:*	white grey 1044
SUBSTRATE:	None
ADHESIVE:	None
SPECIMEN SIZE:*	10,000 × 1800 mm (Received one roll)
CONSTRUCTION:*	Mesh polyester coated with PVC flame retardant on both sides added on the back face of a grey opacifiant PVC FILM. 28% of polyester
COMPOSITION:*	Polyester / PVC
PREPARED BY:	SwRI personnel
CONDITIONING TIME:	14 days at 73.4 ± 5 °F, (23 ± 2.8 °C), 50 ± 5% humidity
SUPPORT USED:	2.0 in. hexagonal wire mesh with 0.25 in. diameter steel rods every 24.0 in.
WITNESSED BY:	N/A

* From Client's material description and/or instructions

APPENDIX A
TEST RESULTS
(CONSISTING OF 2 PAGES)

Client: Serge Ferrari
SwRI Project No.: 01.23233.02.013
Test Date: October 24, 2017
Material I.D.: B92 Blanc ALU 1044

TEST RESULTS

ROUNDED FLAME SPREAD INDEX (FSI):	20
ROUNDED SMOKE DEVELOPED INDEX (SDI):	450

TEST DATA

UNROUNDED FSI:	21.7
UNROUNDED SDI:	474.8
FS*TIME AREA (Ft*Min):	42.2
SMOKE AREA (%*Min):	531.4
FUEL AREA (°F*Min):	954.1

OBSERVATIONS DURING TEST

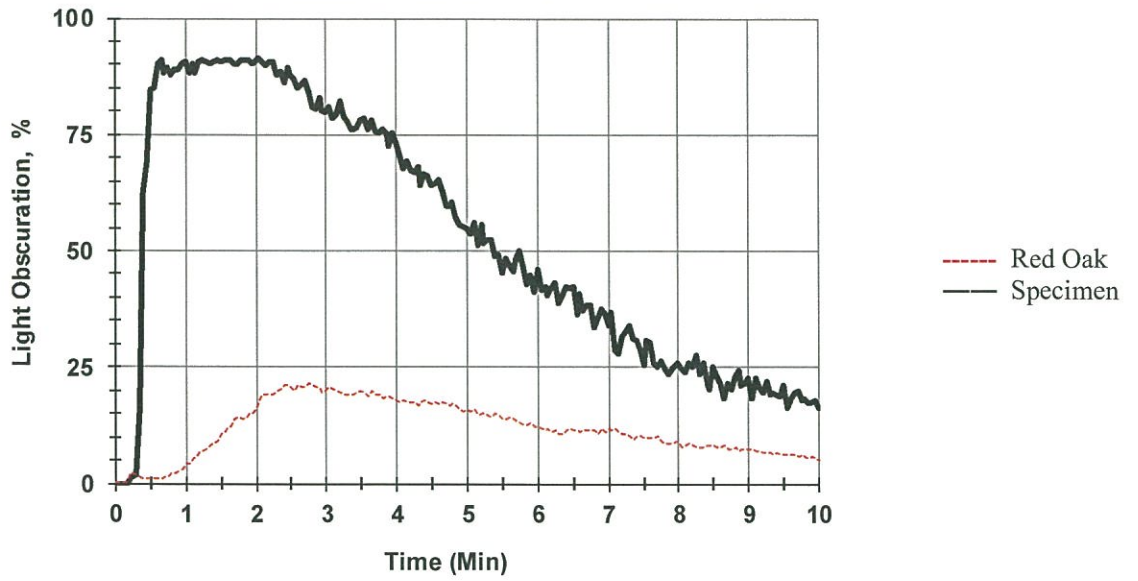
IGNITION TIME (Min: Sec):	00:08
MAXIMUM FLAME FRONT ADVANCE (Ft.):	4.4
TIME TO MAXIMUM ADVANCE (Min: Sec):	1:18
MAXIMUM TEMP. AT EXPOSED TC (°F):	108
TIME TO MAXIMUM TEMP. (Min: Sec):	9:48
TOTAL FUEL BURNED (Cu. Ft.):	52.0
DRIPPING (Min: Sec):	None
FLAMING ON FLOOR (Min: Sec):	00:30
AFTERFLAME TOP (Min: Sec):	None
AFTERFLAME FLOOR (Min: Sec):	None
SAGGING (Min: Sec):	None
DELAMINATION (Min: Sec):	None
SHRINKAGE (Min: Sec):	None
FALLOUT (Min: Sec):	00:25

CALIBRATION DATA

RED OAK SMOKE AREA (%*Min):	110.9
RED OAK FUEL AREA (°F*Min):	4942
GRC BOARD FUEL AREA (°F*Min):	978

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LIGHT OBSCURATION



FLAMESPREAD

