Factory Mutual Research

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OXOQ2. AM
Phase I
(4820)

April 1, 1993

EXPLORATORY EVALUATION BY ASTM E84 FIRE TEST METHOD ON FABRIC MATERIAL

for

GUILFORD OF MAINE, INC.
GILBOA STREET
EAST DOUGLAS, MA 01516

I. INTRODUCTION

Guilford of Maine, Inc. submitted four samples which they designated as Fabric Material for an evaluation per ASTM E84 Fire Test Method.

The ASTM E84 Test Method subjects materials to limited fire conditions when tested in a horizontal ceiling application. The test results may not indicate the material's actual burning characteristics when field installed in a vertical position.

Also, the sample mounting prescribed in this test method may not produce a fire behavior representative of actual building fires.

The material tested is not manufactured under the Factory Mutual Research follow-up inspection and reexamination program; therefore, the manufacturer cannot use the Factory Mutual Research name for marking or advertising the material.

The product is not Approved, except where separately listed in the Factory Mutual Research Approval Guide for specific end-use application.

I I. TEST METHOD

Tests were conducted in accordance with the Standard Method of Test for "SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS", ASTM Designation E84 (91a). The results yield Flame Spread and Smoke Density values for the test materials during a 10 minute fire exposure.

The purpose of this test is to determine the comparative surface burning characteristics of building materials by evaluating the flame spread performance of Red Oak under identical conditions. The Smoke Density value of the material may be compared with that of cement board and Red Oak which have been arbitrarily established as 0 and 100, respectively.

I I I TEST RESULTS

The following are the ASTM E84 test results of Fabric Material supplied by Guilford of Maine, Inc. Tests were conducted on March 18, 1993 under J.I. OXOQ2.AM, Phase I.

Note: The test samples were supported by ¼ in. (6.25 mm) diameter steel rods and 2 in. hexagonal wire mesh.

Sample: SHAMIANA RANGE 3570 5-4000-5130
60% Polyester – 40% Polypropylene Panel Fabric

Flame Spread	2
Smoke Density	85
Observations	0.03 Ignitions of Sample 0.19 Maximum Flame Spread of 0.5 ft. (0.15 m)

Sample: FRISE RANGE 4085-025 PC #68421004
100% Polyester – T430 Panel Fabric

Flame Spread	2
Smoke Density	38
Observations	0.06 Ignitions of Sample 0.40 Maximum Flame Spread of 0.5 ft. (0.15 m)

Sample: PAVILION RANGE 3571 5-4000-6240
60% Polyester – 40% Polypropylene Panel Fabric

Flame Spread	5
Smoke Density	76
Observations	0.04 Ignitions of Sample 0.18 Maximum Flame Spread of 0.5 ft. (0.3 m)

Sample: FR-701-2100-406 – P.O. #69045004
100% Polyester – T430 Panel Fabric

Flame Spread	2
Smoke Density	19
Observations	0.06 Ignitions of Sample 2.43 Maximum Flame Spread of 0.5 ft. (0.15 m)

Caution: These Numerical Flame Spread and Smoke Density values are not intended to reflect the hazards presented by this or any material under actual fire conditions.

The products of combustion were not analyzed nor is it required by the ASTM E84 Test Method.

I V LABORATORY REQUIREMENTS

Factory Mutual Research makes no judgment of product uniformity solely as a result of this fire evaluation. Product uniformity depends in part on manufacturing facilities and quality control procedures. Factory Mutual Research's Audit Inspection and Reexamination Program provides a means to assess these conditions.

Factory Mutual makes no judgment of product suitability for its intended end-use based entirely on ASTM E84 test results. This decision is usually the prerogative of the local authority having jurisdiction.

TEST SUPERVISED AND REPORT BY:

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Materials Engineer