TEST REPORT

REPORT NUMBER: 101113787COQ-002
ORIGINAL ISSUE DATE: April 12, 2013
REVISION DATE: April 23, 2013

EVALUATION CENTER
Intertek Testing Services NA Ltd.
1500 Brigantine Drive
Coquitlam, B.C. V3K 7C1

RENDERED TO

Cement Board Fabricators Inc.
2148 South 41st Street
Louisville, KY
40211

PRODUCT EVALUATED: Silbonit Fiber-cement Flat Sheets
EVALUATION PROPERTY: Surface Burning Characteristics

Report of testing Silbonit fiber-cement flat sheets for compliance with the applicable requirements of the following criteria: ASTM E84-12c, *Standard Test Method for Surface Burning Characteristics of Materials.*

1 Table of Contents

2 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Cement Board Fabricators Inc, to evaluate the surface burning characteristics of Silbonit Fiber-cement Flat Sheets. Testing was conducted in accordance with the standard methods of ASTM E84-12c, *Standard Test Method for Surface Burning Characteristics of Materials*.

This evaluation began April 12, 2013 and was completed the same day.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client and were not independently selected for testing. The sample material was received at the Evaluation Center on April 8, 2013.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The product sample was supplied and described by the client as "Silbonit Fiber-cement Flat Sheets" and consisted of 5/16 in. thick by 24 in. wide by 8 ft long.

For this test run three 8 ft. long panels were placed on the upper ledge of the flame spread tunnel, and butted together to form the required 24 ft. sample length. A layer of 6 mm reinforced cement board was placed over top of the samples, the tunnel lid was lowered into place, and the samples were then tested to ASTM E84-12c.

4 Testing and Evaluation Methods

4.1. TEST STANDARD

The results of the tests are expressed by indexes, which compare the characteristics of the sample under tests relative to that of select grade red oak flooring and inorganic-cement board.

(A) Flame Spread Classification:

This index relates to the rate of progression of a flame along a sample in the 25 foot tunnel. A natural gas flame is applied to the front of the sample at the start of the test and drawn along the sample by a draft kept constant for the duration of the test. An observer notes the progression of the flame front relative to time. This information is plotted on a graph (flame spread curve).

The test apparatus is calibrated such that the flame front for red oak flooring passes out the end of the tunnel in five minutes, thirty seconds (plus or minus 15 seconds).

(B) Smoke Developed:

A photocell is used to measure the amount of light, which is obscured by the smoke passing down the tunnel duct. When the smoke from a burning sample obscures the light beam, the output from the photocell decreases. This decrease with time is recorded and compared to the results obtained for red oak, which is defined to be 100.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

(A) Flame Spread

The resultant flame spread classifications are as follows:
(classification rounded to nearest 5)

Sample	Flame Spread	Flame Spread Classification
Silbonit Fiber-cement Flat Sheets	1	0

(B) Smoke Developed

The areas beneath the smoke developed curve and the related classifications are as follows:
(For smoke developed indexes 200 or more, classification is rounded to the nearest 50. For smoke developed indexes less than 200, classification is rounded to nearest 5)

Sample	Smoke Developed	Smoked Developed Classification
Silbonit Fiber-cement Flat Sheets	0	0

(C) Observations

There was no visible surface ignition or smoke.

6 Conclusion

The sample of 5/16 in thick Silbonit fiber-cement flat sheets, submitted by Cement Board Fabricators Inc., exhibited the following flame spread characteristics when tested in accordance with ASTM E84-12c, *Standard Test Method for Surface Burning Characteristics of Materials*.

Sample Material	Flame Spread Classification	Smoke Developed Classification
Silbonit Fiber-cement Flat Sheets	0	0

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK TESTING SERVICES NA LTD.

Tested and
Reported by: _____
Greg Philp
Technician – Building Products Testing

Reviewed by: _____
Scott Leduc, EIT
Test Engineer – Building Products Testing

APPENDIX A

DATA SHEETS

ASTM E84-12c DATA SHEETS

ASTM E84

Client: Cement Board Fabricators
Date: 04 12 2013
Project Number: 101113787
Test Number: 1
Operator: Greg Philp

Specimen ID: Silbonit Fiber Cement Flat Sheets

TEST RESULTS

FLAMESPREAD INDEX: 0

SMOKE DEVELOPED INDEX: 0

SPECIMEN DATA . . .

Time to Ignition (sec): 0
Time to Max FS (sec): 386
Maximum FS (feet): 0.5
Time to 980 F (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (F): 486
Time to Max Temperature (sec): 596
Total Fuel Burned (cubic feet): 42.00

FS*Time Area (ft*min): 2.0
Smoke Area (%A*min): 0.2
Unrounded FSI: 1.0
Unrounded SDI: 0.2

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 44.0
Red Oak Smoke Area (%A*min): 95.9

TESTED BY

REVIEWED BY

ASTM E84-12c DATA SHEETS

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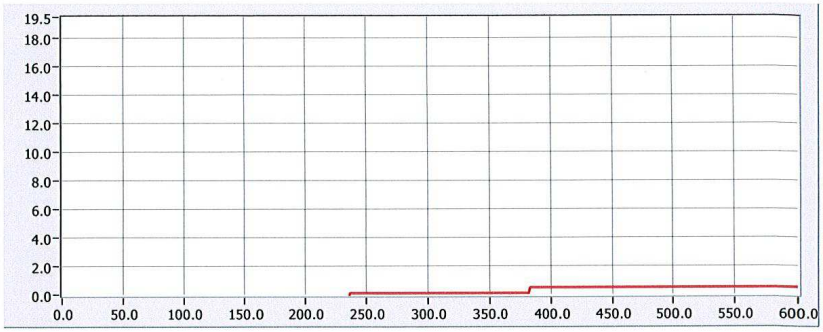
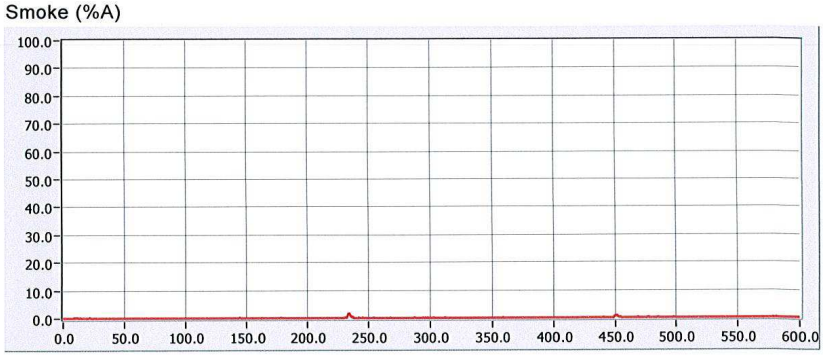
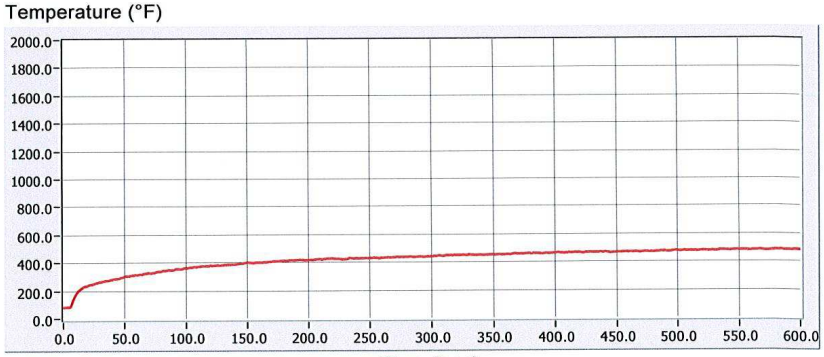
FLAME SPREAD (ft)



Smoke (%A)



Temperature (°F)



Time (sec)

600

REVISION SUMMARY

DATE	PAGE	SUMMARY	
April 12, 2013	All	Original Issue Date	
April 23, 2013	3 and 6t	Sample thickness corrected from 3/8 in to 5/16 inj.	SL