



TEST REPORT

No. : XMIN171102417CCM

Date : Nov.28, 2017

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CUSTOMER NAME: HYDROBLOK GRAND INTERNATIONAL LTD
ADDRESS: 304-20338 65TH AVENUE, LANGLEY, BC V2Y 2X3

Sample Name : TILE BACKER BOARD
Material : Extruded Polystyrene Foam
Buyer : HYDROBLOK GRAND INTERNATIONAL LTD
Manufacturer : HYDROBLOK GRAND INTERNATIONAL LTD

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Selected test(s) as requested by applicant
SGS Ref. No. : SDHL1711024213FB
Date of Receipt : Nov.13, 2017
Testing Start Date : Nov.13, 2017
Testing End Date : Nov.24, 2017

Test Result Summary

No.	Test(s) Requested	Result(s)	Comments
1	ASTM E84-17	Class A	/

For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

***** To be continued*****

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. XM Branch

Civi Huang Authorized Signatory



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Test Conducted:

This test was conducted in accordance with ASTM E84-17 Standard Test Method for Surface Burning Characteristics of Building Materials

Introduction:

The method, designated as ASTM E84-17, "Standard Method of Test for Surface Burning Characteristics of Building Materials", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of flame spread index (FSI) and smoke developed index (SDI).

The purpose of this test method is to determine the relative burning behavior of the material by observing the flame spread along the specimen. Flame spread and smoke developed index are reported. However, there is not necessarily a relationship between these two measurements.

Test Procedure:

The tunnel is preheated to 150°F, as measured by the floor-embedded thermocouple located 23.25 feet downstream of the burner ports, and allowed to cool to 105°F, as measured by the floor-embedded thermocouple located 13 feet from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 24 feet long, 12 inches above the floor. The lid is then lowered into place.

Upon ignition of the gas burners, the flame spread distance is observed and recorded every 15 seconds. Flame spread distance versus time is plotted ignoring any flame front recessions. If the area under the curve (A) is less than or equal to 97.5 min·ft, $FSI = 0.515 \cdot A$; if greater, $FSI = 4900 / (195 - A)$. Smoke developed is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, arbitrarily established as 0 and 100, respectively.

Sample Description and Preparation:

Exposed face: The use of ceramic tile surface for test

Prior to testing, the specimen was conditioned to constant weight at a temperature of $73 \pm 5^\circ\text{F}$ ($23 \pm 3^\circ\text{C}$) and a relative humidity of $50 \pm 5\%$.

Using cement to paste the sample on the ceramic tile. The use of ceramic tile surface for test and flat out on the holder (the holder is 1/4inch diameter steel rods and 2inch wire mesh.)

Remark: The cement and ceramic tile provide by the laboratory.

***** To be continued*****



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Test Results:

Test data and observations:

Ignition time: No ignited
Maximum flame spread (ft): 0
Fallout: None
Test Duration: 10 minutes.
FS*Time area (ft*min): 0
Smoke area (%A*min): 0.7
Red oak smoke area (%A*min): 90.8

Summary of results:

Flame-spread Index (FSI)	Smoke-developed Index (SDI)
0	0

Rating:

The National Fire Protection Association Life Safety Code 101, "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, (ASTM E84) "Method of Test of Surface Burning Characteristics of Building Materials".

The classifications are as follows:

	<u>Flame-Spread Index (FSI)</u>	<u>Smoke-developed Index(SDI)</u>
Class A	0 - 25	0 - 450
Class B	26 - 75	0 - 450
Class C	76 - 200	0 - 450

Conclusion:

Refer to the National Fire Protection Association Life Safety Code 101, "Interior Wall and Ceiling Finish Classification", the submitted sample meets / did not meet the requirement of Class A.

***** To be continued*****



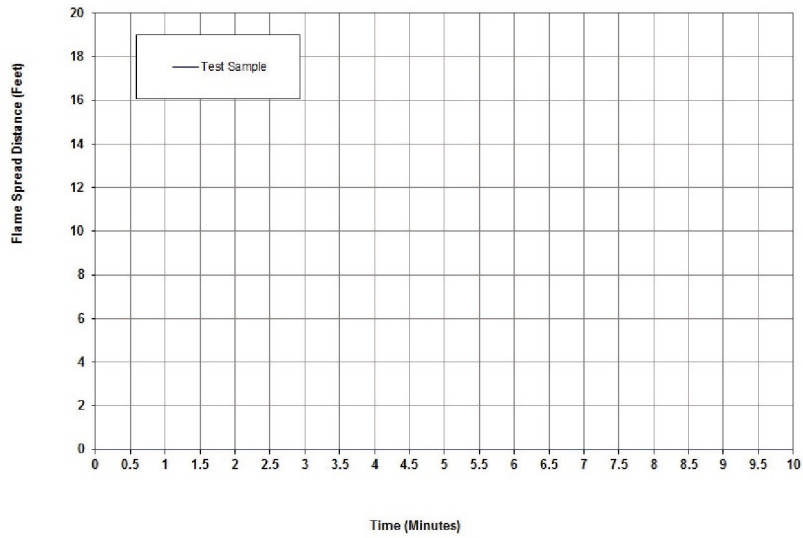
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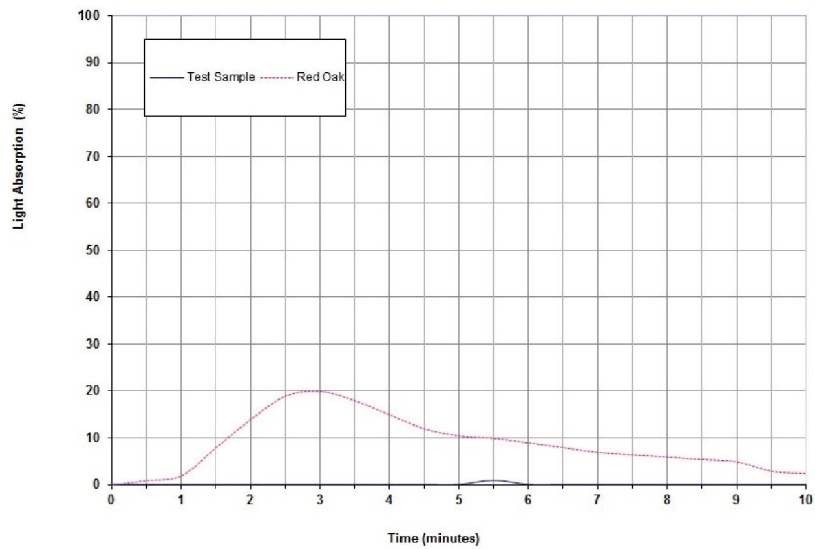
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Appendix 1-Graphs:



Graph1. Flame Spread Index



Graph2. Smoke Developed Index

Note: The above test was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch.
***** To be continued*****

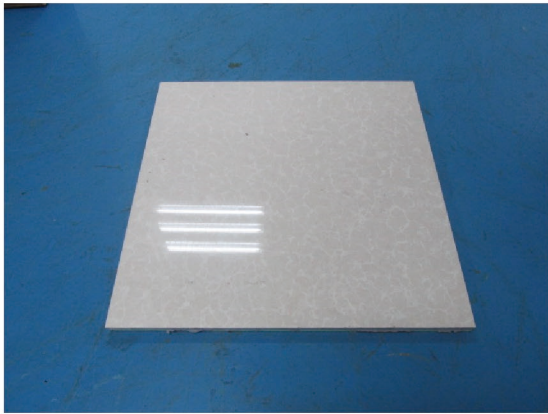
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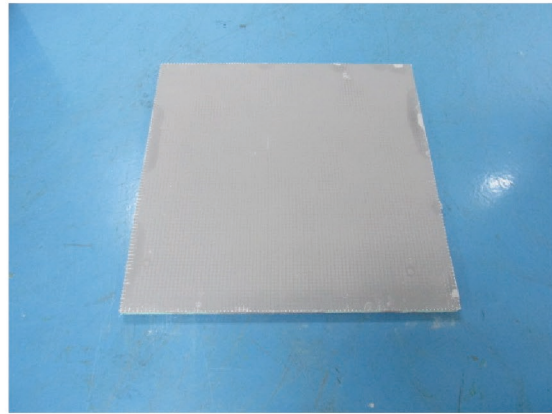
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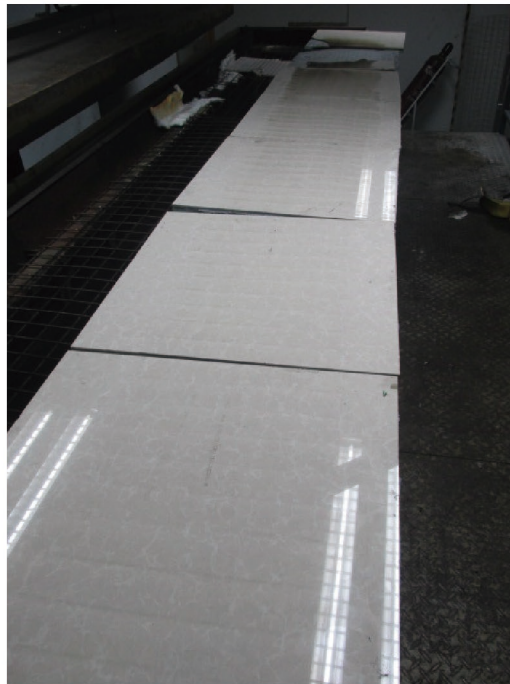
Specimen photograph:



Sample face



Sample back



After test

SGS authenticate the photo on original report only

*****End of report*****