Test Report

No. SDFS1908004867FF Date: Aug.13, 2019

[redacted]

The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Description	:	POLYESTER FIBER ACOUSTIC PANEL
Color	:	WHITE
Thickness	:	24mm
Composition	:	POLYESTER FIBER
Density	:	3300g/m^2
Sample Receiving Date	:	Aug.05, 2019
Test Performing Date	:	Aug.05, 2019 to Aug.13, 2019

Test Result Summary

No.	Test(s) Requested	Result(s)	Comments
1	ASTM E84-17 Standard Test Method for Surface Burning Characteristics of Building Materials	Class A	/
For further details, please refer to the following page(s)			

Signed for and on behalf of
Shunde Branch
SGS-CSTC Co., Ltd.

Irvette Zhang
Approved signatory

SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch Facilities

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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·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:

Thickness	:	Approximately 24mm
Exposed face	:	Blue face

Sample Preparation:

Prior to testing, the specimen was conditioned to constant weight at a temperature of (73.4± 5)°F (23 ± 2.8)°C and a relative humidity of (50 ± 5)%.

The test specimen consisted of a total of 12 sections of material. The sections were butted together during testing to form the requisite specimen length. The specimen was self-supporting on the ledges of the test chamber.

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Test Results:

Test data and observations:

Ignition time:	20 seconds.
Maximum flame spread (ft):	1
Time To Maximum Spread:	57 seconds.
Fallout:	Yes
Test Duration:	10 minutes.
FS*Time area (ft*min):	9.5
Smoke area (%A*min):	60.1
Red oak smoke area (%A*min):	90.8

Summary of results:

Flame-spread Index (FSI)	Smoke-developed Index (SDI)
5	65

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:

	Flame-Spread Index (FSI)	Smoke-developed Index(SDI)
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 the requirement of Class A.

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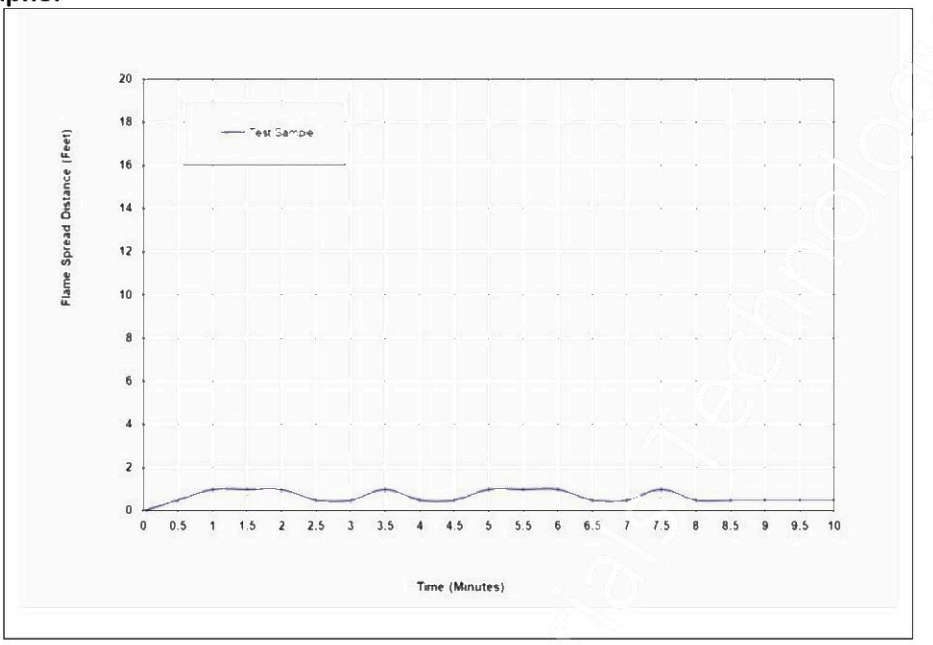
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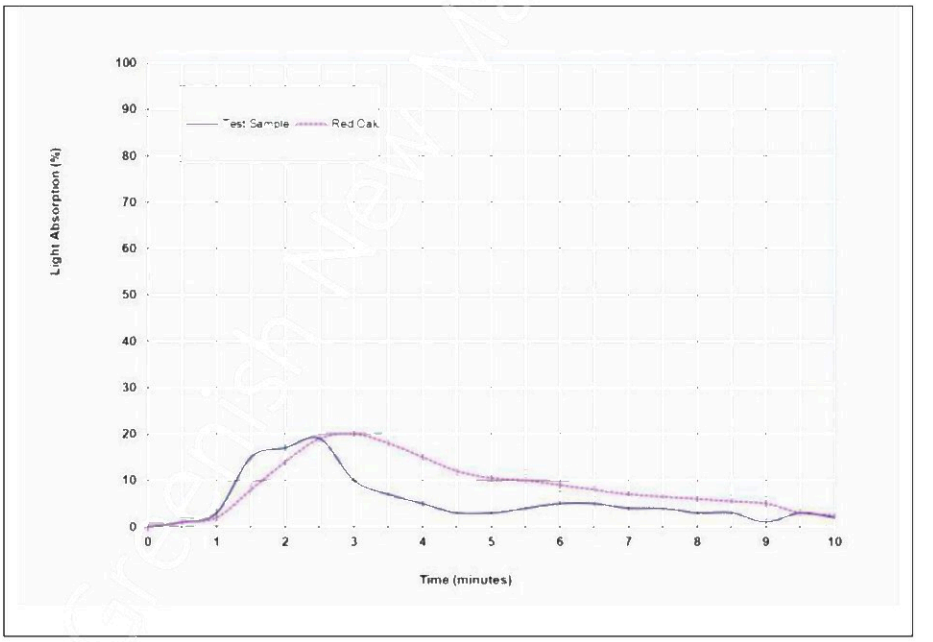
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Appendix 1-Graphs:



Graph1. Flame Spread Index

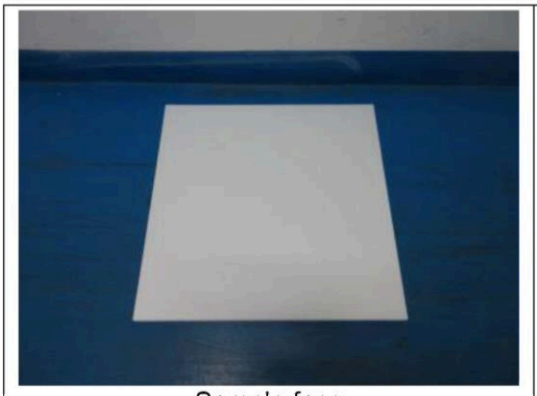


Graph2. Smoke Developed Index

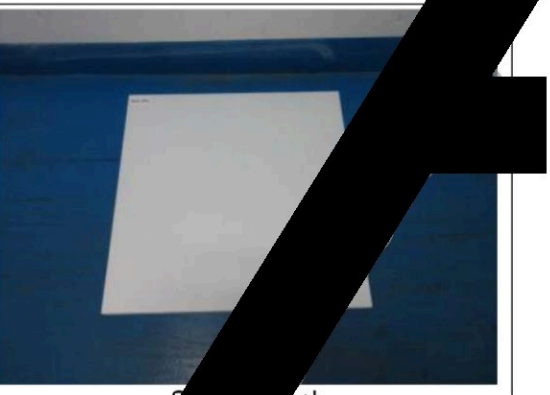
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Appendix 2-Pictures:



Sample face



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After test

End of Report

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