Test Report

SHANGHAI ALUDREAM BUILDING MATERIAL CO., LTD

ROOM 3E-1624, NO.2123, PUDONG AVENUE, PUDONG DISTRICT, SHANGHAI

Sample Name: ALUMINUM COMPOSITE PANEL

SGS Ref No.: TJP23-003069

Style/Item No.: ALUDREAM 4MM

The above sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion arising therefrom. Results apply to the sample as received.

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Test Requested:

ASTM E84-2023 Standard Test Method for Surface Burning Characteristics of Building Materials.

Test Results: -- See attached sheet –

Test Period:

Sample Receiving Date	:	DEC.21, 2023
Test Performing Date	:	DEC.21, 2023 TO JAN.05, 2024

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Anji Branch

Echo Li
Approved Signatory

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I. Test conducted

This test was conducted in accordance with ASTM E84-2023 Standard Test Method for Surface Burning Characteristics of Building Materials.

II. Introduction

The method, designated as ASTM E84-2023, 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.

III. Test procedure

The tunnel is preheated to 65.6℃(150°F), as measured by the floor-embedded thermocouple located 7.09m (23.25 ft) downstream of the burner ports, and allowed to cool to 40.6℃(105°F), as measured by the floor-embedded thermocouple located 3.96m (13 ft) 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 7.32m (24 ft) long, 304.8mm (12 in) 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 30 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 ft·min, FSI = 0.515·A; if greater, FSI = 4900/(195-A).

The test results for smoke shall be plotted and the area under the curve shall be divided by the area under the curve for heptane, multiplied by 100, and rounded to the nearest multiple of five to establish a numerical smoke-developed index (SDI).

IV. Conditioning

Prior to testing, the sample was conditioned,

To a constant weight at a temperature of 23±2.8°C (73.4±5°F) and at a relative humidity of 50±5%.

Sample details

Sample description	Aluminum Composite Panel (provided by client)
Color	Blue
Density	4.7 kg/m^2
Exposed surface	Blue surface

Mounting methods:

The specimen was self-supporting and placed directly on the inner ledges of the tunnel.

The specimen is consisted of 5 pieces of 550mm wide by 1500mm long by 4.0mm thick, all sections jointed end-to-end.

Test results:

Flame Spread Index, FSI	Smoke-developed Index, SDI
0	5

Rating:

The National Fire Protection Association Life Safety Code 101, Chapter 10, Section 10.2.3 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 ASTM E84 or UL 723 Method of Test of Surface Burning Characteristics of Building Materials.

International Building Code, Chapter 8, Interior Finishes, Section 803 Wall and Ceiling Finishes, was classified in accordance with ASTM E 84 or UL 723. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke-developed indexes.

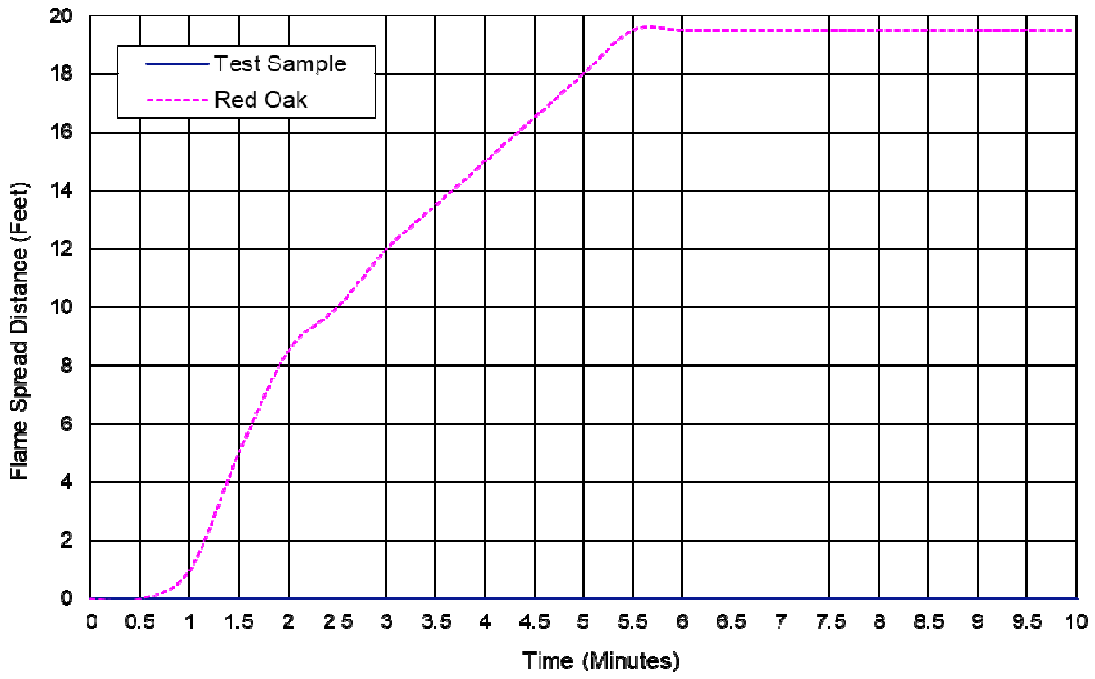
The classifications are as follows:

Index	Class A	Class B	Class C
Flame Spread Index	0-25	26-75	76-200
Smoke-developed Index	0-450	0-450	0-450

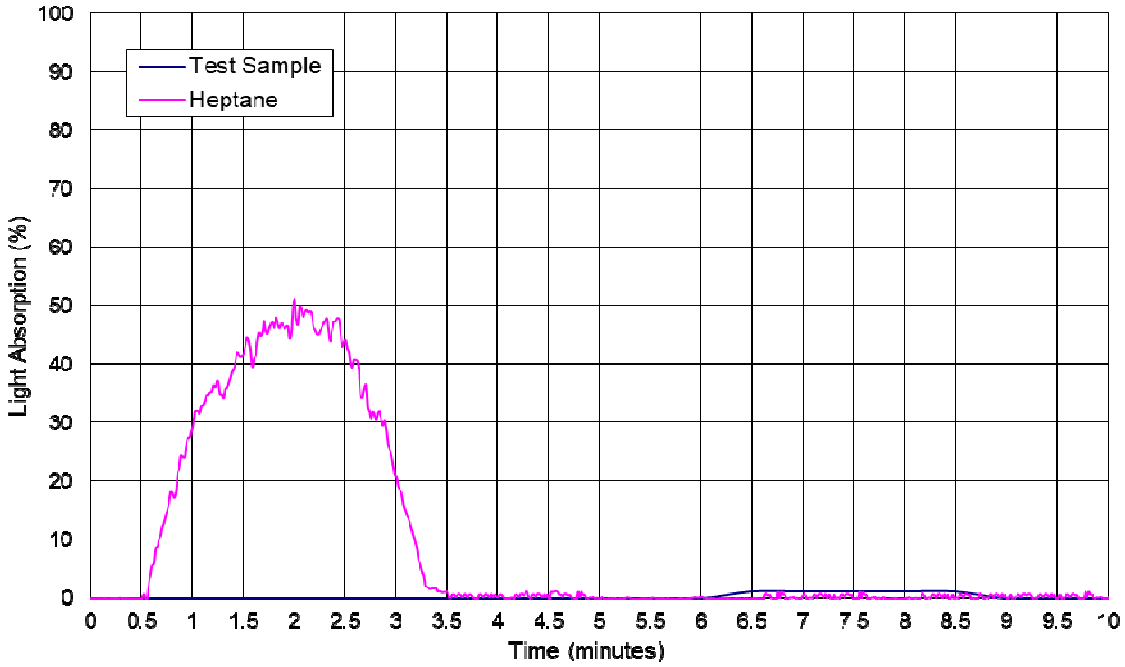
Since the tested sample received a Flame Spread Index 0 and a Smoke-developed Index 5, it would **meet** the requirements of **Class A** interior Wall & Ceiling Finish Category.

Graphical results:

Flame Spread Chart



Smoke Developed Chart

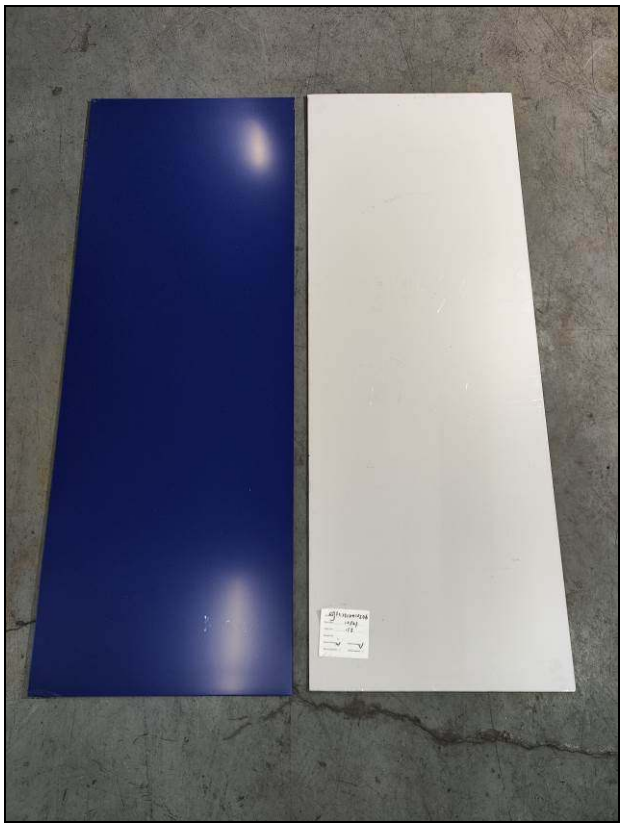


Observations:

Time to ignition (sec)	237
Time to Max. FS (sec)	Not Applicable
Maximum FS (feet)	0
Observations	None

Statement: This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.

Photo Appendix:



SGS authenticate the photo on original report only

End of Report