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检测  
TESTING  
CNAS L4743

**Test Report**

Report No.: AJFS2304002449FF

Date: APR.20, 2023

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**RADIAL ENGINEERING LTD**

1845 KINGSWAY AVE, SUITE 1165 PORT COQUITLAM, BRITISH COLUMBIA, CANADA V3C 0H3

**Sample Name:** ECOSCAPES PANEL (24mm PET)

**SGS Ref No.:** SHCCM2304000115

**Product Specification:** 2440\*1220\*24mm

**Buyer:** RADIAL ENGINEERING LTD

**Material and Mark:** PET

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 E84-2022 Standard Test Method for Surface Burning Characteristics of Building Materials.

**Test Results:** -- See attached sheet --

**Test Period:**

Sample Receiving Date : APR.04, 2023

Test Performing Date : APR.04, 2023 TO APR.18, 2023

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Anji Branch

*Echo*

Echo Li  
Approved Signatory

scan to see the report



AJFS2304002449FF



SGS-CSTC Standards Technical Services Co., Ltd.  
Anji Branch Fire Technology Service

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### I. Test conducted

This test was conducted in accordance with ASTM E84-2022 Standard Test Method for Surface Burning Characteristics of Building Materials.

### II. Introduction

The method, designated as ASTM E84-2022, 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°C (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°C (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,  $FSI = 0.515 \cdot A$ ; 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%.



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**Sample details**

Sample description	ECOScapes Panel (24mm pet) (provided by client)
Color	White
Density	5.8 kg/m <sup>2</sup>

**Exposed face:** Any surface

**Mounting methods:**

Bars was placed at intervals of approximately 610 mm on the inner ledges of the tunnel for support the specimens.

The specimen consisted of 3 pieces of 600 mm wide by 2400 mm long by 24.5 mm thickness and 1 piece of 600 mm wide by 120 mm long by 24.5 mm thickness, all sections jointed end-to-end.

**Test results:**

Flame Spread Index, FSI	Smoke-developed Index, SDI
0	135

**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

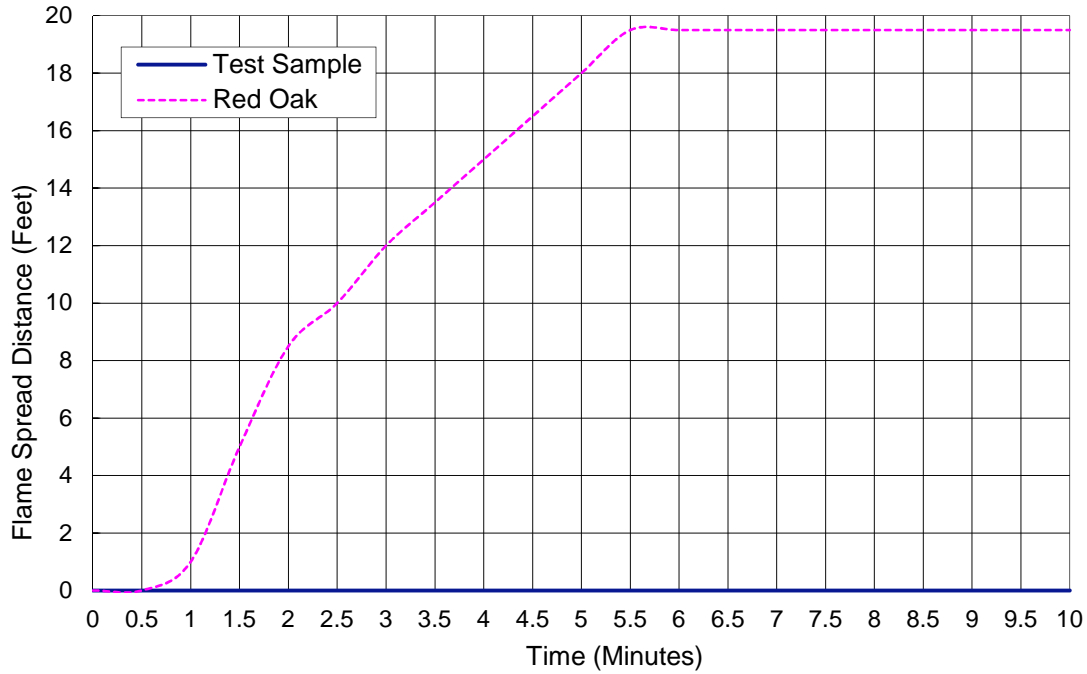
Since the tested sample received a Flame Spread Index 0 and a Smoke-developed Index 135, it would **meet** the requirements of **Class A** interior Wall & Ceiling Finish Category.



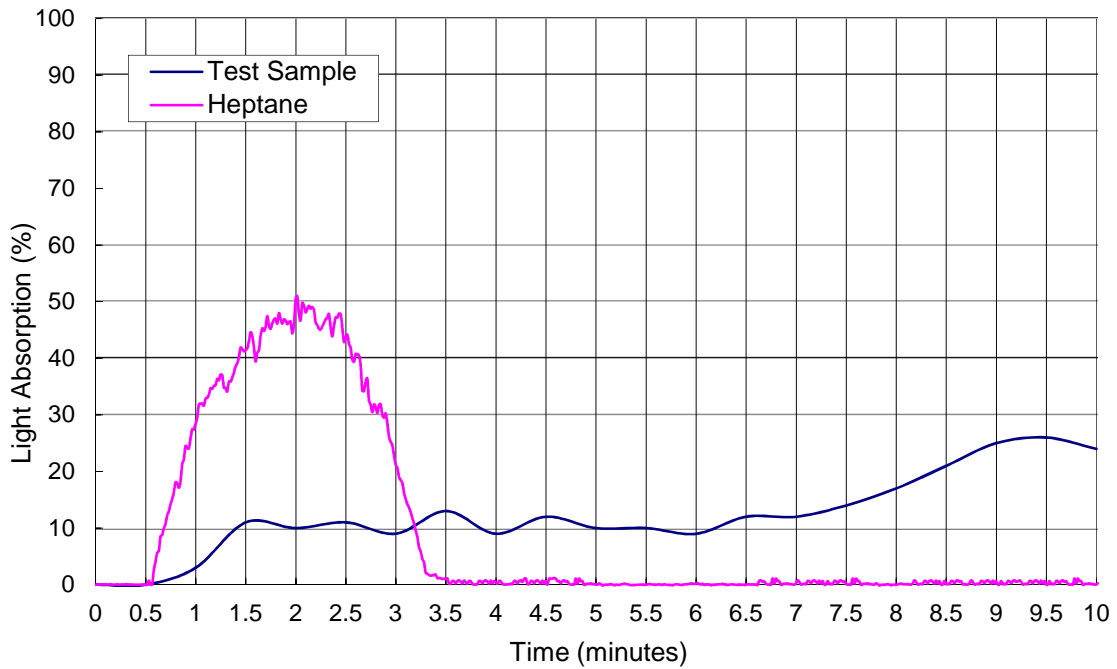
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Graphical results:

Flame Spread Chart



Smoke Developed Chart



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**Observations:**

Time to ignition (sec)	42
Time to Max. FS (sec)	Not application
Maximum FS (feet)	0
Observations	Flaming Dripping

**WARNING:**

The use of supporting materials on the underside of the test specimen has the ability to lower the flame spread index from those which might be obtained if the specimen could be tested without such support. These test results do not necessarily relate to indices obtained by testing materials without such support. Testing of materials that melt, drip, or delaminate to such a degree that the continuity of the flame front is destroyed, results in low flame spread indices that do not relate directly to indices obtained by testing materials that remain in place.

The test results relate only to the specimens of the product in the form in which were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.

**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.



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Photo Appendix:



SGS authenticate the photo on original report only

\*\*\*End of Report\*\*\*



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