TEST REPORT

Report No.: METS-R 4509/2026

Client / Establishment	: M/s. Best Solution for Polyurethane Panels Doha, Qatar.

Sample ID	: METS -S26-4509
Sample Receiving Date	: 02/07/2026
Reporting Date	: 08/07/2026
Date of Analysis	: 02/07/2026-08/07/2026
Tested by	: AM
Issue No	: 01 (Re-Issue Date: NA)

Sample Information:

Sample Description	: Thermal Insulation Foam
Dimension of panels used	: 12panels of 600X600x 19.30mm (l x w x t) and 1 panels of 200X600x19.30mm (l x w x t)
No. of panels	: 13 Nos.
Total Dimension	: 7400x 600 x 19.30 mm (l x w x t) (measured)
Specimen Placement	: 13 Nos. of Wall Panel board were butt jointed end to end.

Brief Evaluation of the Results:

	Test	Results
METS S26-4509	ASTM E84-26-Surface burning characteristics of building materials	FSI- 35 SDI- 140

The tested specimens qualified for Class B as per IBC.
The corresponding test results are furnished in following page

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(Surface burning characteristics of building materials (Flame Spread Index and Smoke Developed Index)

- **Test Method:** ASTM E84-26a

  ASTM E84 standard, also known as the Standard Test Method for Surface Burning Characteristics of Building Materials, is a fire-test-response method used to evaluate the flame spread and smoke development of materials. A 24-foot-long and 20-inch-wide sample is placed in a tunnel-like apparatus called the Steiner Tunnel. The sample is exposed to controlled flames for 10 minutes, and the test measures how far and how quickly the flame spreads across the material's surface.

  The flame spread and smoke development are compared to reference materials, such as red oak (which has a flame spread index of 100) and cement board (which has an index of 0). Based on these results, materials are classified into categories (Class A, B, or C) according to their flame spread and smoke development indices.

- **Conditioning:**

  The sample was delivered on 02/07/2026 and stored in room temperature for 4 days prior to the test at 23°C ±2.8°& 50±5% relative humidity.

- **Specimen placing:**

  The specimen consisted of 13 nos. of Thermal Insulation Foam, butt jointed end to end with an overall dimension of 7400x600x19.30 mm were placed in the Steiner tunnel and supported by ledges

- **Test Procedure:**

  After placing the sample several sections of cement board were butt-jointed end to end along the upper ledge to protect the furnace lid assembly. The sample was exposed to the test flame 10 minutes. The flame front is tracked by an observer, referred to as the Reader, as it progresses down the length of the tunnel. Smoke density is measured with the use of a photometer system on the exhaust duct. Temperature data is recorded throughout the test by a thermocouple probe that is 23 feet from the centerline of the burner and approximately 1 inch below the samples

Results and Observations

Flame Spread Data:

Time (Minutes)	Distance (Feet)
1	0.8
2	2.0
3	3.9
4	5.4
5	7.6
6	7.6
7	7.6
8	7.6
9	7.6
10	7.6

Flame Spread Result:

Parameters	Result
Calculated Flame Spread (CFS)	33.9
Flame Spread Index	35

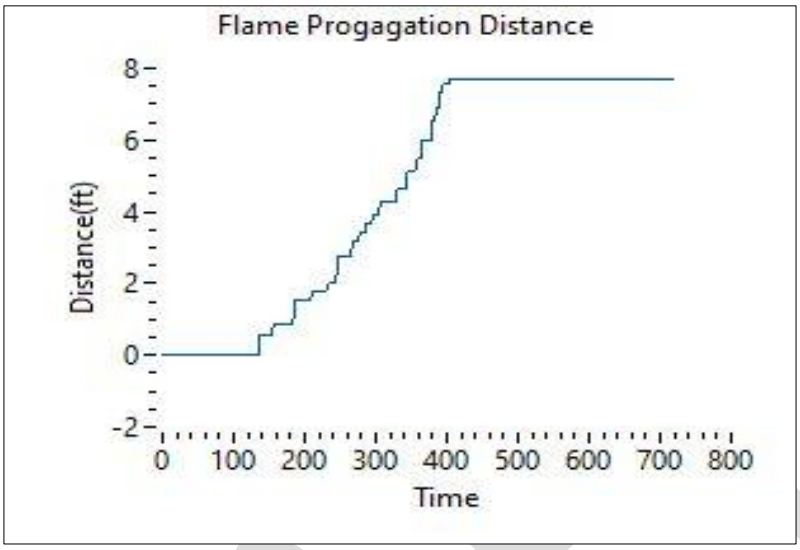
Smoke Developed Result:

Parameters	Result
Calculated Smoke Developed	138.9
Smoke Developed Index	140

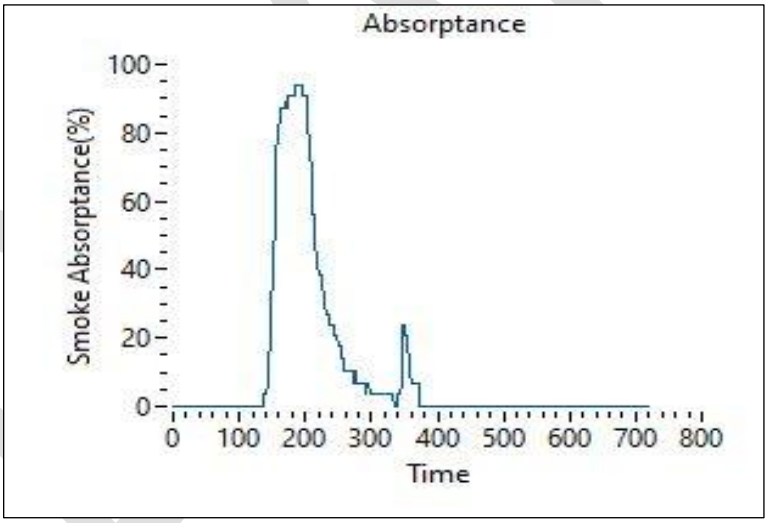
Observation

Dripping	**None**
Flaming on the floor	**None**
After flame on the top	**Yes**
After flame on the floor	**None**
Delamination	**Yes**
Sagging	**None**
Shrinkage	**None**
Fall out	**None**

Graphical results



Flame Spread Index (FSI)



Smoke Density Index

Classification:

Based on the International Building code (IBC) section 803.1.1, the interior wall and ceiling finish materials shall be classified in accordance with ASTM E 84-26a

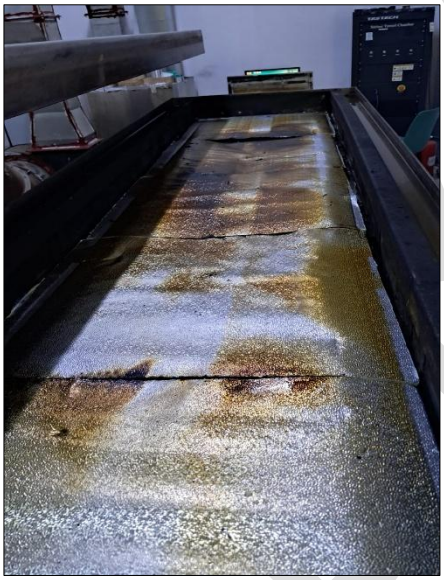
Classification	Flame Spread Index	Smoke Development
Class 1 or A	0-25	450 Maximum
Class 2 or B	26-75	450 Maximum
Class 3 or C	76-200	450 Maximum

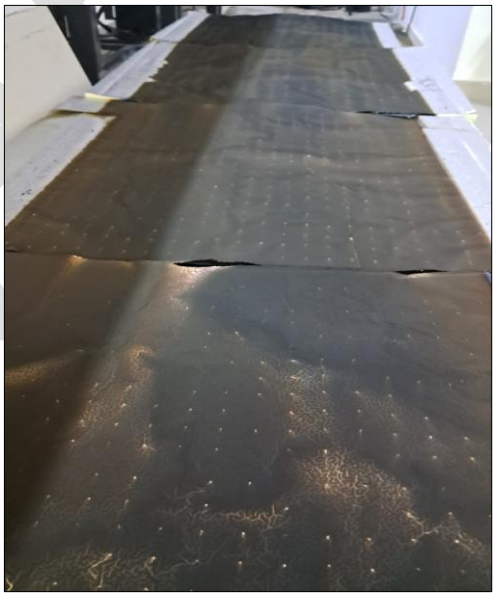
Results: The tested specimen qualified for Class B as per IBC
Test Location: Ajman

Images of Test Specimen

PHOTOGRAPH DURING TEST

PHOTOGRAPH AFTER TEST





The above test results are only applicable to the sample (s) referred above. This report shall not be reproduced except in full, without the written approval of METS laboratory.

For further clarification of reports, please contact gc@metslab.com

-End of Report