



TESTING • CERTIFICATION • AUDITING

# Confidential Report

**Our Ref: 26/02459C/09/18**



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Notified Body  
for PPE Directive,  
Construction Products Regulation  
& Marine Equipment Directive  
I.D. No. 0338 & 0339



Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.  
Telephone: +44 (0) 113 259 1999  
Email: [info@bttg.co.uk](mailto:info@bttg.co.uk)  
Website: [www.bttg.co.uk](http://www.bttg.co.uk)

Date: 01 October 2018  
Our Ref: 26/02459C/09/18  
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Client: Carpets International Thailand  
2054 New Petchburi Road  
Bangkapi  
Huaykwang  
Bangkok 10310  
Thailand

Job Title: Fire Test on One Sample of Carpet Tiles

Client's Order No: --

Date of Receipt: 17 September 2018

Description of Sample(s): One sample of carpet tiles, reference; Machine Tufted Carpet Tile; EcoSoft Backing; 100% Nylon SDN 14oz per sq.m

Work Requested: We were asked to make the following test(s):  
  
BS EN ISO 9239-1

Note: This report relates only to the samples submitted and as described in the report.

- \* subcontracted test, UKAS accredited
- \*\* subcontracted test, EN ISO/IEC 17025 accredited
- \*\*\* not UKAS accredited



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**Client: Carpet International Thailand**

## **FIRE TESTS ACCORDING TO BS EN ISO 9239-1:2010**

### **Reaction to fire tests for Floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2010)**

**Date of Test: 01/10/2018**

## **Conditioning**

The specimens were conditioned in accordance with BS EN 13238:2010. The substrate used was a fibre cement board (ISO 390) with a thickness of  $(6\pm 1)$ mm and a density of  $(1,800\pm 200)$  Kg/m<sup>3</sup> representing the standard substrate of Class A<sub>1fl</sub> or A<sub>2fl</sub>.

## **Procedure**

The test was carried out in accordance with BS EN ISO 9239-1. The sponsor sampled and cut the specimens to the dimensions stated.

Specimens were individually placed in the combustion chamber and allowed to preheat for two minutes under a radiant panel, which gives an imposed radiant flux ranging from approximately 11 kW/m<sup>2</sup> to 1 kW/m<sup>2</sup> along the specimen.

The pilot flame used was the line burner as described and was applied to the surface of the specimen for 10 minutes and then removed.

The flame front was measured at the end of the test or at 30 minutes if applicable.

Test termination was considered to be when the flame front self extinguished or at 30 minutes, which ever is the sooner.

The heat flux from the panel incident on the specimen when self extinguished or at 30 minutes (critical heat flux CHF or HF-30) was calculated from a prior calibration.



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## Results

The test results relate to the behaviour of the test specimens of a material under the particular conditions of test; they are not intended to be the sole criterion for assessing the full potential fire hazard of the materials in use.

<u>Specimen No.</u>	<u>Direction of specimen</u>	<u>Smoke Obscuration</u>		<u>Maximum Flame front (mm)</u>	<u>Critical Heat Flux (kW/m<sup>2</sup>)</u>	<u>Duration of Flaming (sec)</u>
		<u>Max %</u>	<u>% x min</u>			
1	Machine	37	94	240	8.3	739
2	Across	34	121	240	8.3	720
3	Machine	33	152	240	8.3	728
4	Machine	40	159	240	8.3	731
Mean of 3 specimens	Machine	37	135	240	8.3	733

<u>Distance Burnt (mm)</u>	<u>Time for each specimen to burn (s)</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
50	191	212	187	186
100	274	280	243	243
150	351	352	309	307
200	448	490	421	431

## Observations

The tests were carried out in accordance with the standard in relation to carpet tiles which means that the first cross join was situated at 250mm from the zero point. It was commented on the test that the material shrunk back at this join and that because of the gap produced the flame did not progress beyond the join. However, had the flame propagated across the join then the results would have been lower.



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## Note

One specimen was initially tested in each direction and whichever direction gave the worst result a further two specimens were tested. Only the results of the 3 specimens in the same direction were used to calculate the mean results.

The specimens of floor covering were tested loose laid onto a 6mm fibre cement board as defined in BS EN 13238:2010.

Reported by:.......... P Doherty, Operational Head

Enquiries concerning this report should be addressed to Customer Services..



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## Uncertainty Budget - Annex

### Overall (BS EN ISO 9239-1)

The uncertainty varies, therefore:

At position between a Euroclass B to C  $\pm 15\%$

At position between a Euroclass C to D  $\pm 15.5\%$

At position between a Euroclass D to E  $\pm 17.5\%$



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