



# Confidential Report

**Our Ref: 26/03060B/10/22**





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Date: 24 October 2022

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Your Ref: ---

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**Client:**

**Polyflor Ltd**

PO Box 3  
Radcliffe New Road  
Whitefield  
Manchester  
M45 7NR

**Job Title:**

Fire Test on One Sample of Vinyl Flooring

**Clients Order Ref:**

226494

**Date of Receipt:**

06 October 2022

**Description of Sample:**

One sample of vinyl flooring, referenced;

Product Name: Expona Simplay PUR / Expona Puzzle PUR  
Nominal Thickness: 5.0 mm  
Weight Per Unit Area: 8.0 kg/m<sup>2</sup>  
Batch No: L1022/1  
Shade: 2507 Blond Country Oak

**Work Requested:**

We were asked to make the following test(s):

AS ISO 9239-1:2003

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

Note: This report relates only to the items tested.



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## FIRE TESTS ACCORDING TO AS ISO 9239-1:2003

### Reaction to fire tests for Floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2002)

Date of Test: 21/10/2022

#### 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 A1fl or A2fl.

#### Mounting Method

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

#### Procedure

The test was carried out in accordance with AS ISO 9239-1:2003. 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 11.0 kW/m<sup>2</sup> to 1.0 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, whichever 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 spec.</u>	<u>Smoke Obscuration/Development</u>		<u>Maximum Flame front (mm)</u>	<u>Heat Flux-30 (HF-30) (kW/m<sup>2</sup>)</u>	<u>Critical Heat/Radiant Flux (CHF/CRF) (kW/m<sup>2</sup>)</u>	<u>Duration of Flaming (sec)</u>
		<u>Max %</u>	<u>% x min</u>				
1	Machine	71	356	175	9.4	9.4	750
2	Across	82	339	185	9.2	9.2	751
3	Across	74	330	180	9.3	9.3	750
4	Across	82	347	181	9.3	9.3	780
Mean of 3 specs.	Across	79	339	182	9.3	9.3	760

<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	150	160	180	151
100	210	220	250	220
150	265	281	290	300
200	---	---	---	---

## 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.



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Where required to make a judgement to any pass/fail criteria an estimation of uncertainty of measurement has been taken into account. Under our Policy we have used a non-binary decision rule.

See our decision rules Policy (<http://www.bttg.co.uk/decision-rules-policy>) for further information.

Reported by:.....*23. Marsden*..... B Marsden (Mrs), Senior laboratory Technician

Countersigned by:.....*[Signature]*..... P Doherty Manager

Enquiries concerning this report should be addressed to Customer Services



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## Uncertainty Budget - Annex

The uncertainty budget for AS ISO 9239-1: 2010 was determined as follows:-

### Overall

The uncertainty varies down the length of the panel therefore:

- |                                      |            |
|--------------------------------------|------------|
| a) At position between 0 – 450mm     | $\pm 7\%$  |
| b) At position between 450mm -1000mm | $\pm 8\%$  |
| Smoke Obscuration                    | $\pm 15\%$ |



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