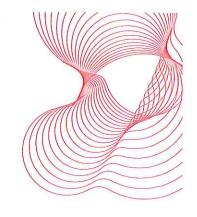


Fire propagation test to BS476: Part 6: 1989



Prepared on behalf of BRE testing by

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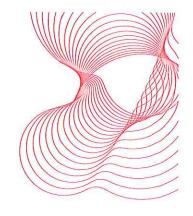
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1 Objective

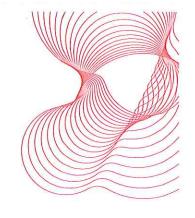
To determine the fire propagation index of the sample specified in Section 2 when subjected to the fire propagation test specified in British Standard 476: Part 6: 1989¹.

2 Sample

The test samples were supplied by the client. BRE were not involved in the sample selection process and therefore cannot comment upon the relationship between samples supplied for test and the product supplied to market.

Unless otherwise stated all measurements are nominal.

Test Sponsor	Mould Growth Consultants Ltd McMillan House Cheam Common Road Worcester Park Surrey KT4 8RH			
Manufacturer of sample	Not given			
Sample name/reference	Sempatap, 5mm thick, adhered to 20mm thick Supalux			
Sample description (as provided by test sponsor/manufacturer)	Sempatap is a coated fibre glass matting with a 5mm flame retardant latex foam insulation backing. The Sempatap was adhered to a 20mm Supalux backing board using a solvent free acrylic emulsion adhesive.			
Description of sample (as received)	Glass fibre matting with 5mm foam insulation backing adhered to a 20mm thick Supalux substrate.			
Mean sample weight per unit area (kg/m²)	18.9			
Sample thickness (mm)	23.8			
Sample receipt date	16 November 2007			
Test face	Fibre glass face			
Date of test	10 December 2007			



3 Conditioning

The specimens were conditioned as required by the standard.

4 Results

Table 1 shows the Temperature rise for calibration sheet and specimens Table 2 shows the Index of performance for each specimen

Table 1 - temperature rise

Time	Temperature rise - °C				
t	Calibration	Specimens			
min	sheet	а	b	С	
0.5	13.9	17.4	17.6	17.1	
1	20.0	27.7	27.3	27.9	
1.5	25.1	33.9	33.1	33.8	
2	29.6	38.6	37.4	38.6	
2.5	33.1	43.5	41.3	42.8	
3	36.7	46.3	45.6	46.3	
4	58.8	70.5	69.0	72.0	
5	89.1	113.2	130.4	127.2	
6	112.7	169.8	184.6	185.0	
7	136.0	206.7	217.8	220.7	
8	155.7	233.7	243.6	248.9	
9	173.0	253.4	269.3	274.7	
10	186.5	270.5	285.2	291.7	
12	203.7	287.6	297.3	301.5	
14	214.8	288.8	292.5	293.0	
16	222.2	285.2	283.9	284.4	
18	228.3	279.0	281.5	278.3	
20	233.2	276.6	276.6	275.9	

t - time in minutes from the time at which the gas jets were ignited. a, b and c - represent individual specimens giving valid test results.

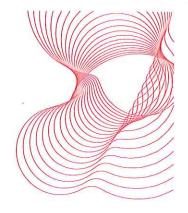


Table 2 Index of performance

Specimen	S	S ₁	S ₂	S ₃
а	10.9	3.2	5.4	2.1
b	12.0	3.0	6.6	2.2
С	12.5	3.2	6.9	2.3

5 Observations

No intumescence or deformation of any specimen occurred that affected the required gas input.

No melting or slumping occurred that prevented the material from being exposed to the heating conditions.

Air flow through the apparatus was not restricted by fallen material or by soot accumulation in the chimney.

6 Conclusions

A sample as described in this report, when tested in accordance with BS 476 : Part 6 : 1989, achieved:

fire propagation index
$$I = 11.6$$

sub-indices $i_1 = 3.1$
 $i_2 = 6.3$
 $i_3 = 2.2$

The test results relate only to behaviour of the test specimens of the product under the particular conditions of test, they are not intended to be the sole criteria for assessing the potential fire hazard of the product in use.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

7 Reference

Fire tests on building materials and structures. Part 6. Fire propagation test for products. British Standard 476: Part 6: 1989. British Standards Institution, London, 1989.

report ends