BCTC
CARPET TECHNICAL CENTRE

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Our Ref: 2600209A/12/05
Your Ref:
Order No: 2506961

21 March 2006

Client:

Polyflor Limited
PO Box 3
Radcliffe New Road
Whitefield
Manchester
M45 7NR

Job Title: **Fire Test**

Material Received: 11 November 2005

Description of Sample: **One sample of floor covering labelled ref.: Polyflex VC, Nominal Thickness: 2.0mm, Weight per unit area: 4.40kg/m2, Batch No: 020811UK, Shade: 1118 Redcurrant**

Brief: BCTC were requested to carry out a fire test on the sample of floor-covering supplied to BS EN 11925-2.

UKAS Accreditation: Our Laboratories are UKAS accredited. However, it should be noted that tests marked * are not UKAS accredited in this report. They are not included in the UKAS Accreditation Schedule for our laboratory, either due to the work not conforming fully to the standard (e.g. reduced number of specimens) or to it being outside the scope of our accreditation, or subcontracted.

Testing Atmosphere: Unless otherwise specified the sample has been conditioned and tested, where appropriate, in the standard atmosphere for conditioning and testing textiles (BS EN ISO 139:2005) of 65 ± 4% r.h. and 20 ± 2°C.

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FIRE TESTS ACCORDING TO BS EN ISO 11925-2:2002
Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame – Part 2 Single-flame source test (ISO 11925-2:2002)

Date of Test: 20/03/2006

Conditioning

Test specimens and filter paper conditioned as described in BS EN 13238:2001.

Procedure

The sample was tested in accordance with BS EN ISO 11925-2. The sponsor sampled the material and the specimens were cut to the dimensions stated.

Three length and three width specimens were prepared in accordance with the above standard. Specified filter paper was placed beneath the specimen holder and replaced between tests.

The specimens were mounted vertically in the specimen holder so that one end and both sides were enclosed with the exposed end 30mm from the end of the frame. The burner was inclined at an angle of 45°. The flame height was set at 20 mm with the flame impinging on the specimen for 15 seconds on the centre line, 40 mm above the bottom edge.

A marker was placed 150 mm above the upper end of the burner and the time recorded when the flame tip reached the marker, if applicable. The following parameters were also recorded:-

1. If ignition occurs
2. Presence of flaming debris, if applicable
3. Ignition of the filter paper, if applicable

Duration of test

For a flame application time of 15 seconds, the total test duration is 20 seconds after application of the flame.

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Classification Criteria

The samples were classified according to BS EN 13501:2002: Fire classification of Construction Products and Building Elements: Part 1: Classification using Test Data from Reaction to Fire Tests.

For Floorings, including their surface coverings to meet the performance criteria:

Classification	Classification Criteria (mean values)
E_{fl}	Fs ≤ 150mm within 20 seconds
F_{fl}	None (No performance determined)

Results

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

Specimen		Ignition (Yes or No)	Time of flaming if ignition occurs (s)	Tip of flame reaches 150mm		Flaming droplets	
				Yes or No	Time taken (s)	Yes or No	Ignition of Filter paper (Yes, No or N/A)
Warp	1	No	N/A	No	N/A	No	N/A
	2	No	N/A	No	N/A	No	N/A
	3	No	N/A	No	N/A	No	N/A
Weft	1	No	N/A	No	N/A	No	N/A
	2	No	N/A	No	N/A	No	N/A
	3	No	N/A	No	N/A	No	N/A

N/A = Not applicable

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Comments

The results indicate that the sample, when tested in accordance with the above test method was classified according to BS EN 13501-1:2002 as "Class E_{fl}".

Sample was tested as an essentially flat product, the specimens were tested stuck down onto a 6mm fibre cement board as defined in BS EN 13238:2001 using Balls F44 adhesive. A surface exposure was carried out only.

The information contained on page no's 1/4 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by the Advanced Materials Services on the materials referred to.

Signed B. Chambers Date 21/03/06
Mr B. Chambers
Fire Technician

Reported By M. N Date 21.3.06
Mr M Nunney
Executive Manager

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Client:

Polyflor Limited
PO Box 3
Radcliffe New Road
Whitefield
Manchester
M45 7NR

Job Title: **Fire Test**

Material Received: 11 November 2005

Description of Sample: **One sample of floor covering labelled ref.: Polyflex VC, Nominal Thickness: 2.0mm, Weight per unit area: 4.40kg/m2, Batch No: 020811UK, Shade: 1118 Redcurrant**

Brief: BCTC were requested to carry out a fire test on the sample of floor-covering supplied to BS EN ISO 9239-1.

UKAS Accreditation: Our Laboratories are UKAS accredited. However, it should be noted that tests marked * are not UKAS accredited in this report. They are not included in the UKAS Accreditation Schedule for our laboratory, either due to the work not conforming fully to the standard (e.g. reduced number of specimens) or to it being outside the scope of our accreditation, or subcontracted.

Testing Atmosphere: Unless otherwise specified the sample has been conditioned and tested, where appropriate, in the standard atmosphere for conditioning and testing textiles (BS EN ISO 139:2005) of 65 ± 4% r.h. and 20 ± 2°C.

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FIRE TESTS ACCORDING TO BS EN ISO 9239-1:2002
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: 20/03/2006

Conditioning

The specimens were conditioned in accordance with BS EN 13238:2001. The substrate used was a fibre cement board (ISO 390) with a thickness of (6 ± 1)mm and a density of (1,800 ± 200) Kg/m^3 representing the standard substrate of Class A1$_{fl}$ or A2$_{fl}$.

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^2 to 1 kW/m^2 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 min., 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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Classification Criteria

The samples were classified according to BS EN 13501:2002: Fire classification of Construction Products and Building Elements: Part 1: Classification using Test Data from Reaction to Fire Tests.

For Floorings including their surface coverings the classes are:

Classification	Classification Criteria (mean values) (kW/m^2)
B_{fl}	8.0
C_{fl}	4.5
D_{fl}	3.0
	Smoke Production % x min
s1	≤ 750
s2	Not s1

When tested to BS EN ISO 11925-2:2002 the sample has to have a flame spread (Fs) of: Fs ≤ 150mm within 20 seconds (Class E_{fl})

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.

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Smoke Production Results

Specimen	Direction of specimen	Max %	% x min
1	Machine	1	0
2	Across	3	2
3	Across	2	1
4	Across	2	1

Flame Production Results

Specimen	Maximum Flame front (mm)	Critical Heat Flux (if applicable) (kW/m^2)	Flame front at 30min (mm)	HF30 (kW/m^2) (if applicable)	Duration of Flaming (sec)
1	48	>11.0	N/A	N/A	735
2	51	>11.0	N/A	N/A	726
3	74	>11.0	N/A	N/A	731
4	53	>11.0	N/A	N/A	750

Distance Burnt (mm)	Time for each specimen to burn (s)						
	1		2		3		4
50	181		207		216		191
100							
150							
200							
250							
300							
350							
400							
450							

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Mean Results of Flame and Smoke Production

Direction	Final Flame Front (mm)	Critical Heat Flux (if applicable) (kW/m^2)	Flame front at 30 min (mm)	Heat Flux HF-30 (if applicable) (kW/m^2)	Smoke Production % x min
Across	59	>11.0	N/A	N/A	1

N/A Not Applicable

Comments

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

It should be noted that to achieve the above classification, the material has also to meet the performance requirements of Class E_{fl}, when tested in accordance with BS EN ISO 11925-2:2002

The specimens of floor covering were tested stuck down onto a 6mm fibre cement board as defined in BS EN 13238:2001 using Balls F44 adhesive.

The results indicate that the above sample would meet a classification of **Class B_{fl}-s1** when tested to this standard alone.

The information contained on page no's 1/5 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by the Advanced Materials Services on the materials referred to.

Signed B Chambers Date 21/03/06
Mr B. Chambers
Fire Technician

Reported By M.d Date 21.3.06
Mr M Nunney
Executive Manager

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Our Ref: 2600209C/12/05
Your Ref:
Order No: 2506961

Client:

Polyflor Limited
PO Box 3
Radcliffe New Road
Whitefield
Manchester
M45 7NR

Job Title: **Fire Tests**

Material Received: 11 November 2005

Description of Sample: **One sample of floor covering labelled ref.: Polyflex VC, Nominal Thickness: 2.0mm, Weight per unit area: 4.40kg/m2, Batch No: 020811UK, Shade: 1118 Redcurrant**

Brief: BCTC were requested to carry out a fire test on the sample of floor-covering supplied to BS EN 13501-1.

UKAS Accreditation: Our Laboratories are UKAS accredited. However, it should be noted that tests marked * are not UKAS accredited in this report. They are not included in the UKAS Accreditation Schedule for our laboratory, either due to the work not conforming fully to the standard (e.g. reduced number of specimens) or to it being outside the scope of our accreditation, or subcontracted.

Testing Atmosphere: Unless otherwise specified the sample has been conditioned and tested, where appropriate, in the standard atmosphere for conditioning and testing textiles (BS EN ISO 139:2005) of 65 ± 4% r.h. and 20 ± 2°C.

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Application

The above product is defined as a flooring product. Its classification is valid for the end use applications: Fully adhered onto a specified substrate using a specified adhesive. Both substrate and adhesive described in reports ref: 2600209A/12/05 & 2600209B/12/05.

Fire Performance

The above product is fully described in the following test reports in support of the following test methods as carried out by BCTC.

BS EN ISO 11925-2: 2002 Test date: 20/03/06 Test Report No 2600209A/12/05
BS EN ISO 9239-1: 2002 Test date: 20/03/06 Test Report No 2600209B/12/05

Test Results

Test Method	Parameter	Results	Classification	Pass/Fail
BS EN ISO 11925-2: 2002	Flame spread ≤ 150mm	Yes	E_{fl}	Pass
BS EN ISO 9239-1: 2002	Critical Flux (kW/m^2):			
	3.0	>11.0	D_{fl}	Pass
	4.5		C_{fl}	Pass
	8.0		B_{fl}	Pass
	Smoke % min:			
	≤750	1	s1	Pass
	Not s1		s2	

Final Classification

In accordance with Table 2 – Classes of reaction to fire performance for floorings of EN 13501-1: 2002, the above product has been classified as:

Class B_{fl}-s1

Note

This document does not represent type approval or certification of the product.

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The information contained on page no's 1/3 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by the Advanced Materials Services on the materials referred to.

Signed B Chambers Date 21/03/06
Mr B. Chambers
Fire Technician

Reported By M.d Date 21.3.06
Mr M Nunney
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