

Return address: P.O. Box 2220, 6802 CE ARNHEM, The Netherlands

Unifloor Underlay Systems
Att. Mr. F. Vousten
Arnsbergstraat 4
7418 EZ DEVENTER
The Netherlands

TÜV Rheinland Nederland B.V.
The Netherlands

Postal address:
P.O. Box 2220
6802 CE ARNHEM

Parking and delivery:
Westervoortsedijk 73
6827 AV ARNHEM

www.tuv.com/nl

T +31 88 888 7888

Jaring.de.Wolff@nl.tuv.com

Testreport

Project number: 89210247
Report number: 89210247.11br

Date
03/02/2017

Project number
89210247

Received:

A floor covering combination (underlay system, glue and floorcovering), marked as:
Heat-Pak/ Jumpax Basic (MDF) with 6 mm Heatblok”;
TEV-reference: MT16-117021.26

Report number
89210247.11br

Phone number client
+31 (0) 570 85 55 33

Sampling procedure:

The samples are selected by the applicant. The test house has had no influence on the sampling procedure.

Fax number client
+31 (0) 570 85 55 44

The samples have been received on 15/12/2016.

Article
Jumpax Heat Isolator, Jumpax
Basic (MDF) with 6 mm Heatblok

Order:

Classification of burning behaviour according to EN 13501-1:2007+ A1:2009.

Test methods: Ignitability of products subjected to direct impingement of flame (ISO 11925-2:2010/C1:2011) and determination of the burning behaviour using a radiant heat source (ISO 9239-1:2010)

Appendix
I : Flooring Radiant Panel Single
Specimen Report — 6 pages

Results:

See page three and four.

Appendix:

See page five up to and including ten.

TRN applies General Terms & Conditions
which are filed at the office of the Clerk for
civil affair at the Court in Zutphen (the
Netherlands) under number 35/2010,
dated November 17th 2010.

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PRODUCT IDENTIFICATION

Applicant Name	Unifloor Underlay Systems
Tested in combination with	: Heat-Pak/ Jumpax Basic (MDF) with 6 mm Heatblok *
Production direction	2 mm LVT*
	No production direction applicable*
Total thickness (mm)	16.1**
Total mass (gr/m ²)	9525**
Density (kg/m ³)	593**

* Applicant's declaration

** Determination by the test house after conditioning to constant mass is achieved.

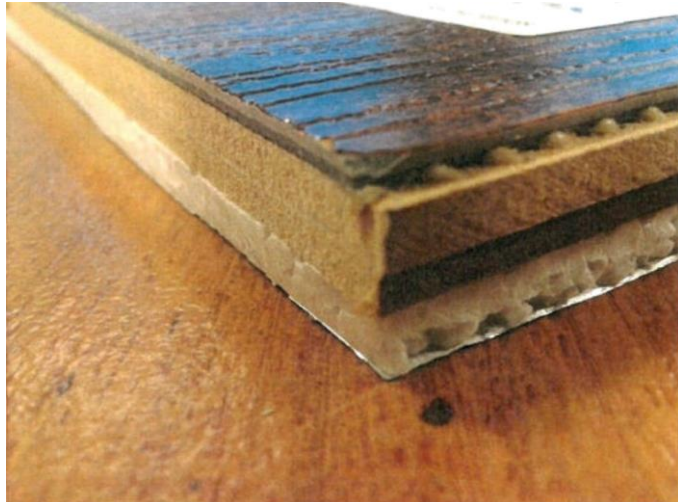


Figure 1. Picture of the received sample

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TEST RESULTS
Ignitability of products subjected to direct impingement of flame
 Method EN ISO 11925-2 :2010/CI:2011

 Date of testing : 03/01/2017
 Conditioning time, climate ñ 7 days, 23+2 °C and 50+5 %
 Description of substrate : Fibre cement board, 8-£2 mm, 1800z200 kg/m'
 conforming to EN 13238.
 Flame application : Surface.
 Flame application time : 15 seconds.

Orientation:			
Total burning time ¹	15	15	15
Flame tip reaches 150 mm (s)	No	No	No
Extent of damaged area, length (mm)	35	35	35
Extent of damaged area, width (mm)	12	13	13
Material melts (yes/no)	Yes	Yes	Yes
Shrinks away ² (yes/no)	No	No	No
Glowing (sec)	No	No	No
Flaming debris (yes/no)	No	No	No
Ignition of filter paper (yes/no)	No	No	No

1 Inclusive a flame application time of 15 or 30 seconds with surface or edge impingement
 2 Shrinks away from flame without being ignited
 3 The time at which it occurs and its duration

Determination of the burning behaviour using a radiant heat source
 Method EN ISO 9239-1:2010

 Date of testing : 06/01/2017
 Conditioning time, climate : 7 days, 23z2 °C and 50a5 %
 Description of substrate : Fibre cement board, 8-£2 mm, 1800+200 kg/m'
 conforming to EN 13238.
 Sampling procedure : By contractor.
 Description of cleaning used : None.
 Fixing method : None, sample is tested loose laid on the substrate.

Test specimen	Flame spread (cm)	CRF (kW/m ²)	Peak light attenuation (%)	Smoke production (%.min)
1	13.0	10.3	42.6	104
2	11.0	10.5	45.7	110
3	12.0	10.4	43.3	124
Mean	12.0	10.4	43.9	113

Note: according the manufacturers declaration there is no production direction applicable, therefore three samples are sufficient for classification.

Specimen 1, 2, and 3: Flashing, transitory- or sustained flaming are observed.

Specimen 1, 2, and 3: Extinguished naturally before the end of the test duration

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CONCLUSION

According to EN 13501-1:2007+ A1:2009 the tested sample of the aforementioned quality **Heat-Pak/ Jumpax Basic (MDF) with 6 mm Heatblok**, in relation to its reaction to fire behaviour is classified: Bd .

The additional classification in relation to smoke production is: s1.

The aforementioned quality meets the requirement of reaction to fire classification:
Bu — s1

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The classification is valid for the following end use applications:

- End use substrates of classes A1 and A2-s1,d0.
- Any way of fixation, glued down or loose laid.

Statements:

The test results only relate to the behaviour of the test specimens of the examined product under the particular conditions of the test in laboratory conditions; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use. The method might not be suitable if the product is exposed to much larger flames or heat radiant sources.

The validity of this report will expire directly after alterations or modifications of the examined product (combination)(s) and/or the criteria. This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

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

Author:
Mr. M.A. van de Vlekkert



Review:
Mr. J. de Wolff



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(End of report)

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APPENDIX I: Flooring Radiant Panel Single Specimen Report

Report produced with the Fire Testline Technologies FRPSoft software

Page 1

Flooring Radiant Panel Single Specimen Report

Standaard	: EN ISO 9239-1:2010
Laboratory	: TÜV Rheinland Nederland B.V.
Sponsor	: 89210247 Unifloor
Date of test	: Jan. 06 2017
Specimen description (MDF)	: M116-117021.26 Jumpax Heat Isolator / Jumpax Basic
Test name	: # sample 1
File name	: D:\FRPFILES\17010015.CSV
Test number in series	: 3
Instalatie: vloerplaat op vloer	: 'FRI' f1FT*9:'C':\t.lfi',F1.X1 N9 I ti CiiX'
Thickness (mm)	: 16.1
Density (kg/m ³)	: 593
Test duration	: 12 tititule: 16 ietenct (7.iti si
Substrate used	: Yes
Substrate	: t'ulci um stlicitc
Fixing method	: Stone (too:*c laid)
Condition	: *cs
Conditioning temp. (°C)	: ?*3
Conditioning RH (%)	: Stl

Test Results

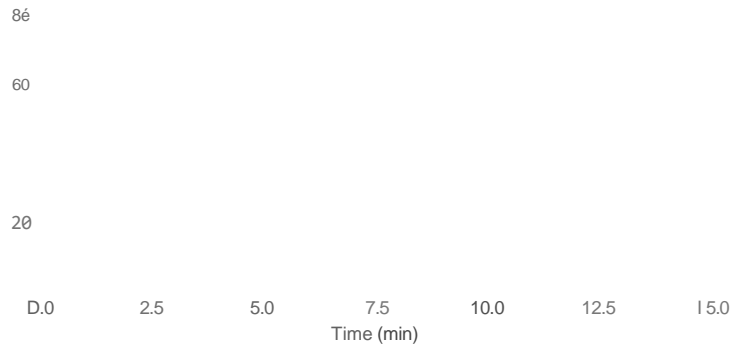
Time to ignition	: 2 minutes 03 seconds (123 s)
Time to failure	: 12 minutes 12 seconds (732 s)
Flame height (mm)	: 130
Heat flux at 10 cm (kW/m ²)	: 10.29
HF-10 (kW/m ²)	: 10.29
HF-20 (kW/m ²)	: Not calculated (test duration < 20 minutes)
HF-30 (kW/m ²)	: Not calculated (test duration < 30 minutes)
Flame spread at 10 minutes (mm)	: 130
Flame spread at 20 minutes (mm)	: Not measured
Flame spread at 30 minutes (mm)	: Not measured
Peak light intensity (lm)	: 42.5fi
Time to peak light intensity (s)	: 1 minute 15 seconds (75 s)
Integral light intensity (lmh)	: 1fi3.77
Potential classification	: A2(0)/B(0)
Smoke production classification	: >J

Results relate only to the behaviour of the specimens of the product under the particular conditions intended to be the sole criterion for assessing the potential fire hazard of the product.

APPENDIX I: Flooring Radiant Panel Single Specimen Report

Report produced with the Fire Testing Technology FRTSatt software

Smoke Graph



File name: fl sample 1
File: none It>rttPr"ll i's:l 701out .t'sv

Rak® Results

Position (mm)	Time (s)	Flux (kW/m ²)	Qsh (MJ/m ²)	Position (mm)	Time (s)	Flux (kW/m ²)	Qsh (MJ/m ²)
0	100	11.1	2.103	510	-	3.7	-
160	-	10.0	-	610	-	2.6	-
-	-	9.4	-	-	-	2.2	-
410	-	5.3	-	860	-	1.2	-
-	-	-	-	910	-	-	-

Comments

Specimen extinguished naturally.

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

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Flooring Radiant Panel Single Specimen Test Report

Standard : EN ISO 9239-1:2016
 Laboratory : TÜV Rheinland Nederland B.V.
 Sponsor : 89210247 Unifloor
 : Jan 06 2017

Specimen description : MT16-117021.26 Jumpax Heat Isolator / Jumpax Basic
 (MDF)
 : # sample 2
 File name : D:\FRPFILES\17010016.CSV
 Test number in series : 3

Flux calibration (30 cm dia)He : FRP/SFI/TT/9A/MALI/PLüf 16.0'SF*

Thickness (mm) : **16.1**

Test duration : 14 minutes 10 seconds (850 s)
 Substrate used? : Yes
 Substrate : Calcium silicate
 Fixing method : None (loose laid)
 Conditioned? : Yes
 Condition RH (%): ("1-*) : 2?
 Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes (120 s)
 Time to flameout : 14 minutes 08 seconds (848 s)
 Extent of burning (mm) : 110
 Critical flux at extinguishment (kW/m²) : 10.48
 HF-10 (kW/m²) : 10.48
 HF-20 (kW/m²) : n.ct calculated 1.test duration > 20 minutes)
 HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
 Flame spread at 10 minutes (mm) : 110
 Flame spread at 20 minutes (mm) : Not measured
 Flame spread at 30 minutes (mm) : Not measured
 Peak light attenuation (%) : 45.72
 Time to peak light attenuation : 3 minutes 23 seconds (203 s)
 Total integrated smoke (%-min) : 110.02

Potential classification : A2(B)/B(B)
 Smoke production classification : s1

These results relate only to the behaviour of the specimens of the product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use

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Report produced with the Fire Testing Technology FRP500 software

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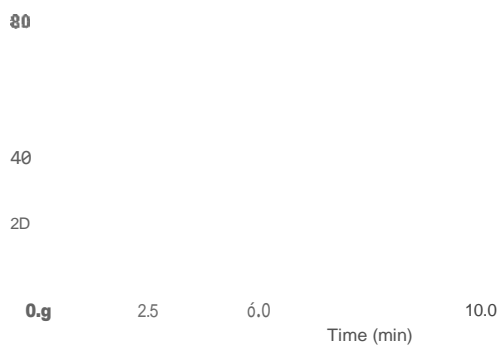
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Smoke Graph



Test name : # sample 2
file name f:\f\ft\1111*d\1 VITI\IT1 f.c*IV

Rake Results

Position (mm)	Time (s)	Flux (kW/m ²)	Qsb (MJ/m ²)	Position (mm)	Time (s)	Flux (kW/m ²)	Qsb (MJ/m ²)
110	279	10.5	2.925	560		3.1	
160		10.0		610		2.0	
911		7.5		760		1.6	
410		JJ		860		1.2	
460		4.4		910		1.1	

Specimen extinguished naturally.

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

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Standard : EN ISO 9239-1:2010
 Laboratory : TÜV Rheinland Ne4 ci.a.al 13.\
 Sponsor : 89210247 Unifloor
 Date of test : Jan. 06 2017

Specimen description (MDF) : MT16-117021.26 Jumpax Heat Isolator / Jumpax Basic
 Test name : # sample 3
 File name : D:\FRPFILES\17010017.CSV
 Test number in series : 3

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX16016.CSV

Thickness (mm) : 16,1
 Density (kg/m³) : 593

Test duration : 13 minutes 09 seconds (789 s)
 Substrate used? : Yes
 Substrate : Calcium silicate
 Fixing method : None (loose laid)
 Conditioned? : Yes
 Conditioning temp. (°C) : 23
 Conditioning RH (%) : 50

Time to ignition : 2 minutes 03 seconds (123 s)
 Time to flameout : 13 minutes 07 seconds (787 s)
 Extent of burning (mm) : 120
 Critical flux at extinguishment (kW/m²) : 10.39
 I OF-1 (kJ/m²) : 111.31
 IIF-1 (kJ/m²) : - Not calculated (icat duration * 2(1 minutci j
 IIF-3 (kJ/m²) : hot - calculat#(1 tt#st rturation * 30 minutes)

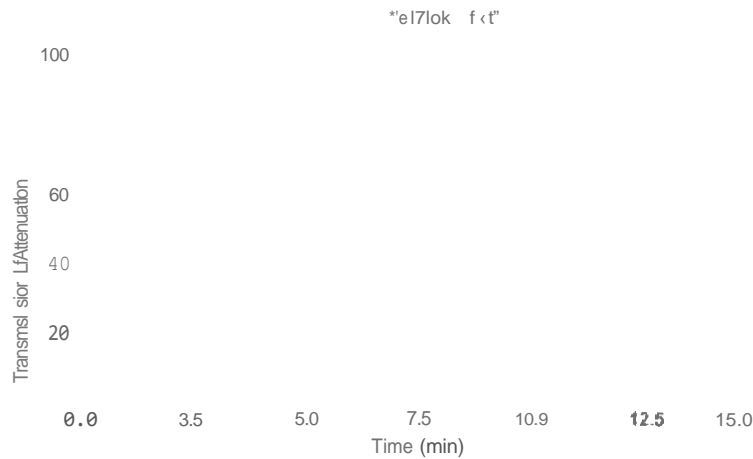
Flame spread at 20 minutes (mm) : , Not measured

Peak Light: aNeutiation (lcl) : 43.31
 Time in ptal: liplu attenuation : 3 minutes 21 seconds (201 s)
 Total integrated smoke (%.min) : **124.24**
Potential classification : **A2(0)/B(0)**
Smoke production classification : s1

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

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Report produced with the Fire Testing Technology FTRFSoft software



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File name: D:\t\k*I\LI\...t\JI\lilil7.φ\IN

Rake Results

Position (mm)	Time (s)	Flux (kW/m²)	Qsb (MJ/m²)	Position (mm)	Time (s)	Flux (kW/m²)	Qsb (MJ/m²)
110	44	10.5	3.606	510
160	-	10.0	-	510	...	2.6	...
		9.4	-			2.2	...
						1.9	...
310		7.5		760		1.6	...
		6.4				1.4	...
410		5.3		860		1.2	...
460		4.4		910		1.1	...

Specimen extinguished naturally.

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