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Testreport

Project number: 89210549
Report number: 89210549.03br

Date
27/10/2016

Project number
89210549

Report number
89210549.03br

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Received:

A textile floor covering, marked as: “**Suite**”;
TÜV-reference: MT16-113956.09

An underlayment, marked as: “**Starbase**”;
TÜV-reference: MT16-113956.03

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Starbase & Suite (Glued)

Sampling procedure:

The samples are selected by the applicant. The test house has had no influence on the sampling procedure. The samples have been received in week 26/2016.

Appendix
I : Flooring Radiant Panel Single
Specimen Report – 8 pages

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)

Results:

See page three and four.

Appendix:

See page five up to and including twelve.

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

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PRODUCT IDENTIFICATION

Name : **Starbase***

Total thickness (mm) : 6.3**

Total mass (gr/m²) : 1043**

Density (kg/m³) : 165**

* Applicant's declaration

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

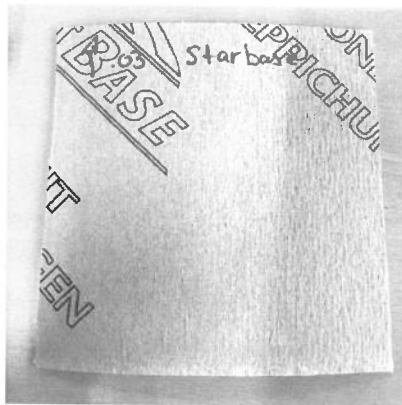


Figure 1. Picture of the received sample

Name : **Suite***

Pile fibre composition : 80% Wool / 20% Polyamide*

Pile thickness (mm) : 8.5*

Total mass (gr/m²) : 2.370*

Total thickness (mm) : 9.0**

Total mass (gr/m²) : 2517**

Density (kg/m³) : 279**

* Applicant's declaration

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



Figure 2. Picture of the received sample

TEST RESULTS
Ignitability of products subjected to direct impingement of flame
 Method EN ISO 11925-2 :2010/C1:2011

According to EN 14041:2004 table 2, this textile floor covering is classified as E_n (classified without further testing).

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

Date of testing : 17/10/2016
 Conditioning time, climate : ≥ 3 days, 23±2 °C and 50±5 %
 Description of substrate : Fibre cement board, 8±2 mm, 1800±200 kg/m³ conforming to EN 13238.
 Sampling procedure : By contractor.
 Description of cleaning used : None.
 Fixing method : The tested product is glued with thomsit T440 on 14/10/2016.

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Test specimen, orientation	Flame spread (cm)	CRF (kW/m ²)	Peak light attenuation (%)	Smoke production (%.min)
1, Length	12.0	10.4	7.2	20
2, Width	31.0	7.3	16.1	24
3, Length	32.0	7.0	8.1	31
4, Length	13.0	10.2	7.2	18
Mean, Length	19.0	9.2	7.5	23

Specimen 1, 2, 3 and 4: No flashing, transitory- or sustained flaming are observed.
 Specimen 1, 2, 3 and 4: 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 “Starbase & Suite”, in relation to its reaction to fire behaviour is classified: **C_n**.

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

The aforementioned quality meets the requirement of reaction to fire classification:
C_n – s1

The classification is valid for the following end use applications:

- End use substrates of classes A1 and A2-s1,d0.
- Glued down with Thomist T440.

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. J. de Wolff



Review:
Mr. R. Boerboom



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(End of report)

APPENDIX I: Flooring Radiant Panel Single Specimen Report

Report produced with the Fire Testing Technology FRPSoft software

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Flooring Radiant Panel Single Specimen Report

Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : Estillon 89210549
Date of test : Oct. 17 2016

Specimen description : MT16-113956.03+09 Ecobase 6 mm met suite wol / PA tapijt
Test name : # prod 1
File name : D:\FRPFILES\16100024.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX16011.CSV

Thickness (mm) : 15.4
Density (kg/m³) : 444

Test duration : 12 minutes 23 seconds (743 s)
Substrate used? : Yes
Substrate : Calcium silicate
Fixing method : adhesive
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 01 seconds (121 s)
Time to flameout : 12 minutes 21 seconds (741 s)
Extent of burning (mm) : 120
Critical flux at extinguishment (kW/m²) : 10.35
HF-10 (kW/m²) : 10.46
HF-20 (kW/m²) : Not calculated (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 (%) : 7.19
Time to peak light attenuation : 2 minutes 31 seconds (151 s)
Total integrated smoke (%.min) : 20.42

Potential classification : A2(f)/B(f)
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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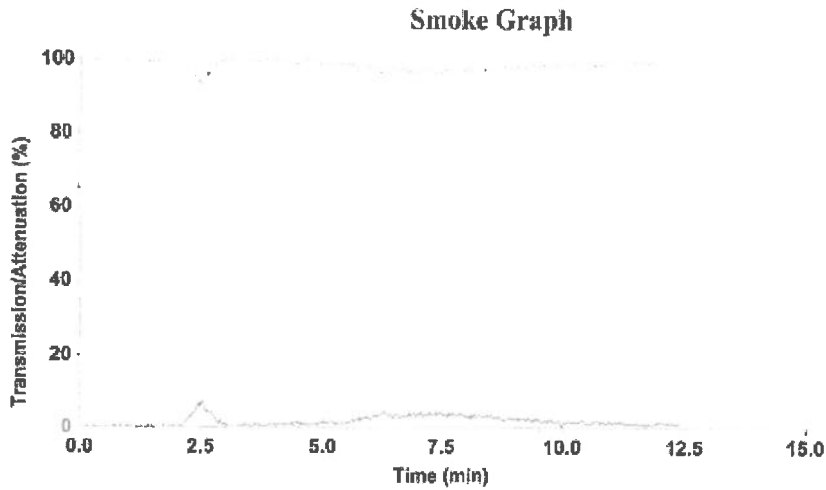
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Test name : # prod 1
File name : D:\PRPFILES\16100024.CSV

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)
60	136	11.1	1.514	510	-	3.6	-
110	147	10.5	1.538	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.2	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.2	-	810	-	1.2	-
410	-	5.2	-	860	-	1.0	-
460	-	4.3	-	910	-	0.9	-

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 Report

Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : Estillon 89210549
Date of test : Oct. 17 2016

Specimen description : MT16-113956.03+09 Ecobase 6 mm met suite wol/ PA tapijt
Test name : # cross 2
File name : D:\FRPFILES\16100025.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX16011.CSV

Thickness (mm) : 15.4
Density (kg/m³) : 444

Test duration : 12 minutes 10 seconds (730 s)
Substrate used? : Yes
Substrate : Calcium silicate
Fixing method : adhesive
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 04 seconds (124 s)
Time to flameout : 12 minutes 07 seconds (727 s)
Extent of burning (mm) : 310
Critical flux at extinguishment (kW/m²) : 7.26
HF-10 (kW/m²) : 7.26
HF-20 (kW/m²) : Not calculated (test duration < 20 minutes)
HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
Flame spread at 10 minutes (mm) : 310
Flame spread at 20 minutes (mm) : Not measured
Flame spread at 30 minutes (mm) : Not measured
Peak light attenuation (%) : 16.13
Time to peak light attenuation : 7 minutes 11 seconds (431 s)
Total integrated smoke (%.min) : 23.63

Potential classification : C(f)
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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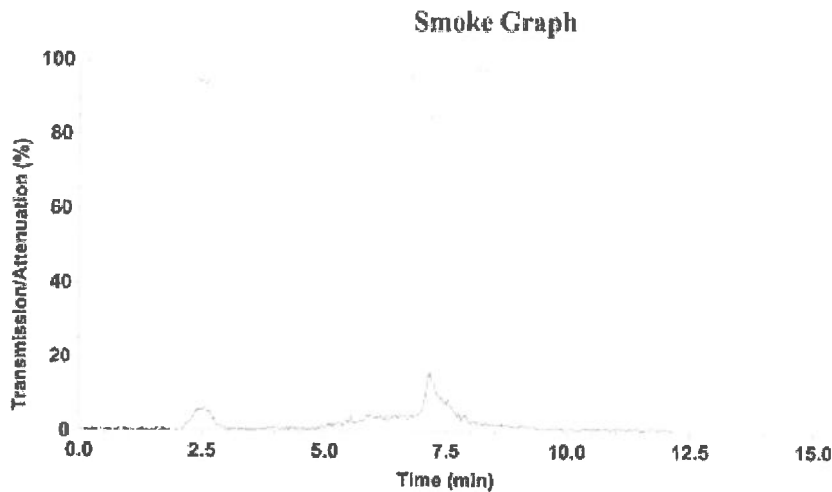
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Test name : # cross 2
File name : D:\FRPFILES\16100025.CSV

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)
60	149	11.1	1.659	510	-	3.6	-
110	151	10.5	1.579	560	-	3.0	-
160	420	9.9	4.156	610	-	2.5	-
210	451	9.2	4.153	660	-	2.2	-
260	478	8.2	3.921	710	-	1.8	-
310	500	7.3	3.628	760	-	1.5	-
360	-	6.2	-	810	-	1.2	-
410	-	5.2	-	860	-	1.0	-
460	-	4.3	-	910	-	0.9	-

Comments

Specimen extinguished naturally.

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Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : Estillon 89210549
Date of test : Oct. 17 2016

Specimen description : MT16-113956.03+09 Ecobase 6 mm met suite wol / PA tapijt
Test name : # cross 3
File name : D:\FRPFILES\16100026.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX16011.CSV

Thickness (mm) : 15.4
Density (kg/m³) : 444

Test duration : 14 minutes 24 seconds (864 s)
Substrate used? : Yes
Substrate : Calcium silicate
Fixing method : adhesive
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 05 seconds (125 s)
Time to flameout : 14 minutes 22 seconds (862 s)
Extent of burning (mm) : 320
Critical flux at extinguishment (kW/m²) : 7.04
HF-10 (kW/m²) : 7.26
HF-20 (kW/m²) : Not calculated (test duration < 20 minutes)
HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
Flame spread at 10 minutes (mm) : 310
Flame spread at 20 minutes (mm) : Not measured
Flame spread at 30 minutes (mm) : Not measured
Peak light attenuation (%) : 8.11
Time to peak light attenuation : 6 minutes 46 seconds (406 s)
Total integrated smoke (%.min) : 31.05

Potential classification : C(0)
Smoke production classification : s1

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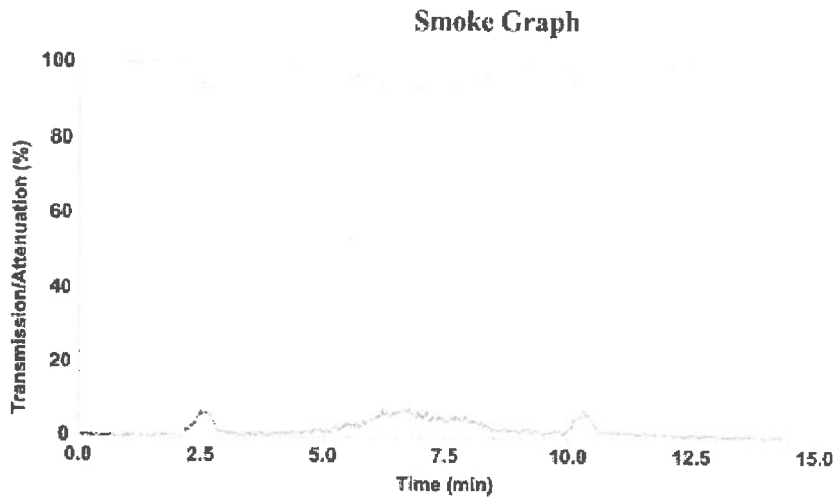
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Test name : # cross 3
File name : D:\FRPFILES\16100026.CSV

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)
60	135	11.1	1.503	510	-	3.6	-
110	149	10.5	1.559	560	-	3.0	-
160	575	9.9	5.690	610	-	2.5	-
210	583	9.2	5.369	660	-	2.2	-
260	593	8.2	4.864	710	-	1.8	-
310	610	7.3	4.426	760	-	1.5	-
360	-	6.2	-	810	-	1.2	-
410	-	5.2	-	860	-	1.0	-
460	-	4.3	-	910	-	0.9	-

Comments

Specimen extinguished naturally.

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Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : Estillon 89210549
Date of test : Oct. 17 2016

Specimen description : MT16-113956.03+09 Ecobase 6 mm met suite wol / PA tapijt
Test name : # cross 4
File name : D:\FRPFILES\16100027.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX16011.CSV

Thickness (mm) : 15.4
Density (kg/m³) : 444

Test duration : 12 minutes 27 seconds (747 s)
Substrate used? : Yes
Substrate : Calcium silicate
Fixing method : adhesive
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 03 seconds (123 s)
Time to flameout : 12 minutes 24 seconds (744 s)
Extent of burning (mm) : 130
Critical flux at extinguishment (kW/m²) : 10.23
HF-10 (kW/m²) : 10.23
HF-20 (kW/m²) : Not calculated (test duration < 20 minutes)
HF-30 (kW/m²) : 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 attenuation (%) : 7.22
Time to peak light attenuation : 2 minutes 32 seconds (152 s)
Total integrated smoke (%.min) : 17.93
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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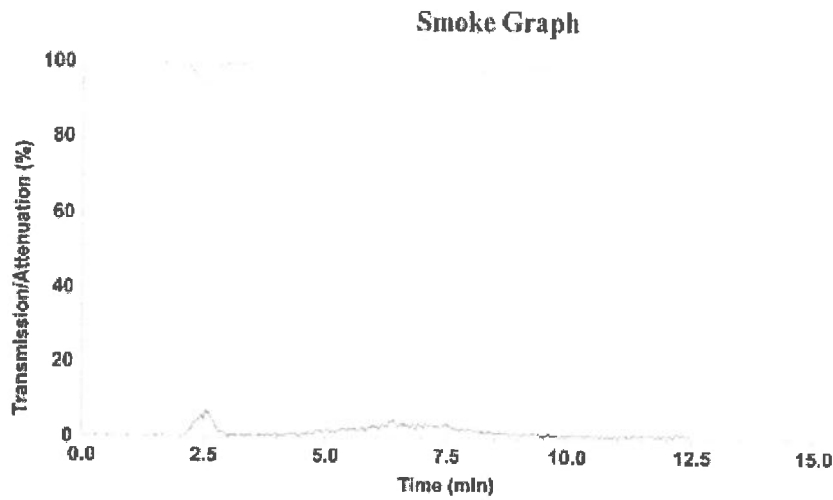
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Test name : # cross 4
 File name : D:\FRPFILES\16100027.CSV

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)
60	134	11.1	1.492	510	-	3.6	-
110	149	10.5	1.559	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.2	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.2	-	810	-	1.2	-
410	-	5.2	-	860	-	1.0	-
460	-	4.3	-	910	-	0.9	-

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.