

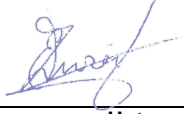


Prüfbericht-Nr.: <i>Test Report No.:</i>	89212529.02br	Auftrags-Nr.: <i>Order No.:</i>	172114	Seite 1 von 14 <i>Page 1 of 14</i>	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	01.11.2017		
Auftraggeber: <i>Client:</i>	Superior Manufacturing Group-Europe BV, Achterzeedijk 57 Unit 1, 2992 SB Barendrecht, The Netherlands				
Prüfgegenstand: <i>Test item:</i>	Anti fatigue mat				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	656 Cushion Ease Solid Nitrile FR				
Auftrags-Inhalt: <i>Order content:</i>	Classification of burning behaviour				
Prüfgrundlage: <i>Test specification:</i>	EN 13501-1:2007+ A1:2009 Classification of burning behaviour <i>Test methods: Ignitability of products subjected to direct impingement of flame (EN ISO 11925-2:2010/C1:2011) and determination of the burning behaviour using a radiant heat source (EN ISO 9239-1:2010)</i>				
Wareneingangsdatum: <i>Date of receipt:</i>	06.11.2017				
Prüfmuster-Nr.: <i>Test sample No.:</i>	MT17-172114.02				
Prüfzeitraum: <i>Testing period:</i>	07.11.2017 - 10.11.2017				
Ort der Prüfung: <i>Place of testing:</i>	Westervoortsedijk 73, 6827 AV Arnhem, Netherlands				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland Nederland B.V				
Prüfergebnis*: <i>Test result*:</i>	Siehe Sonstiges / See Other				
geprüft von / tested by:	kontrolliert von / reviewed by:				
15.11.2017 M.A. van de Vlekkert		15.11.2017 E. Zwier			
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other:	Test result: See clause 4 on page 5.				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>				
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>					

v04

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**Liste der verwendeten Prüfmittel
List of used test equipment**

Prüfmittel <i>Test equipment</i>	Prüfmittel-Nr. / ID-Nr. <i>Equipment No. / ID-No.</i>	Nächste Kalibrierung <i>Next calibration</i>
Flooring Radiant Panel	A00929	30.08.2018
Anemometer	A01989	26.09.2020
Scales	A00769	31.01.2018
Thickness gauge	A00904	14.01.2018
Metal ruler 1	A01759	12.12.2019
Metal ruler 2	A01558	12.01.2019
Metal ruler 3	A01567	20.09.2019
Vertical ignitability test cabinet	A01576	-
Stopwatch	A01699	11.12.2020
Metal reference plate	A00813	12.12.2019

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Produktbeschreibung
Product description

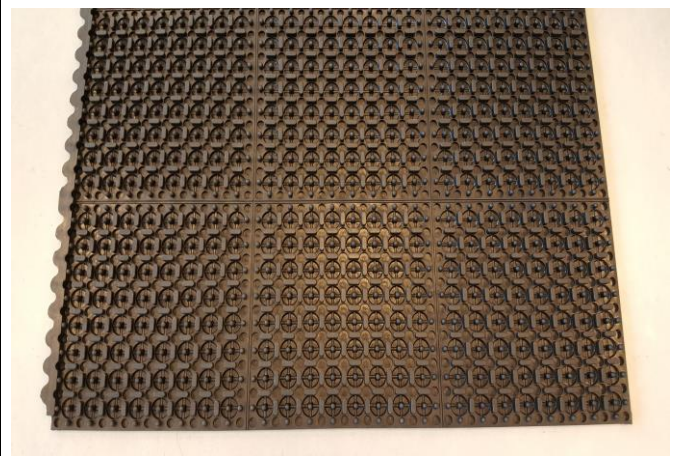
Product identity	656 Cushion Ease Solid Nitrile FR*	Use of fire-retardant	Yes*
Composition	Nitrile rubber*		

* applicants declaration

Figure 1, Picture of the received sample (surface)



Figure 2, Picture of the received sample (backing)



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1	Construction data ISO 24346:2006 & ISO 23997:2008		
	Test condition	23 ± 2°C and 50 ± 4% relative humidity	
	Pre conditioning, duration	≥ 48 h & until constant mass is achieved	
	Total thickness (mm)	18.8	
	Total mass (g/m ²)	13653	
	Density (kg/m ³)	726	

2	Ignitability of products subjected to direct impingement of flame EN ISO 11925-2:2010/C1:2011						
	Date of testing	08.11.2017					
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity					
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved					
	Description of substrate	Fibre cement board, thickness 8 ± 2 mm, density 1800 ± 200 kg/m ³ conforming to EN 13238:2010					
	Flame application	Surface					
	Flame application time (s)	15					
	Requirements according EN 13501-1:2007+A1:2009	See clause 5					
	Test result(s)						
	Orientation	Length			Width		
	Test sample	1	2	3	1	2	3
	Ignition of the sample	Yes	Yes	Yes	Yes	Yes	Yes
	Flame tip reached 150 mm above the application point	No	No	No	No	No	No
	Duration after application when the flame tip reached the 150 mm above the application point (s)	N/A	N/A	N/A	N/A	N/A	N/A
	Extent of damaged area, length (mm)	44	48	45	54	52	57
	Extent of damaged area, width (mm)	12	12	12	12	15	14
	Material melts	No	No	No	No	No	No
	Shrinks away from flame without being ignited	No	No	No	No	No	No
	After glowing	No	No	No	No	No	No
	Flaming droplets/particles which caused ignition of filter paper	No	No	No	No	No	No

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3	Determination of the burning behaviour using a radiant heat source EN ISO 9239-1:2010					
	Date of testing	09.11.2017 & 10.11.2017				
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity				
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved				
	Description of substrate	Fibre cement board, thickness 8 ± 2 mm, density 1800 ± 200 kg/m ³ conforming to EN 13238:2010				
	Fixing method	None, samples are tested loose laid on the substrate				
	Requirements according EN 13501-1:2007+ A1:2009	See clause 5				
	Test result(s)					
	Test sample	1	2	3	4	Mean
	Orientation (Length: ↑, Width: T)	↑	T	T	T	T
	Flame spread (cm)	11	11	13	13	12
	CHF / HF-30 (kW/m ²)	10.5	10.5	10.3	10.3	10.4
	Maximum light attenuation (%)	26.9	35.0	38.2	32.8	35.3
Smoke production (%.min)	198	303	277	255	278	
Observations: 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.						

4	Classification of burning behaviour EN 13501-1:2007+A1:2009	
	The product, 656 Cushion Ease Solid Nitrile FR , in relation to its reaction to fire behaviour is classified:	B_{fl}
	The additional classification in relation to smoke production is:	s1
	Reaction to fire classification : B_{fl} – s1	
	Field of application <ul style="list-style-type: none"> - As a floor covering in accordance with the nominal product parameters given on page 3. - On end use substrates of classes A1 and A2-s1,d0 according to EN 13238:2010. - Any way of fixation, glued down or loose laid. 	
Statements <ul style="list-style-type: none"> - This document does not represent type approval or certification of the product. - 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 validity of this report will expire directly after alterations or modifications of the examined product (combination)(s) and/or the criteria. 		

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5	Potential classes of reaction to fire performance for floorings			
	EN 13501-1:2007+A1:2009			
	Class	Test method(s)	Classification criteria	
	A1 _{fi}	EN ISO 1182 ^a and	$\Delta T \leq 30 \text{ °C}$; and $\Delta m \leq 50 \%$; and $t_f = 0$ (i.e. no sustained flaming)	-
		EN ISO 1716	$PCS \leq 2.0 \text{ MJ/kg}^a$ and $PCS \leq 2.0 \text{ MJ/m}^2^b$ and $PCS \leq 1.4 \text{ MJ/m}^2^c$ and $PCS \leq 2.0 \text{ MJ/kg}^d$	-
	A2 _{fi}	EN ISO 1182 ^a or	$\Delta T \leq 50 \text{ °C}$ and $\Delta m \leq 50 \%$ and $t_f \leq 20 \text{ s}$	-
		EN ISO 1716 and	$PCS \leq 3.0 \text{ MJ/kg}^a$ and $PCS \leq 4.0 \text{ MJ/m}^2^b$ and $PCS \leq 4.0 \text{ MJ/m}^2^c$ and $PCS \leq 3.0 \text{ MJ/kg}^d$	-
		EN ISO 9239-1 ^e	$CHF \geq 8.0 \text{ kW/m}^2$	Smoke production ^g
	B _{fi}	EN ISO 9239-1 ^e and	$CHF \geq 8.0 \text{ kW/m}^2$	Smoke production ^g
		EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	-
	C _{fi}	EN ISO 9239-1 ^e and	$CHF \geq 4.5 \text{ kW/m}^2$	Smoke production ^g
		EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	-
	D _{fi}	EN ISO 9239-1 ^e and	$CHF \geq 3.0 \text{ kW/m}^2$	Smoke production ^g
EN ISO 11925-2 ^h : Exposure = 15 s		$F_s \leq 150 \text{ mm}$ within 20 s	-	
E _{fi}	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	-	
F _{fi}	No performance determined			
^a	For homogeneous products and substantial components of non-homogeneous products.			
^b	For any external non-substantial component of non-homogeneous products.			
^c	For any internal non-substantial component of non-homogeneous products.			
^d	For the product as a whole.			
^e	Test duration = 30 min.			
^f	Critical flux is defined as the radiant flux at which the flame extinguishes or the radiant flux after a test period of 30 min, whichever is the lower (i.e. the flux corresponding with the furthest extent of spread of flame).			
^g	s1 = Smoke $\leq 750 \%$ minutes; s2 = not s1.			
^h	Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.			

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6	<p style="text-align: center;">Flooring Radiant Panel Single Specimen Report</p> <p style="font-size: small;">Report produced with the Fire Testing Technology FRPSoft software page 1</p> <h2 style="text-align: center;">Flooring Radiant Panel Single Specimen Report</h2> <p>Standard : EN ISO 9239-1:2010 Laboratory : TÜV Rheinland Nederland B.V. Sponsor : TÜV Rheinland Superior manufacturing group 89212529 Date of test : Nov. 09 2017</p> <p>Specimen description : 656 Cushion Ease Solid Nitrile FR MT17-172114.02 Test name : # Prod 1 File name : D:\FRPFILES\17110010.CSV Test number in series : 4</p> <p>Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX17010.CSV</p> <p>Thickness (mm) : 18.8 Density (kg/m³) : 726</p> <p>Test duration : 23 minutes 20 seconds (1400 s) Substrate used? : Yes Substrate : Calcium silicate Fixing method : None (loose laid) Conditioned? : Yes Conditioning temp. (°C) : 23 Conditioning RH (%) : 50</p> <p>Test Results</p> <p>Time to ignition : 2 minutes 03 seconds (123 s) Time to flameout : 23 minutes 18 seconds (1398 s) Extent of burning (mm) : 110 Critical flux at extinguishment (kW/m²) : 10.49 HF-10 (kW/m²) : 10.77 HF-20 (kW/m²) : 10.49 HF-30 (kW/m²) : Not calculated (test duration < 30 minutes) Flame spread at 10 minutes (mm) : 90 Flame spread at 20 minutes (mm) : 110 Flame spread at 30 minutes (mm) : Not measured Peak light attenuation (%) : 26.85 Time to peak light attenuation : 10 minutes 38 seconds (638 s) Total integrated smoke (%.min) : 198.02</p> <p>Potential classification : A2(0)/B(0) Smoke production classification : s1</p> <p style="font-size: x-small;">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.</p>
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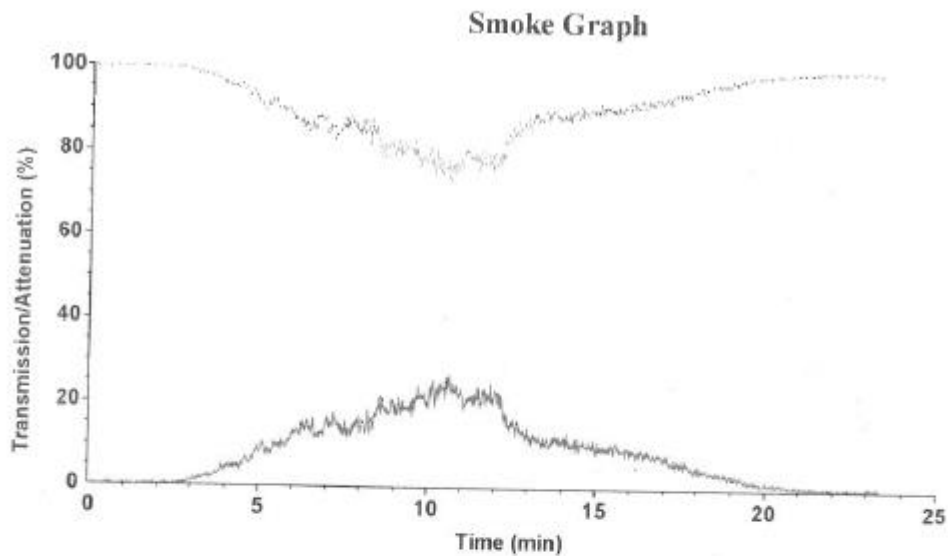
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page 2



Test name : # Prod 1
File name : D:\FRPFILES\17110010.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	542	11.2	6.060	510	-	3.6	-
110	727	10.5	7.629	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.1	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.3	-	810	-	1.3	-
410	-	5.3	-	860	-	1.2	-
460	-	4.4	-	910	-	1.0	-

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 : ~~TÜV Rheinland~~ Superior manufacturing group 89212529
 Date of test : Nov. 09 2017

Specimen description : 656 Cushion Ease Solid Nitrile FR MT17-172114.02
 Test name : # Cross 2
 File name : D:\FRPFILES\17110011.CSV
 Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX17010.CSV

Thickness (mm) : 18.8
 Density (kg/m³) : 726

Test duration : 24 minutes 04 seconds (1444 s)
 Substrate used? : Yes
 Substrate : Calcium silicate
 Fixing method : None (loose laid)
 Conditioned? : Yes
 Conditioning temp. (°C) : 23
 Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 04 seconds (124 s)
 Time to flameout : 24 minutes (1440 s)
 Extent of burning (mm) : 110
 Critical flux at extinguishment (kW/m²) : 10.49
 HF-10 (kW/m²) : 10.49
 HF-20 (kW/m²) : 10.49
 HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
 Flame spread at 10 minutes (mm) : 110
 Flame spread at 20 minutes (mm) : 110
 Flame spread at 30 minutes (mm) : Not measured
 Peak light attenuation (%) : 35.01
 Time to peak light attenuation : 10 minutes 54 seconds (654 s)
 Total integrated smoke (%.min) : 303.04

Potential classification : A2(f1)/B(f1)
 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.

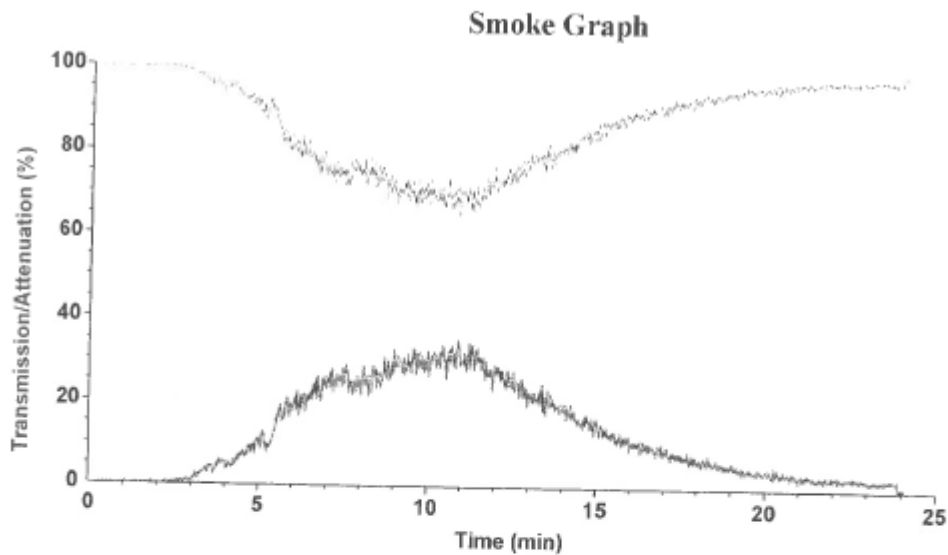
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page 2



Test name : # Cross 2
File name : D:\FRPFILES\17110011.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	367	11.2	4.103	510	-	3.6	-
110	595	10.5	6.244	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.1	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.3	-	810	-	1.3	-
410	-	5.3	-	860	-	1.2	-
460	-	4.4	-	910	-	1.0	-

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 : ~~TÜV Rheinland~~ Superior manufacturing group 89212529
 Date of test : Nov. 10 2017

Specimen description : 656 Cushion Ease Solid Nitrile FR MT17-172114.02
 Test name : # Cross 3
 File name : D:\FRPFILES\17110016.CSV
 Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX17010.CSV

Thickness (mm) : 18.8
 Density (kg/m³) : 726

Test duration : 21 minutes 57 seconds (1317 s)
 Substrate used? : Yes
 Substrate : Calcium silicate
 Fixing method : None (loose laid)
 Conditioned? : Yes
 Conditioning temp. (°C) : 23
 Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 04 seconds (124 s)
 Time to flameout : 21 minutes 54 seconds (1314 s)
 Extent of burning (mm) : 130
 Critical flux at extinguishment (kW/m²) : 10.26
 HF-10 (kW/m²) : 10.38
 HF-20 (kW/m²) : 10.38
 HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
 Flame spread at 10 minutes (mm) : 120
 Flame spread at 20 minutes (mm) : 120
 Flame spread at 30 minutes (mm) : Not measured
 Peak light attenuation (%) : 38.16
 Time to peak light attenuation : 11 minutes 45 seconds (705 s)
 Total integrated smoke (%.min) : 277.36

Potential classification : A2(II)/B(II)
 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.

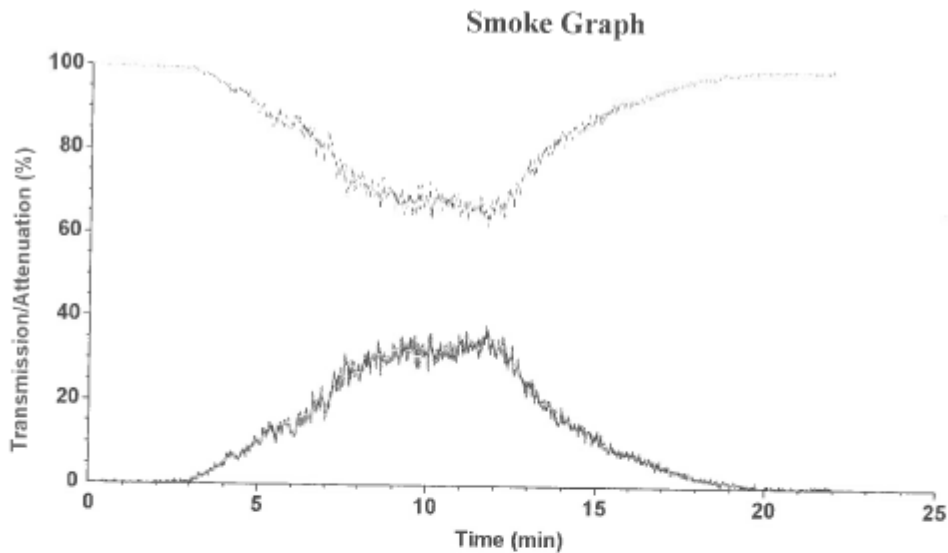
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page 2



Test name : # Cross 3

File name : D:\FRPFILES\17110016.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	426	11.2	4.763	510	-	3.6	-
110	553	10.5	5.803	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.1	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.3	-	810	-	1.3	-
410	-	5.3	-	860	-	1.2	-
460	-	4.4	-	910	-	1.0	-

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 : ~~TÜV Rheinland~~ Superior manufacturing group 89212529
 Date of test : Nov. 10 2017

Specimen description : 656 Cushion Ease Solid Nitrile FR MT17-172114.02
 Test name : # Cross 4
 File name : D:\FRPFILES\17110017.CSV
 Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX17010.CSV

Thickness (mm) : 18.8
 Density (kg/m³) : 726

Test duration : 24 minutes 29 seconds (1469 s)
 Substrate used? : Yes
 Substrate : Calcium silicate
 Fixing method : None (loose laid)
 Conditioned? : Yes
 Conditioning temp. (°C) : 23
 Conditioning RH (%) : 50

Test Results

Time to ignition : 2 minutes 04 seconds (124 s)
 Time to flameout : 24 minutes 26 seconds (1466 s)
 Extent of burning (mm) : 130
 Critical flux at extinguishment (kW/m²) : 10.26
 HF-10 (kW/m²) : 10.63
 HF-20 (kW/m²) : 10.38
 HF-30 (kW/m²) : Not calculated (test duration < 30 minutes)
 Flame spread at 10 minutes (mm) : 100
 Flame spread at 20 minutes (mm) : 120
 Flame spread at 30 minutes (mm) : Not measured
 Peak light attenuation (%) : 32.83
 Time to peak light attenuation : 9 minutes 43 seconds (583 s)
 Total integrated smoke (%.min) : 255.35

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.

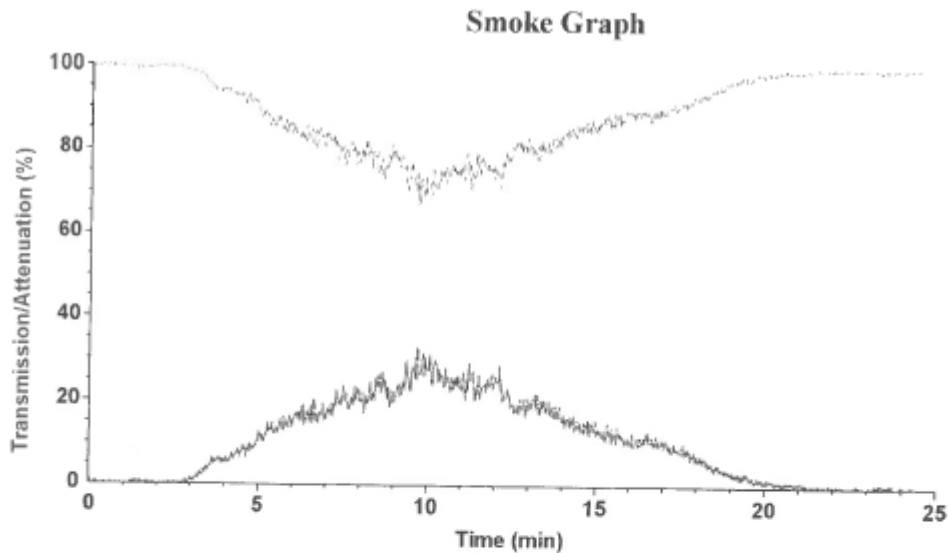
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Absatz	EN 13501-1:2007+ A1:2009	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

Report produced with the Fire Testing Technology FRPSoft software

page 2



Test name : # Cross 4
File name : D:\FRPFILES\17110017.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	445	11.2	4.976	510	-	3.6	-
110	691	10.5	7.251	560	-	3.0	-
160	-	9.9	-	610	-	2.5	-
210	-	9.2	-	660	-	2.1	-
260	-	8.2	-	710	-	1.8	-
310	-	7.3	-	760	-	1.5	-
360	-	6.3	-	810	-	1.3	-
410	-	5.3	-	860	-	1.2	-
460	-	4.4	-	910	-	1.0	-

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.