

Test report no.: <i>Testrapport nr.:</i>	89221176 069	Order No.: <i>Opdracht nr.:</i>	221176	Page 1 of 14 <i>Pagina 1 van 14</i>
Client Reference No.: <i>Klantreferentie nr.:</i>	N/A	Order date: <i>Opdrachtdatum:</i>	05.10.2023	
Client: <i>Klant:</i>	Forbo Flooring B.V., PO Box 13, 1560 AA Krommenie, The Netherlands			
Test item: <i>Testvoorwerp:</i>	Resilient floor covering			
Identification/ Type No.: <i>Benaming / Type nr.:</i>	Marmoleum Click - Dessin 333885 - Batch 29604			
Order content: <i>Inhoud opdracht:</i>	Classification of burning behaviour			
Test specification: <i>Testomschrijving:</i>	EN 13501-1:2018 ^a Classification of burning behaviour Test methods: Ignitability of products subjected to direct impingement of flame (EN ISO 11925-2:2020) and determination of the burning behaviour using a radiant heat source (EN ISO 9239-1:2010)			
Date of sample receipt: <i>Ontvangstdatum monster:</i>	09.10.2023			
Test sample No.: <i>Testproefstuk nr.:</i>	MT23-221176.41			
Testing period: <i>Testperiode:</i>	09.10.2023 - 25.10.2023			
Place of testing: <i>Testlocatie:</i>	Westervoortsedijk 73, 6827 AV Arnhem			
Testing laboratory: <i>Testlaboratorium:</i>	TÜV Rheinland Nederland B.V.			
Test result*: <i>Testresultaat*:</i>	See Other			
tested by: <i>getest door:</i>	<input checked="" type="checkbox"/>			
Date: 17.11.2023 <i>Datum:</i>	Ondertekend door: Michiel van de Vlekkert	Issue Date: 17.11.2023 <i>Datum uitgave:</i>	Ondertekend door: Tim Zandvliet	
Position / functie:	Engineer	Position / functie:	Expert	
Others / <i>Andere:</i>	Test result: See clause 4 on page 5.			
Condition of the test item at delivery: <i>Toestand van het test voorwerp bij ontvangst:</i>	Test item complete and undamaged			
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
* Legenda:	P(ass) = voldoet aan test omschrijving	F(ail) = voldoet niet aan test omschrijving	N/A = niet van toepassing	N/T = niet getest
<p>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.</p> <p><i>Dit testrapport heeft alleen betrekking op het voorgenoemde test voorwerp. Zonder toestemming van het testcentrum mag dit testrapport niet in delen worden vermenigvuldigd. Dit keuringsrapport geeft geen recht op het dragen van enig keurmerk.</i></p>				

Test report no.: 89221176 069
Testrapport nr.:

Page 2 of 14
Pagina 2 van 14

Remarks
Opmerkingen

1	<p>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. The decision rule for statements of conformity in this test report is based on the “Zero Guard Band Rule” and “Simple Acceptance” in accordance to and ILAC-G8:09/2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account.</p> <p><i>De apparatuur die tijdens de gespecificeerde testperiode is gebruikt, is gekalibreerd volgens ons testlaboratoriumkalibratieprogramma. De apparatuur voldoet aan de eisen die zijn opgenomen in de relevante normen. De traceerbaarheid van de gebruikte testapparatuur wordt gewaarborgd door naleving van de voorschriften van ons managementsysteem. De beslisregel voor conformiteitsverklaringen in dit testrapport is gebaseerd op de “Zero Guard Band Rule” en “Simple Acceptance” in overeenstemming met en ILAC - G8:09/2019 en IEC Guide 115:2021, tenzij anders aangegeven in de toegepaste norm vermeld op pagina 1 van dit rapport of aangevraagd door de klant. Dit betekent dat er geen rekening wordt gehouden met de meetonzekerheid.</i></p>
2	<p>As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</p> <p><i>Zoals contractueel overeengekomen is dit document enkel digitaal ondertekend. TÜV Rheinland heeft niet geverifieerd en kan niet verifiëren welke wettelijke of andere vereisten van toepassing zijn op dit document. Een dergelijke verificatie valt onder de verantwoordelijkheid van de gebruiker van het document. Op verzoek van de opdrachtgever kan TÜV Rheinland de geldigheid van de digitale handtekening bevestigen door een apart document. Een dergelijk verzoek moet worden gericht aan onze verkoopafdeling. Voor een dergelijke extra service zal een milieutoeslag in rekening worden gebracht.</i></p>
3	<p>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Tests clauses marked with ^a are performed under ISO 17025 accreditation. Deviations of testing specification(s), test locations or customer requirements are listed in specific test clause in the report. This report is only to be read as a whole. No opinions or interpretation are included in this report. This test report consists of multiple pages and is only to be read as a whole. The number of pages can be seen in the header on the top right of each page, the report ends when the last page is reached. TÜV Rheinland Nederland B.V. is solely responsible for the content.</p> <p><i>Test onderdelen welke met * zijn gemarkeerd zijn uitbesteed aan gekwalificeerde onderaannemers en zijn beschreven in het respectievelijke test onderdeel van dit rapport. Test onderdelen welke met ^a zijn gemarkeerd zijn onder ISO 17025 accreditatie uitgevoerd. Afwijkingen van testspecificatie(s), testlocaties of klant eisen zijn vermeld in het van toepassing zijnde onderdeel in het rapport. Het rapport dient als geheel te worden gelezen. Er zijn geen opinies en interpretaties opgenomen binnen het rapport. Dit rapport bestaat uit meerdere pagina's en dient al geheel gelezen te worden. Het aantal pagina's is rechtsboven in de koptekst van dit rapport vermeld en eindigt wanneer de laatste pagina is bereikt. TÜV Rheinland Nederland is als enige verantwoordelijk voor de inhoud van het rapport.</i></p>
4	<p>All rights reserved. No part of this report may be reproduced, provided to and/or examined by third parties, and/or published by print, photoprint, microfilm, in electronic form or any other means without the explicit previous written consent of TÜV Rheinland Nederland B.V.</p> <p>In case this report was drafted within the context of an assignment to TÜV Rheinland Nederland B.V., the rights and obligations of contracting parties are subject to the General Terms & Conditions for Advisory, Research and Certification assignments to TÜV Rheinland Nederland B.V. and/or the relevant agreement concluded between the contracting parties. © 2010 TÜV Rheinland Nederland.</p> <p><i>Alle rechten voorbehouden. Niets uit dit rapport mag worden veelevoudigd, aan derden ter beschikking gesteld en/of door derden onderzocht en/of openbaar gemaakt door middel van druk, fotokopie, microfilm, in elektronische vorm of op welke andere wijze dan ook, zonder uitdrukkelijke voorafgaande schriftelijke toestemming van TÜV Rheinland Nederland B.V.</i></p> <p><i>Indien dit rapport is opgesteld in het kader van een opdracht aan TÜV Rheinland Nederland B.V., zijn de rechten en verplichtingen van contractpartijen onderworpen aan de Algemene Voorwaarden voor Advies-, Onderzoeks- en Certificeringsopdrachten aan TÜV Rheinland Nederland B.V. en/of de betreffende overeenkomst tussen de contractpartijen. © 2010 TÜV Rheinland Nederland</i></p>

Test report no.: 89221176 069
Testrapport nr.:

Page 3 of 14
Pagina 3 van 14

Product description
Product omschrijving

1	Product details: <i>Product details:</i>	Product identity: Marmoleum Click – Dessin 333885 – Batch 29604 Product type: Resilient floor covering
2	Other: <i>Andere:</i>	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
3	Test sample obtaining: <i>Selectie van het proefstuk:</i>	<input checked="" type="checkbox"/> Sending by customer <input type="checkbox"/> Sampling by TÜV Rheinland Group <input type="checkbox"/> others:

Figure 1: Picture of the received sample (surface)



Figure 2: Picture of the received sample (back)



Test report no.: 89221176 069 Testrapport nr.:			
Clause Deel	Requirements - Tests / Vereisten - Tests	Measuring results – Remarks Meetresultaten – Opmerkingen	Result Resultaat

1	Construction data (indicative) of the product obtained by the testlaboratory after pre-conditioning 01-4.3-P.02-322-WI01		
	Test condition	23 ± 2°C and 50 ± 4% relative humidity	
	Pre conditioning, duration	≥ 48 h & until constant mass is achieved	
	Total thickness (mm)	10.0	
	Total mass (g/m ²)	9231	
	Density (kg/m ³)	923	
	<i>Note: the determined construction data are used for determination of constant mass, the used testmethod is not in accordance with the determination of construction data according the specification standard. Therefore the testresults should be handled as indicative.</i>		

2	Ignitability of products subjected to direct impingement of flame EN ISO 11925-2:2020 ^a						
	Date of testing	25.10.2023					
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity					
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved					
	Description of substrate	Particle board, thickness 20 ± 2 mm, density 680 ± 50 kg/m ³ conforming to EN 13238:2018					
	Flame application	Surface					
	Flame application time (s)	15					
	Requirements according EN 13501-1	See clause 5 of this report					
	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)	47	45	45	45	44	46
	Extent of damaged area, width (mm)	10	10	10	10	11	11
	Material melts	Yes	Yes	Yes	Yes	Yes	Yes
	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	

Test report no.: 89221176 069
Testrapport nr.:

Clause Deel	Requirements - Tests / Vereisten - Tests	Measuring results – Remarks Meetresultaten – Opmerkingen	Result Resultaat
----------------	---	---	---------------------

3	Determination of the burning behaviour using a radiant heat source EN ISO 9239-1:2010 ^a					
	Date of testing	25.10.2023				
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity				
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved				
	Description of substrate	Particle board, thickness 20 ± 2 mm, density 680 ± 50 kg/m ³ conforming to EN 13238:2018				
	Fixing method	None, samples are tested loose laid on the substrate.				
	Precision of the test method	The measurement uncertainty for this test strongly depends on the products that are tested, based on that influence a measurement uncertainty for the method can't be determined. Information on the influence of the different products can be found in ISO 9239-1:2010 Annex B.				
	Requirements according EN 13501-1	See clause 5 of this report				
	Test result(s)					
	Test sample	1	2	3	4	Mean
	Orientation (Length: ↑, Width: T)	↑	T	T	T	T
	Flame spread (cm)	36	39	38	39	39
	CHF / HF-30 (kW/m ²)	6.2	5.6	5.8	5.6	5.7
	Maximum light attenuation (%)	19.1	22.5	22.0	22.6	22.4
Smoke production (%.min)	114	93	93	134	107	
Observed significant phenomena during the test: Specimen 1, 2, 3 and 4: Melting / Blistering / Sustained Flaming. Specimen 1, 2, 3 and 4: Extinguished manually after the end of the test duration.						

4	Classification of burning behaviour EN 13501-1:2018 ^a	
	The product, Marmoleum Click – Dessin 333885 – Batch 29604 , in relation to its reaction to fire behaviour is classified:	C_{fi}
	The additional classification in relation to smoke production is:	s1
	Reaction to fire classification : C_{fi} – 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 wood and 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. 		

Test report no.: 89221176 069
Testrapport nr.:

Clause Deel	Requirements - Tests / Vereisten - Tests	Measuring results – Remarks Meetresultaten – Opmerkingen	Result Resultaat	
5	Potential classes of reaction to fire performance for floorings EN 13501-1:2018 ^a			
	Class	Test method(s)	Classification criteria	Additional classifications
	A1 _{fl}	EN ISO 1182 ^{a2} and	$\Delta T \leq 30 \text{ }^\circ\text{C}$; and $\Delta m \leq 50 \%$; and $t_f = 0$ (i.e. no sustained flaming)	-
		EN ISO 1716	$PCS \leq 2.0 \text{ MJ/kg}$ ^{a2} 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 _{fl}	EN ISO 1182 ^{a2} or	$\Delta T \leq 50 \text{ }^\circ\text{C}$ and $\Delta m \leq 50 \%$ and $t_f \leq 20 \text{ s}$	-
		EN ISO 1716 and	$PCS \leq 3.0 \text{ MJ/kg}$ ^{a2} 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 _{fl}	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 _{fl}	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 _{fl}	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 _{fl}	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	-
F _{fl}	EN ISO 11925-2 ^h : Exposure = 15 s	$F_s > 150 \text{ mm}$ within 20 s	-	
<p>^{a2} 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.</p>				

Report produced with the Fire Testing Technology FRPSoft software

page 1

Flooring Radiant Panel Single Specimen Report

Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : 89221176
Date of test : Oct. 25 2023

Specimen description : MT23-221176.41
Test name : # Prod 1
File name : D:\FRPFILES\23100031.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX23005.CSV

Thickness (mm) : 10
Density (kg/m³) : 923

Test duration : 30 minutes (1800 s)
Substrate used? : Yes
Substrate : Particle board
Fixing method : none
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

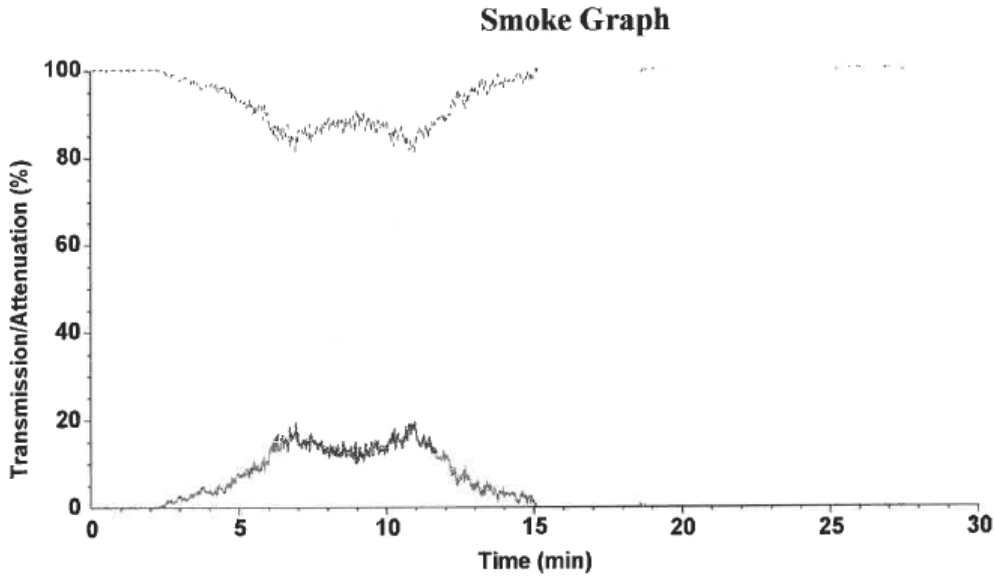
Time to ignition : 2 minutes 05 seconds (125 s)
Time to flameout : 30 minutes (1800 s)
Extent of burning (mm) : 360
Critical flux at extinguishment (kW/m²) : 6.15
HF-10 (kW/m²) : 9.41
HF-20 (kW/m²) : 6.15
HF-30 (kW/m²) : 6.15
Flame spread at 10 minutes (mm) : 210
Flame spread at 20 minutes (mm) : 360
Flame spread at 30 minutes (mm) : 360
Peak light attenuation (%) : 19.08
Time to peak light attenuation : 10 minutes 56 seconds (656 s)
Total integrated smoke (%.min) : 113.93

Potential classification : C(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.

Report produced with the Fire Testing Technology FRPSoft software

page 2



Test name : # Prod 1
File name : D:\FRPFILES\23100031.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	269	11.7	3.139	510	-	3.6	-
110	386	10.9	4.202	560	-	3.0	-
160	443	10.2	4.523	610	-	2.6	-
210	606	9.4	5.704	660	-	2.2	-
260	732	8.3	6.064	710	-	1.9	-
310	882	7.2	6.363	760	-	1.6	-
360	1209	6.2	7.438	810	-	1.4	-
410	-	5.2	-	860	-	1.3	-
460	-	4.3	-	910	-	1.2	-

Comments

Specimen was extinguished manually after end of test.

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.

Flooring Radiant Panel Single Specimen Report

Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : 89221176
Date of test : Oct. 25 2023

Specimen description : MT23-221176.41
Test name : # Cross 2
File name : D:\FRPFILES\23100032.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9\CALIB\FLX23005.CSV

Thickness (mm) : 10
Density (kg/m³) : 923

Test duration : 30 minutes (1800 s)
Substrate used? : Yes
Substrate : Particle board
Fixing method : none
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

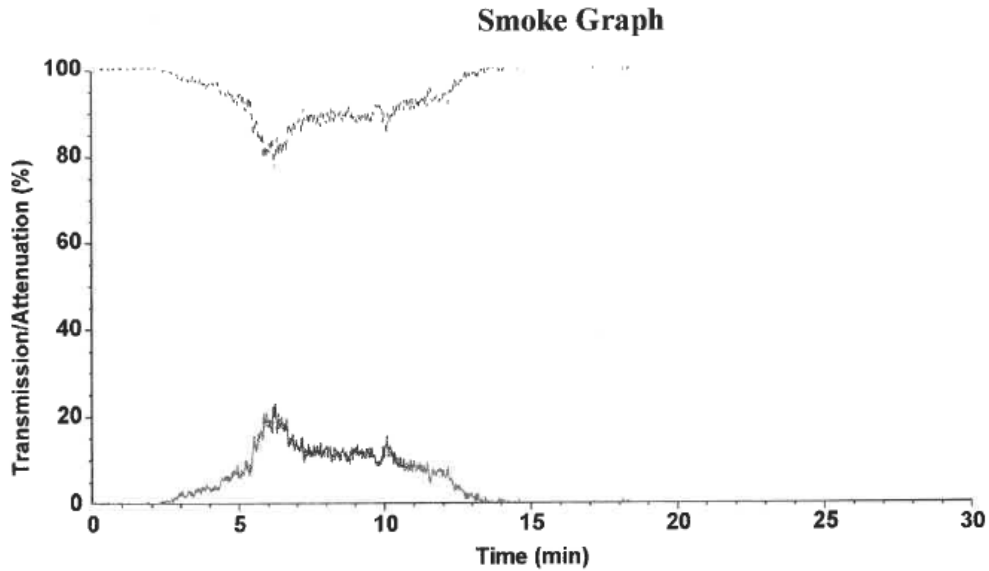
Test Results

Time to ignition : 2 minutes 06 seconds (126 s)
Time to flameout : 30 minutes (1800 s)
Extent of burning (mm) : 390
Critical flux at extinguishment (kW/m²) : 5.56
HF-10 (kW/m²) : 9.19
HF-20 (kW/m²) : 6.79
HF-30 (kW/m²) : 5.56
Flame spread at 10 minutes (mm) : 220
Flame spread at 20 minutes (mm) : 330
Flame spread at 30 minutes (mm) : 390
Peak light attenuation (%) : 22.46
Time to peak light attenuation : 6 minutes 15 seconds (375 s)
Total integrated smoke (%.min) : 92.89

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

Report produced with the Fire Testing Technology FRPSoft software

page 2



Test name : # Cross 2
 File name : D:\FRPFILES\23100032.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	305	11.7	3.560	510	-	3.6	-
110	391	10.9	4.256	560	-	3.0	-
160	485	10.2	4.951	610	-	2.6	-
210	583	9.4	5.488	660	-	2.2	-
260	730	8.3	6.047	710	-	1.9	-
310	1029	7.2	7.423	760	-	1.6	-
360	1598	6.2	9.831	810	-	1.4	-
410	-	5.2	-	860	-	1.3	-
460	-	4.3	-	910	-	1.2	-

Comments

Specimen was extinguished manually after end of test.

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.

Flooring Radiant Panel Single Specimen Report

Standard : EN ISO 9239-1:2010
Laboratory : TÜV Rheinland Nederland B.V.
Sponsor : 89221176
Date of test : Oct. 25 2023

Specimen description : MT23-221176.41
Test name : # Cross 3
File name : D:\FRPFILES\23100033.CSV
Test number in series : 4

Flux calibration file name : C:\FRPSOFT2.9A\CALIB\FLX23005.CSV

Thickness (mm) : 10
Density (kg/m³) : 923

Test duration : 30 minutes (1800 s)
Substrate used? : Yes
Substrate : Particle board
Fixing method : none
Conditioned? : Yes
Conditioning temp. (°C) : 23
Conditioning RH (%) : 50

Test Results

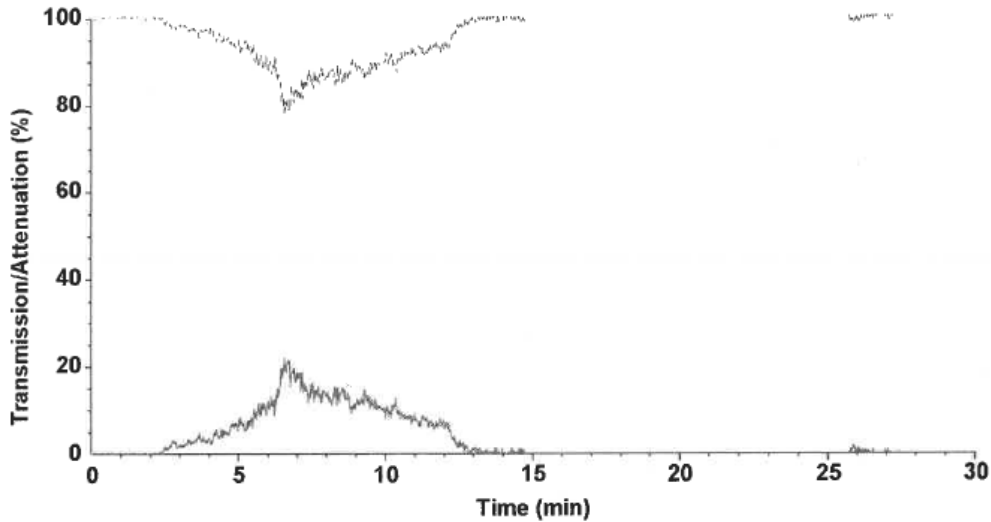
Time to ignition : 2 minutes 05 seconds (125 s)
Time to flameout : 30 minutes (1800 s)
Extent of burning (mm) : 330
Critical flux at extinguishment (kW/m²) : 6.79
HF-10 (kW/m²) : 9.41
HF-20 (kW/m²) : 6.58
HF-30 (kW/m²) : 6.79
Flame spread at 10 minutes (mm) : 210
Flame spread at 20 minutes (mm) : 340
Flame spread at 30 minutes (mm) : 330 ³⁸⁰
Peak light attenuation (%) : 21.95
Time to peak light attenuation : 6 minutes 34 seconds (394 s)
Total integrated smoke (%.min) : 92.71

Potential classification : **C(f)**
Smoke production classification : **s1**

Report produced with the Fire Testing Technology FRPSoft software

page 2

Smoke Graph



Test name : # Cross 3
File name : D:\FRPFILES\23100033.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	289	11.7	3.373	510	-	3.6	-
110	393	10.9	4.278	560	-	3.0	-
160	478	10.2	4.880	610	-	2.6	-
210	612	9.4	5.761	660	-	2.2	-
260	778	8.3	6.445	710	-	1.9	-
310	1087	7.2	7.842	760	-	1.6	-
360	1610	6.2	9.905	810	-	1.4	-
410	-	5.2	-	860	-	1.3	-
460	-	4.3	-	910	-	1.2	-

Comments

Specimen was extinguished manually after end of test.

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.

Flooring Radiant Panel Single Specimen Report

Standard	: EN ISO 9239-1:2010
Laboratory	: TÜV Rheinland Nederland B.V.
Sponsor	: 89221176
Date of test	: Oct. 25 2023
Specimen description	: MT23-221176.41
Test name	: # Cross 4
File name	: D:\FRPFILES\23100034.CSV
Test number in series	: 4
Flux calibration file name	: C:\FRPSOFT2.9A\CALIB\FLX23005.CSV
Thickness (mm)	: 10
Density (kg/m ³)	: 923
Test duration	: 30 minutes (1800 s)
Substrate used?	: Yes
Substrate	: Particle board
Fixing method	: none
Conditioned?	: Yes
Conditioning temp. (°C)	: 23
Conditioning RH (%)	: 50

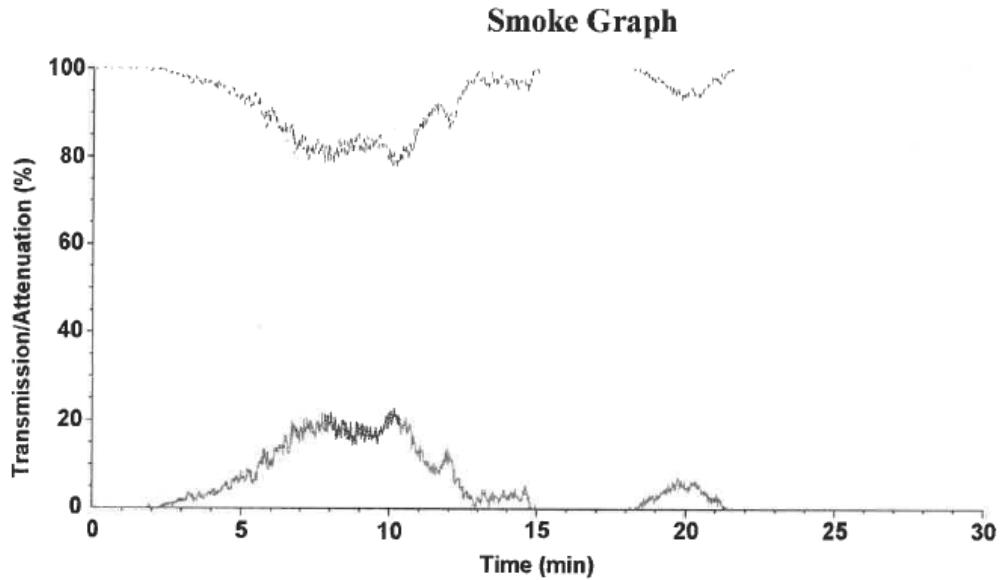
Test Results

Time to ignition	: 2 minutes 05 seconds (125 s)
Time to flameout	: 30 minutes (1800 s)
Extent of burning (mm)	: 390
Critical flux at extinguishment (kW/m ²)	: 5.56
HF-10 (kW/m ²)	: 9.19
HF-20 (kW/m ²)	: 6.90
HF-30 (kW/m ²)	: 5.56
Flame spread at 10 minutes (mm)	: 220
Flame spread at 20 minutes (mm)	: 325
Flame spread at 30 minutes (mm)	: 390
Peak light attenuation (%)	: 22.57
Time to peak light attenuation	: 10 minutes 10 seconds (610 s)
Total integrated smoke (%.min)	: 133.97
Potential classification	: C(fl)
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.

Report produced with the Fire Testing Technology FRPSoft software

page 2



Test name : # Cross 4
File name : D:\FRPFILES\23100034.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	272	11.7	3.175	510	-	3.6	-
110	385	10.9	4.191	560	-	3.0	-
160	475	10.2	4.849	610	-	2.6	-
210	574	9.4	5.403	660	-	2.2	-
260	705	8.3	5.840	710	-	1.9	-
310	1011	7.2	7.293	760	-	1.6	-
360	1502	6.2	9.240	810	-	1.4	-
410	-	5.2	-	860	-	1.3	-
460	-	4.3	-	910	-	1.2	-

Comments

Specimen was extinguished manually after end of test.

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.