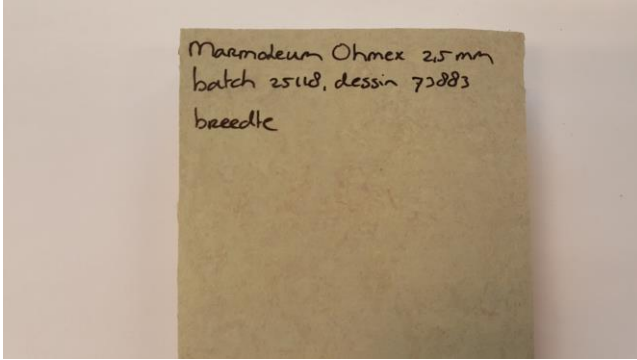




Prüfbericht-Nr.: <i>Test Report No.:</i>	89214258.04br-2 Supersedes 89214258.04br	Auftrags-Nr.: <i>Order No.:</i>	214720	Seite 1 von 6 Page 1 of 6	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	4501011564	Auftragsdatum: <i>Order date:</i>	22.10.2018		
Auftraggeber: <i>Client:</i>	Forbo Flooring B.V., PO Box 13, 1560 AA Krommenie, The Netherlands				
Prüfgegenstand: <i>Test item:</i>	Resilient floor covering				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	Marmoleum Ohmex 2,5 mm				
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>	31.10.2018				
Prüfmuster-Nr.: <i>Test sample No.:</i>	MT18-214720.04				
Prüfzeitraum: <i>Testing period:</i>	31.10.2018 - 03.12.2018				
Ort der Prüfung: <i>Place of testing:</i>	Externally accredited Test Laboratory				
Prüflaboratorium: <i>Testing laboratory:</i>	Externally accredited Test Laboratory				
Prüfergebnis*: <i>Test result*:</i>	Siehe Sonstiges / See Other				
geprüft von / tested by:	kontrolliert von / reviewed by:				
06.12.2018 M.A. van de Vlekkert 	06.12.2018 R. Boerboom 				
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 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested					
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>					

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Produktbeschreibung
Product description

Product identity	Marmoleum Ohmex 2,5 mm*	Dessin	73883*
Batch	25118*		

* applicants declaration

Figure 1, Picture of the received sample

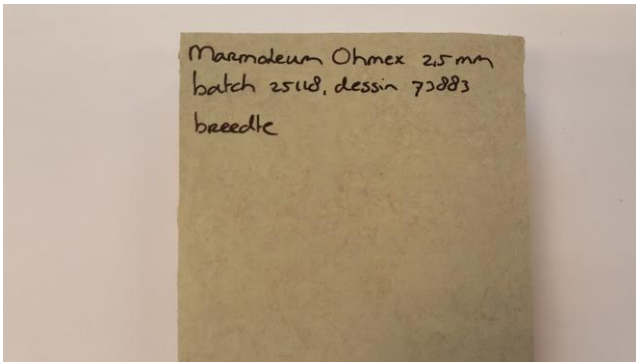
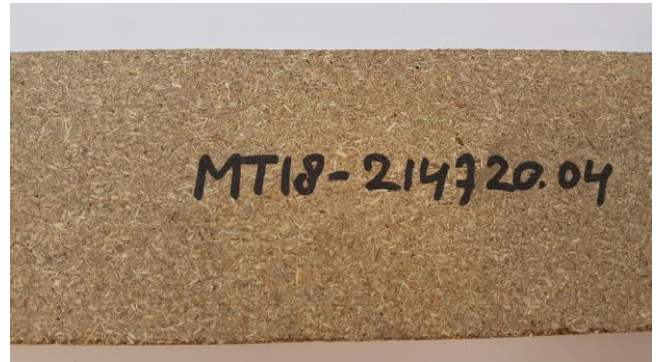


Figure 2, Picture of the received sample (back)



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

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)	20.4	
	Total mass (g/m ²)	14377	
	Density (kg/m ³)	703	
	<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. The values are measured including the Particleboard.</i>		

2	Ignitability of products subjected to direct impingement of flame EN ISO 11925-2:2010/C1:2011						
	Date of testing	06.11.2018					
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity					
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved					
	Description of substrate	Particleboard, thickness 20 ± 2 mm, density 680 ± 50 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	49	50	52	52	50
	Extent of damaged area, width (mm)	11	11	10	11	12	12
	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	

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

3	Determination of the burning behaviour using a radiant heat source <i>EN ISO 9239-1:2010</i>					
	Date of testing	03.12.2018				
	Pre-conditioning, climate	23 ± 2°C and 50 ± 4% relative humidity				
	Pre-conditioning, duration	≥ 48 h & until constant mass is achieved				
	Description of substrate	Particleboard, thickness 20 ± 2 mm, density 680 ± 50 kg/m ³ conforming to EN 13238:2010				
	Fixing method	The samples are glued to the substrate with Eurocol 614.				
	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)	28	34	29	35	33
	CHF / HF-30 (kW/m ²)	7.7	6.6	7.5	6.4	6.8
	Smoke production (%.min)	356	460	369	467	432
Observations: Specimen 1, 2 and 3: Extinguished naturally before the end of the test duration. Specimen 4: Extinguished manually after the end of the test duration.						

4	Classification of burning behaviour <i>EN 13501-1:2007+A1:2009</i>	
	The product, Marmoleum Ohmex 2,5 mm , in relation to its reaction to fire behaviour is classified:	C_{fl}
	The additional classification in relation to smoke production is:	s1
	Reaction to fire classification : C_{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 wood and of classes A1 and A2-s1,d0 according to EN 13238:2010. - Glued down with Eurocol 614. 	
	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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Absatz	EN 13501-1:2007+ A1:2009	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

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.			