

TFI Report 450008-02

Classification

of the Reaction to Fire according to EN 13501-1:2010

Customer NOX Corporation

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137-865 Seocho-Ku, Seoul

SOUTH KOREA

Product textile floor covering

NOX LOOM+ (woven LVT)

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This report includes 6 pages and 0 annex(es).

Aachen, 25 February 2015

Dr. Ernst Schröder



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This report only applies to the tested specimens and has been established to the best of our knowledge. Only the entire report shall be reproduced. Under no circumstances, extracts shall be used. Furthermore, we apply the "General Terms and Conditions for the Execution of Contracts" of the Textiles & Flooring Institute GmbH, also with regard to the order execution.









1 Transaction

Test order Classification of the reaction to fire according to EN 13501-1:2010

Order date 11 December 2014

Your reference R.-F. Peter, Clark Mun

Product designation(s) Product 1: NOX LOOM+ (woven LVT) 3.0 mm (50 x 50)

Product 2: NOX LOOM+ (woven LVT) 5.0 mm (50 x 50) Product 3: NOX LOOM+ (woven LVT) 3.0 mm (50 x 100) Product 4: NOX LOOM+ (woven LVT) 5.0 mm (50 x 100)

TFI sample number 15-01-0024, 15-01-0219

15-01-0025, 15-01-0217, 15-01-0026, 15-01-0218 15-01-0027, 15-01-0220

2 Product specification

The construction products are completely described in the test reports mentioned under item 3 and in the corresponding Annexes KT. The test reports provide the basis for the present classification.

3 Results

3.1 Test reports and test results used for the classification

Test laboratory	Customer	Test report no.	Test method
Tautiles O Flancis		450000 04	EN ISO 9239-1:2010
Textiles & Flooring Institute GmbH	NOX Corporation	450008-01 dated 25 February 2015	EN ISO 11925-2:2010 (15 s ignition time)
Textiles & Flooring	NOX Corporation	450008-03	EN ISO 9239-1:2010
Institute GmbH	NOA Corporation	dated 25 February 2015	-









3.2 Test results

_	_ , , ,		Parameter Number of tests	Result	
	Test method	Parameter		Mean value	Requirements fulfilled (Y/N)
Product 1	EN ISO 9239-1:2010	Average critical heat flux [kW/m²]	6	9.6	
		Integrated smoke value [% x min.]		262	
Pro	EN ISO 11925-2:2010	Flame tip < 150 mm		-	Υ

— то	T () Num	Number of	Result		
	Test method	Parameter	tests	Value*	Requirements fulfilled (Y/N)
	EN 100 0000 4 0040	Average critical heat flux [kW/m²]	2	10.7	
Product 2	EN ISO 9239-1:2010	Integrated smoke value [% x min.]	2	249	
Pro	EN ISO 11925-2:2010	Flame tip < 150 mm	-	-	-

^{*}Worse result for the average critical heat flux and the corresponding integrated smoke value from the Radiant Panel Test with a reduced number of samples.









	_ , ,	_		Result	
	Test method	Parameter		Requirements fulfilled (Y/N)	
	EN ISO 9239-1:2010	Average critical heat flux [kW/m²]	2	9.4	
Product 3	EN 150 9259-1.2010	Integrated smoke value [% x min.]	2	264	
Pro	EN ISO 11925-2:2010	Flame tip < 150 mm	-	-	-

^{*}Worse result for the average critical heat flux and the corresponding integrated smoke value from the Radiant Panel Test with a reduced number of samples.

		Downwater	Number of tests Value*	Result	
	Test method	Parameter		Requirements fulfilled (Y/N)	
	EN ISO 9239-1:2010	Average critical heat flux [kW/m²]	2	10.5	
Product 4	EN 130 9239-1.2010	Integrated smoke value [% x min.]	2	315	
Pro	EN ISO 11925-2:2010	Flame tip < 150 mm	-	-	-

^{*}Worse result for the average critical heat flux and the corresponding integrated smoke value from the Radiant Panel Test with a reduced number of samples.









3.3 Classification and field of application

The construction products "NOX LOOM+ (woven LVT)" are classified as follows with regard to the reaction to fire:

 B_{fl}

The additional classification with regard to the smoke development is:

s1

The additional classification with regard to burning droplets/particles is:

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The format of the reaction to fire classification for floor coverings is:

Reaction to fire		Smoke de	velopment
B _{fl}	-	s	1

Classification of the reaction to fire: B_{fl} - s1

This classification is valid for the following product parameters:

Product characteristics [unit]	Range	
Total thickness [mm]	3.0 - 5.0	
Mass per unit area [g/m²]	4900-8900	
Typ of product	tiles (0.5 m x 0.5 m) tiles (0.5 m x 1.0 m)	

This classification is valid for the following end use application:

Type of end use application horizontally laid floor covering

Substrate noncombustible substrates (Euroclass A1 and A2-s1,d0)

with a gross density ≥ 1350 kg/m³

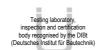
Underlay for installation no

Type of fixation glued or unglued

Joint according to EN ISO 9239-1:2010 yes (tiles 0.5 m x 0.5 m)

no (tiles 0.5 m x 1.0 m)







Page 5 of 6



Limitations

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

The classification assigned to the construction product in this report is suited for a declaration of conformity by the manufacturer or a Declaration of Performance within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive or Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This declaration confirms that the design of the product does not require any specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic contents or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence, the manufacturer has concluded that system 3 for the attestation of conformity respectively system 3 for the assessment and verification of the constancy of performance is appropriate

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.





