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Test Report No. 431402-03

Fire test for the classification according to EN 13501-1:2010

1 Procedure

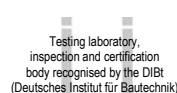
You gave us the order to test the sample mentioned below. Type and extent of the tests as well as their results are stated in the following report. Individual results can be found in the annexes. This report is a transcription of the test report no. 431402-01.

Assignment Reaction to fire test for construction products
according to EN ISO 11925-2:2010
and EN ISO 9239-1:2010
Construction product tested..... textile floor covering
Sample designation Elifnur Cami Halilari
Customer..... Elifnur Cami Halilari
Order date 03 September 2013, 16 September 2013
Your reference K. Kabak
Report issued by Dipl.-Ing. Ulrike Balg, direct dial -133

2 Brief Description of the Sample Material

Type of manufacture woven
Type of surface cut pile
Colouring / patterning patterned
Fibre composition of use surface cotton, acrylic*
Type of backing finish
Specimen sampled by customer
Number of batch..... not specified
Date of production not specified

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Sparkasse Aachen
IBAN DE2239050000001331222
SWIFT/BIC-Code: AACSD33

HRB 8157 Aachen
VAT No. DE209411312
Managing Director
Dr. Ernst Schröder

Sample quantity..... 1.20 m x 2.00 m

TFI reference n° 13-08-0139

* Customer's information

3 Summary of the Test Results

3.1 Ignitability in the case of direct exposure to the impingement of a flame (annex KB)

Characteristics according to EN ISO 11925-2:2010

Samples ignited..... no

Charred distance ≤ 150 mm

Duration of sustained burning..... 0 s

3.2 Burning behaviour under a radiant heat source (annexes RP and F)

Characteristics according to EN ISO 9239-1:2010

Critical radiant flux..... 8.3 kW/m²

Smoke development..... 48 % x min

The burning behaviour characteristics mentioned above are only valid for the installation method mentioned in annex RP.

4 Reference

4.1

The test results are only valid for the construction product as described under paragraph 2 and in annex KT, used as a horizontally laid floor covering, glued or unglued installed on a mineral substrate according to EN 13238:2010.

4.2

The test results relate to the behaviour of the test specimen of a 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.

4.3

This test-report is the basis for a classification report according to EN 13501-1:2010.

5 Annexes

The individual results as well as the type and scope of the tests are summarized in the following annexes:

Characteristics of the construction product ^a	KT 431402-03
Burning behaviour - single-flame-source-test ^a	KB 431402-03
Burning behaviour - radiant-panel-test ^a	RP 431402-03
Pictures radiant-panel-test.....	F 431402-03

The tests marked ^a are certified according to EN ISO/IEC 17025.

Aachen, 17 September 2013



Dr. Ernst Schröder

The present document is provided with a qualified electronic signature and is valid without autograph signature.

This report only applies to the tested samples 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.

Annex KT – Characteristics of the construction product

1 Procedure

Sample designation Elifnur Cami Halilari
 TFI reference number 13-08-0139
 Testing period 12 September 2013
 Colour beige, light brown, red

2 Test methods

ISO 1765:1986 Machine-made textile floor coverings – Determination of thickness
 ISO 8543:1998 Textile floor coverings – Methods for determination of mass

Deviations from the standard:

- results declared as averages instead of individual results

3 Test results

Parameter	Manufacturer information	TFI-results	
Type of manufacture	woven	woven	
Type of surface	cut pile	cut pile	
Fibre composition of use surface	cotton, acrylic	not tested	
Type of backing	finish	finish	
Dimensions	wall-to-wall	wall-to-wall	
Total thickness [mm]	14	12.1	
Thickness of pile [mm]	not specified	not tested	
Total mass per unit area [g/m ²]	4500	2812	(CV=0.5 %)

CV = Coefficient of Variation

Annex KB – Burning behaviour – single-flame-source-test

1 Procedure

Sample designation Elifnur Cami Halilari

TFI reference number 13-08-0139

Testing period 11 September 2013

The product identification characteristics can be found on the first page of the test report, or in annex KT.

2 Test methods

Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame according to EN ISO 11925-2:2010, Part 2: Single-flame source test.

Ignitability when subjected to direct impingement of flame: This test method is used to determine the ignitability of building products by direct small flame impingement. The specimens are tested in a vertical orientation without using an additional radiant heat source.

The test specimen were installed on a mineral substrate according to EN 13238:2010 (thickness (8 ± 2) mm, density (1.800 ± 200) kg/m³).

The test specimen were conditioned for 5 days according to ISO 554:1976 (temperature (23 ± 2) °C, relative humidity (50 ± 5) %).

3 Test results

Surface ignition

Characteristics	Sample n°					
	1	2	3	4	5	6
Direction of production	lengthwise	lengthwise	lengthwise	crosswise	crosswise	crosswise
Flames extinct after (s) ¹⁾	15.0	15.0	15.0	15.0	15.0	15.0
Sample ignited	no	no	no	no	no	no
Paper ignited	no	no	no	no	no	no
150 mm reference line reached	no	no	no	no	no	no

¹⁾ this includes the time of the flame application itself.

Duration of flame application: 15 s

Special observations: none

Annex RP – Burning behaviour – radiant-panel-test

1 Procedure

Sample designation Elifnur Cami Halilari

TFI reference number 13-08-0139

Testing period 11 September 2013

The product identification characteristics can be found on the first page of the test-report or in annex KT.

2 Test methods

Reaction to fire tests for floorings according to EN ISO 9239-1:2010. Part 1: Determination of the burning behaviour using a radiant heat source

Determination of the burning behaviour using a radiant heat source: This test method is used for assessing the wind-opposed burning behaviour and the spread of flame on horizontally mounted floor coverings exposed to a heat flux radiant gradient in a test chamber, when ignited with a pilot flame.

The test specimens were installed loose laid on a mineral substrate according to EN 13238:2010 (thickness (8 ± 2) mm. density (1.800 ± 200) kg/m³).

The test specimen were conditioned for 4 days according to ISO 554:1976 (temperature (23 ± 2) °C, relative humidity (50 ± 5) %).

Annex RP - Burning behaviour

Sample designation: 13-08-0139

Test:

Sample No.: 1
 Direction: lengthwise

Observation

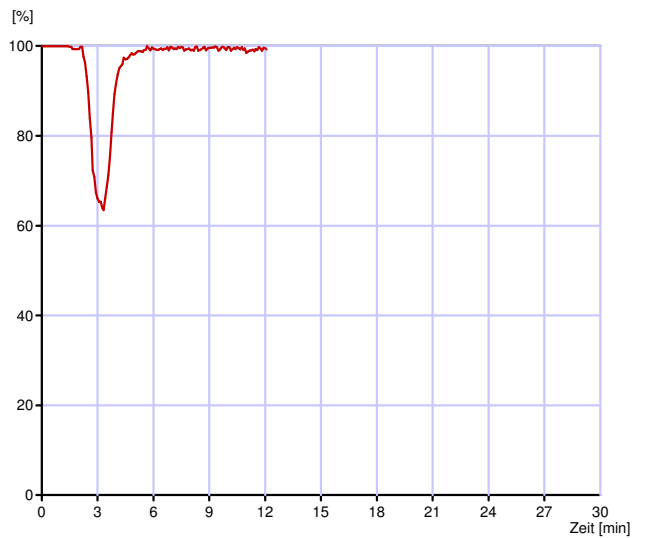
molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	0 mm
penetration of flame through substrate	-
transitory flaming	-
blistering	-
glowing, after flame has extinguished	-

Results

Position [mm]	Time [min:s]	Heat flow [kW/m ²]
50	02:08	12.46
100	02:21	11.44
150	02:36	10.42
200	02:59	9.40
250	03:54	8.28
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-
550	-	-
600	-	-
650	-	-
700	-	-
750	-	-
800	-	-
850	-	-
900	-	-
950	-	-
1000	-	-

Time [min:s]	Position [mm]	Heat flow [kW/m ²]
10:00	252	8.23
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.23
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	49.6
Flame extinguished after [min:s]:	12:00
Max. burnt distance [mm]:	252
Max. light attenuation [%]:	36.5

Annex RP - Burning behaviour

Sample designation: 13-08-0139

Test:

Sample No.: 2
 Direction: lengthwise

Observation

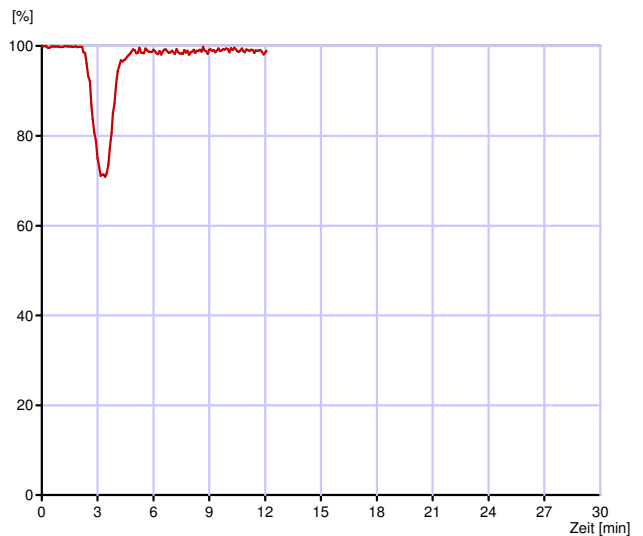
molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	0 mm
penetration of flame through substrate	-
transitory flaming	-
blistering	-
glowing, after flame has extinguished	-

Results

Position [mm]	Time [min:s]	Heat flow [kW/m ²]
50	02:08	12.46
100	02:28	11.44
150	02:46	10.42
200	03:07	9.40
250	03:42	8.28
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-
550	-	-
600	-	-
650	-	-
700	-	-
750	-	-
800	-	-
850	-	-
900	-	-
950	-	-
1000	-	-

Time [min:s]	Position [mm]	Heat flow [kW/m ²]
10:00	260	8.05
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.05
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	43.5
Flame extinguished after [min:s]:	12:00
Max. burnt distance [mm]:	260
Max. light attenuation [%]:	29.1

Annex RP - Burning behaviour

Sample designation: 13-08-0139

Test:

Sample No.: 3
 Direction: lengthwise

Observation

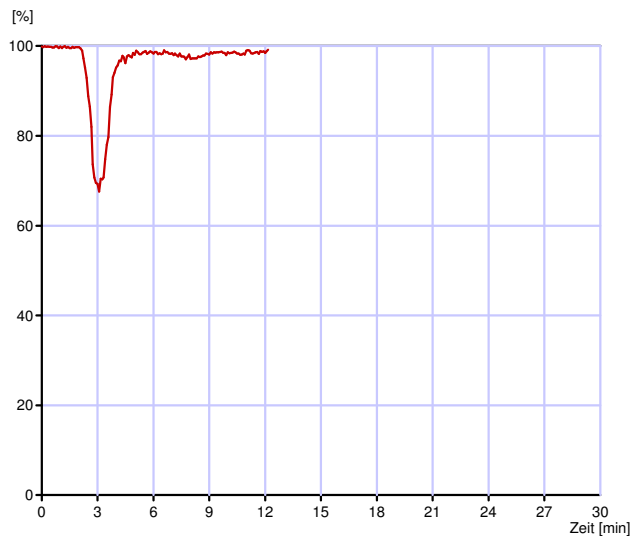
molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	0 mm
penetration of flame through substrate	-
transitory flaming	-
blistering	-
glowing, after flame has extinguished	-

Results

Position [mm]	Time [min:s]	Heat flow [kW/m ²]
50	02:08	12.46
100	02:17	11.44
150	02:36	10.42
200	03:01	9.40
250	-	-
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-
550	-	-
600	-	-
650	-	-
700	-	-
750	-	-
800	-	-
850	-	-
900	-	-
950	-	-
1000	-	-

Time [min:s]	Position [mm]	Heat flow [kW/m ²]
10:00	242	8.46
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.46
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	49.1
Flame extinguished after [min:s]:	12:00
Max. burnt distance [mm]:	242
Max. light attenuation [%]:	32.4

Annex RP - Burning behaviour

Sample designation: 13-08-0139

Test:

Sample No.: 1
 Direction: crosswise

Observation

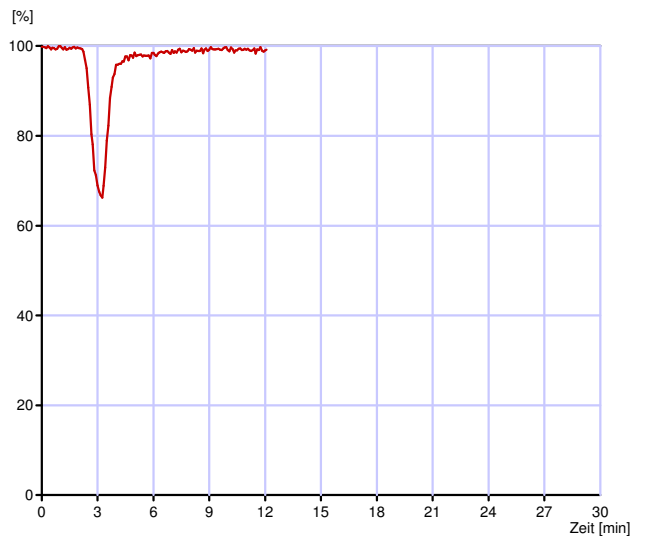
molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	0 mm
penetration of flame through substrate	-
transitory flaming	-
blistering	-
glowing, after flame has extinguished	-

Results

Position [mm]	Time [min:s]	Heat flow [kW/m ²]
50	02:14	12.46
100	02:18	11.44
150	02:35	10.42
200	02:49	9.40
250	-	-
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-
550	-	-
600	-	-
650	-	-
700	-	-
750	-	-
800	-	-
850	-	-
900	-	-
950	-	-
1000	-	-

Time [min:s]	Position [mm]	Heat flow [kW/m ²]
10:00	235	8.63
20:00	-	-
30:00	-	-

Smoke density



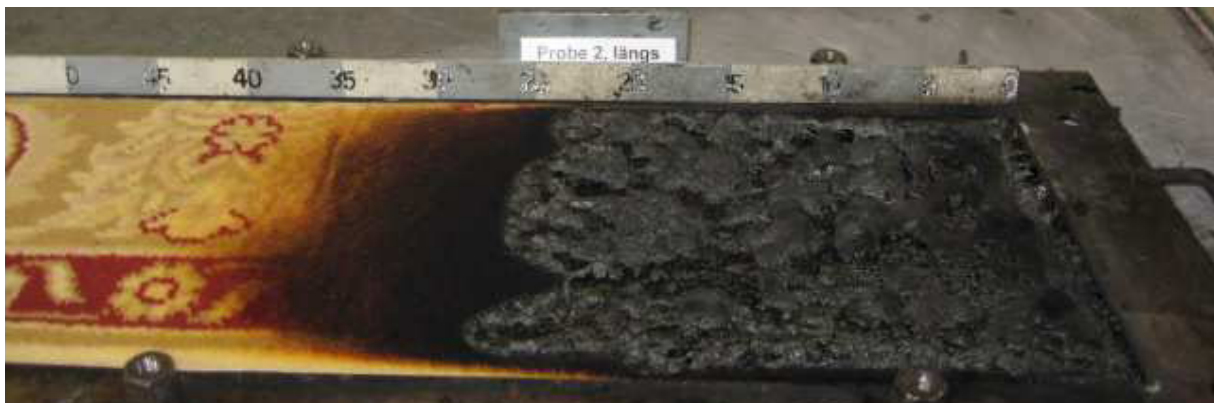
CHF [kW/m ²]:	8.63
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	44.8
Flame extinguished after [min:s]:	12:00
Max. burnt distance [mm]:	235
Max. light attenuation [%]:	33.8

Annex F – Pictures radiant-panel-test

n° 1 (sample 1, lengthwise)



n° 2 (sample 2, lengthwise)



n° 3 (sample 3, lengthwise)



n° 4 (sample 1, crosswise)

