

tapytiegels



Textiles & Flooring Institute GmbH

TFI Report 440167-02

Classification

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

Customer

PeVanHa [REDACTED]
[REDACTED] Group
[REDACTED]
[REDACTED]
THE NETHERLANDS

Product

textile floor covering
BRADFORD

Responsible at TFI

Dipl.-Ing. [REDACTED]
Tel: +49 241 9679 [REDACTED]
[REDACTED]

This report includes 3 pages and 0 annex(es).

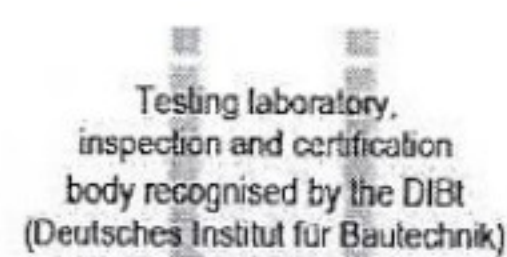
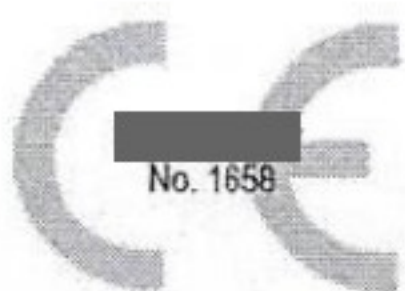
Aachen, 05 March 2014

Dr. [REDACTED]



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VAT No. DE209411312
Managing Director
Dr. [REDACTED]

1 Transaction

Test order	Classification of the reaction to fire according to EN 13501-1:2010
Order date	29 January 2014
Your reference	██████████
Product designation(s)	BRADFORD
TFI sample number	14-01-0179

2 Product specification

The construction product is completely described in the test report mentioned under item 3 and in the corresponding Annex KT. The test report provides 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
Textiles & Flooring Institute GmbH	PeVanHa b.v.	440167-01	EN ISO 9239-1:2010
	██████████ Group		-

3.2 Test results

	Test method	Parameter	Number of tests	Result	
				Mean value	Requirements fulfilled (Y/N)
Product	EN ISO 9239-1:2010	Average critical heat flux [kW/m ²]	3	8.9	
		Integrated smoke value [% x min.]		596	
	EN ISO 11925-2:2010	Flame tip < 150 mm	-	-	Y*

*According to EN 14041:2008, Section 4.1.4, Table 2, the product mentioned above fulfils the requirements of class Efl without further testing.



3.3 Classification and field of application

The construction product "BRADFORD" is 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:

-

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

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

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

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 $\geq 1350 \text{ kg/m}^3$
Underlay for installation	No
Type of fixation	glued or unglued
Joint	Yes

Limitations

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

TFI Report 440167-01

Reaction to fire test

For the classification according to EN 13501-1:2010

Customer

PeVanHa [REDACTED]
[REDACTED] Group
[REDACTED]
[REDACTED]
THE NETHERLANDS

Product

textile floor covering
BRADFORD

Responsible at TFI

Dipl.-Ing. [REDACTED]
Tel: +49 241 9679 [REDACTED]
[REDACTED]

This report includes 2 pages and 3 annexes

Aachen, 05 March 2014

Dr. [REDACTED]

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1 Transaction

Test order	Reaction to fire test for construction products according EN ISO 9239-1:2010
Order date	29 January 2014
Your reference	██████████
Product designation	BRADFORD, batch 1343
TFI sample number	14-01-0179
Date of manufacture	-none-
Date of sample receipt	31 January 2014
Sampling performed by	Customer

2 Product Specification

cf. annex KT

3 Results

Burning behaviour using a radiant heat source according to EN ISO 9239-1:2010

Average critical heat flux [kW/m ²]	8.9
Integrated smoke density [% x min]	596
Adhesion	none
Substrate according to EN 13238:2010	fibre cement board

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

The test results relate to the behaviour of the test specimens of a construction 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 construction product in use.

4 Annexes

Photographs	F 440167-01
Characteristics of the construction product ^a	KT 440167-01
Reaction to Fire ^a	RP 440167-01

The annexes marked ^a are based on tests accredited in accordance with EN ISO/IEC 17025.



Annex F - Photographs

1 Transaction

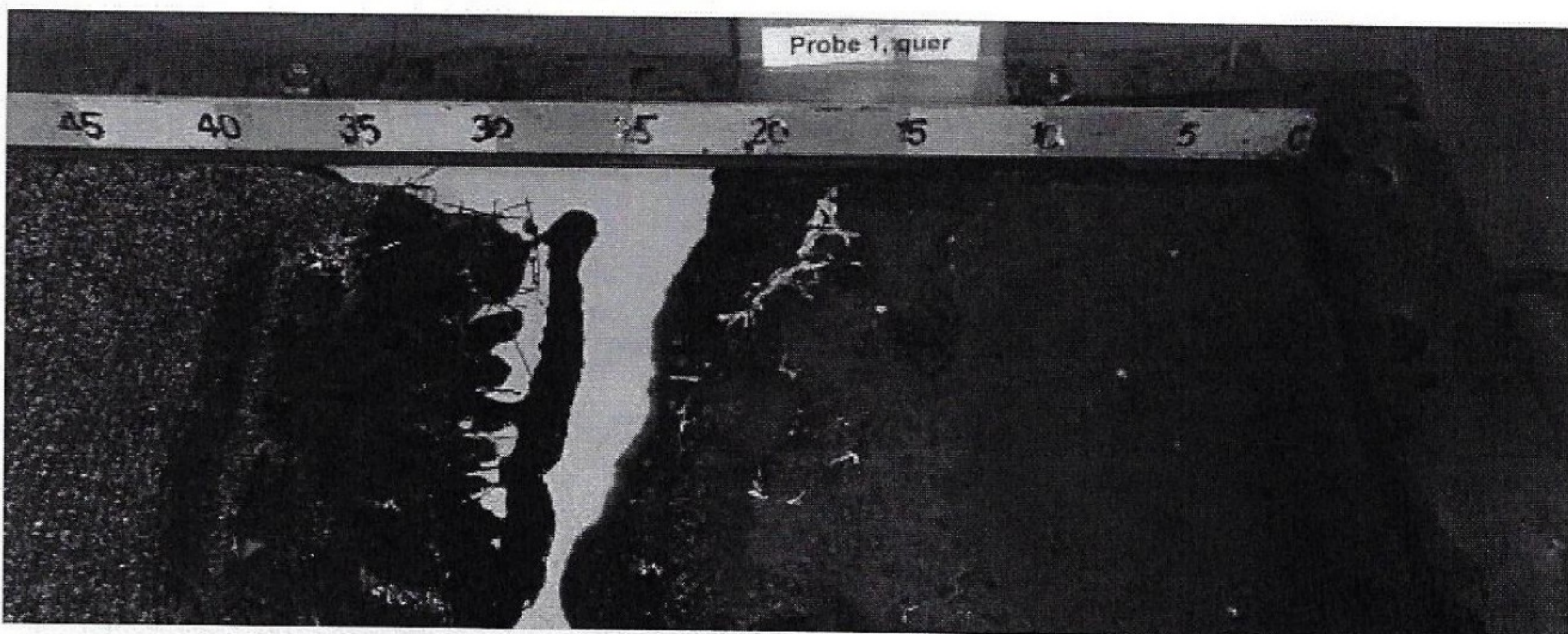
Product designation BRADFORD
TFI sample number 14-01-0179
Testing period 26 February 2014

2 Test Method / Requirements

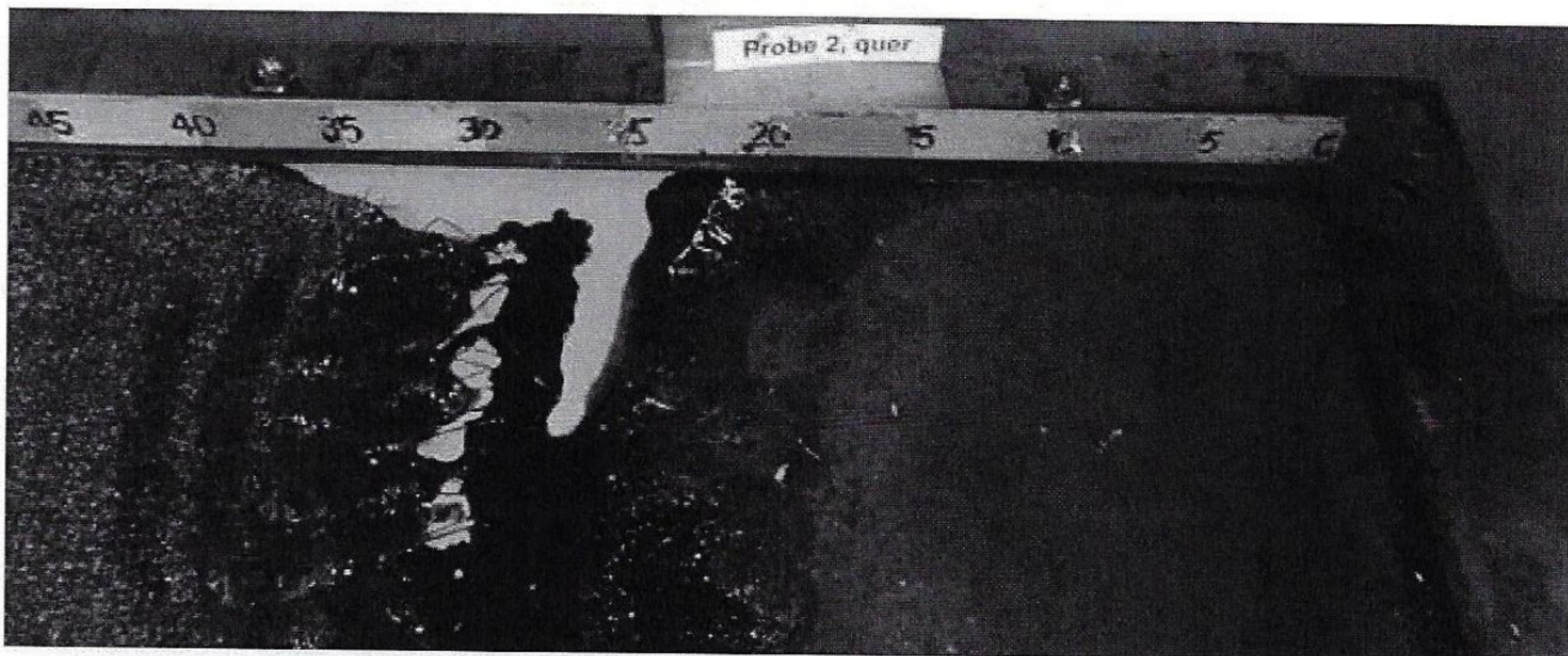
-not specified-

3 Results

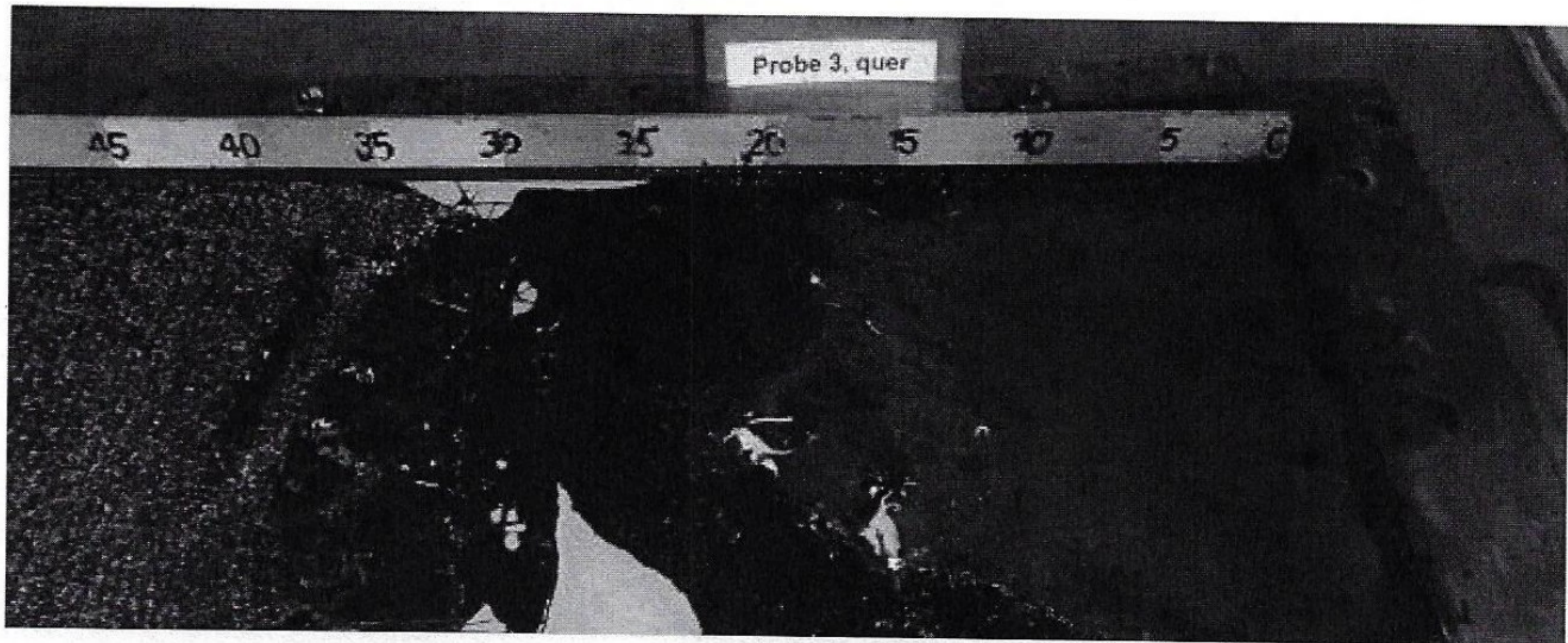
3.1. Specimen 1, cross production direction



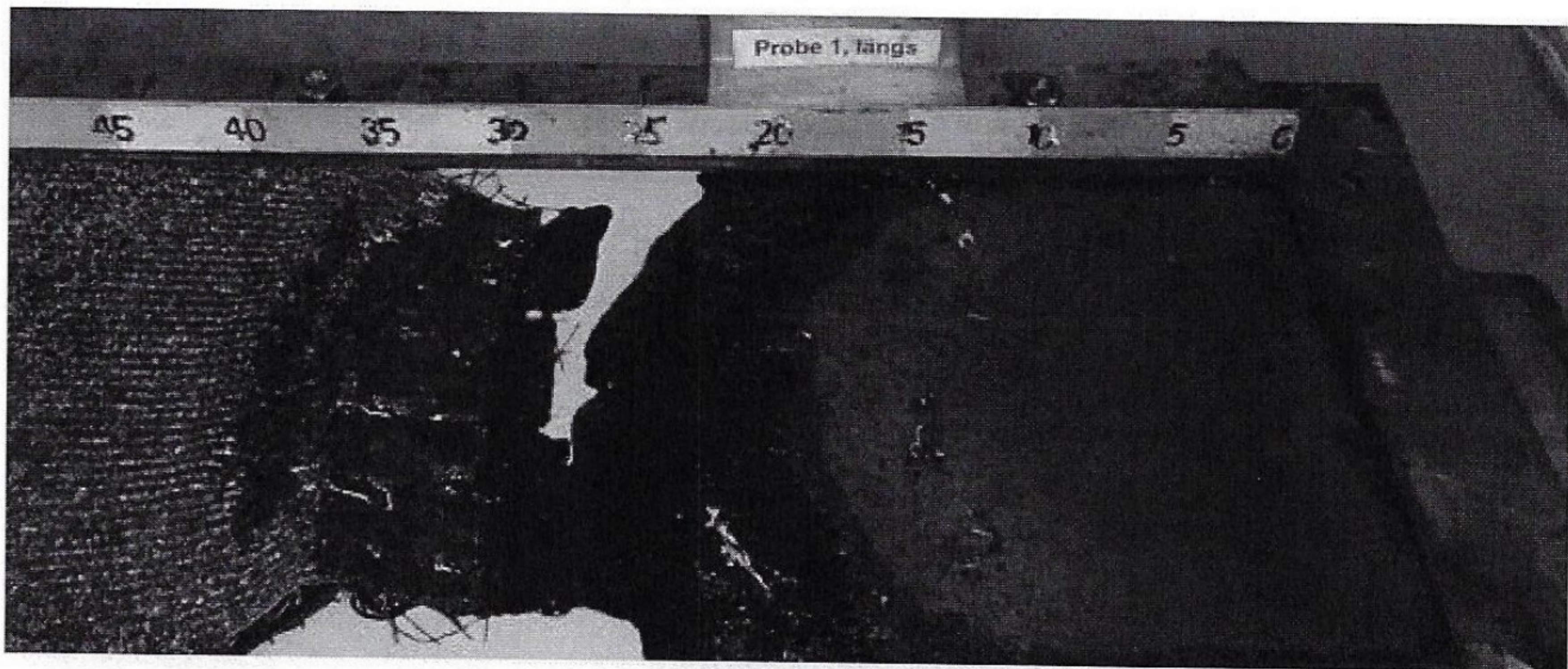
3.2. Specimen 2, cross production direction



3.3. Specimen 3, cross production direction



3.4. Specimen 3, in production direction



Annex KT – Characteristics of the construction product

1 Transaction

Product designation	BRADFORD
TFI sample number	14-01-0179
Testing period	06 February 2014

2 Test Method / Requirements

ISO 1765:1986	Machine-made textile floor coverings – Determination of thickness
ISO 8543:1998	Textile floor coverings – Methods for determination of mass
Deviation	Indication of mean values instead of individual results

3 Results

Parameter	Manufacturer's data	TFI results
Type of manufacture	Needlefelt	needled
Type of surface	Needlefelt rib structure	ribbed structure
Backing	Polyflex bitumenbacking with a non-woven fabric	heavy backing with textile bottom
Pattern	- none -	multicoloured, patterned
Colour	9520	black, white
Use surface	100 % polypropylene (PP)	not tested
Type of delivery	Carpet tile	tiles
Total thickness [mm]	7 ± 7.5 %	6.8
Thickness of pile above the substrate [mm]	3 ± 5 %	not tested
Total mass per unit area [g/m ²]	3800 ± 7.5 %	██████████ %

CV=Coefficient of Variation



Annex RP – Reaction to Fire

1 Transaction

Product designation	BRADFORD
TFI sample number	14-01-0179
Testing period	26 February 2014

2 Test Method / Requirements

EN ISO 9239-1:2010 Part 1	Determination of the burning behaviour using a radiant heat source
Substrate according to EN 13238:2010	Fibre cement board
Adhesion	-none -
Joint	Yes
Conditioning	Conditioning to constant mass according to EN 13238:2010
Deviation	- none-

3 Results

cf. page 2 – 5

Annex RP - Burning behaviour

Sample designation: 14-01-0179

Test:

Sample No.: 1
 Direction: crosswise

Observation

molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	250 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	03:06	12.38
100	04:01	11.41
150	05:24	10.45
200	05:58	9.48
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	224	8.97
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.97
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	625.0
Flame extinguished after [min:s]:	17:53
Max. burnt distance [mm]:	224
Max. light attenuation [%]:	94.6

Annex RP - Burning behaviour

Sample designation: 14-01-0179

Test:

Sample No.: 2
 Direction: crosswise

Observation

molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	250 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	03:17	12.38
100	04:13	11.41
150	05:03	10.45
200	05:55	9.48
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	228	8.88
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.88
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	594.5
Flame extinguished after [min:s]:	15:36
Max. burnt distance [mm]:	228
Max. light attenuation [%]:	95.5

Annex RP - Burning behaviour

Sample designation: 14-01-0179

Test:

Sample No.: 3
 Direction: crosswise

Observation

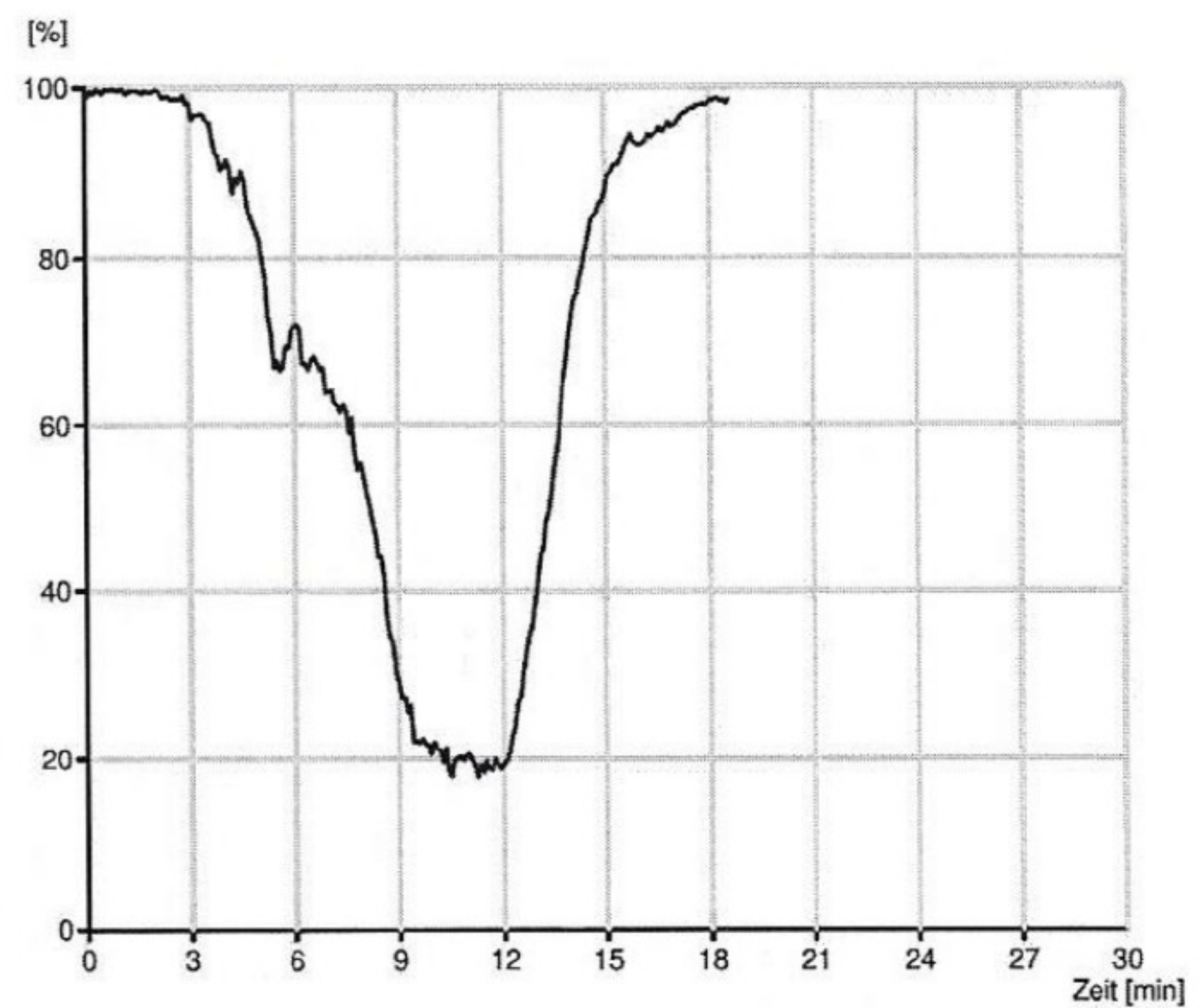
molten/singed during pre-radiation up to :	250 mm
buckled/contracted from pilot flame area up to :	250 mm
penetration of flame through substrate	-
transitory flaming	-
blistering	-
glowing, after flame has extinguished	-

Results

Position [mm]	Time [min:s]	Heat flow [kW/m ²]
50	03:08	12.38
100	04:19	11.41
150	05:44	10.45
200	08:05	9.48
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	237	8.67
20:00	-	-
30:00	-	-

Smoke density



CHF [kW/m ²]:	8.67
HF_30 [kW/m ²]:	0.00
Smoke density integral [%*min]:	566.6
Flame extinguished after [min:s]:	18:38
Max. burnt distance [mm]:	237
Max. light attenuation [%]:	82.2