for the proof of Fire behaviour according to DIN 4102-1

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PÜZ-Stelle (LBO): BRA09

Reference: FLT 3527715 (Translation of the German test report - no guarantee for translation of technical terms)

Sponsor: Plaspack Netze GmbH
Dr.-Grobben-Straße 1
A - 4690 Schwanenstadt

Order: 2015-01-22 **Arrived:** 2015-01-29

Description of samples: Uncoated knitted netting made of polyethylene in different colours and a weight per unit area from 105 g/m^2 to 200 g/m^2 to be used as screen, in textile architecture or for decorative purposes, named "**Austronet 202 B1 / UV**", "**Austronet 700 B1 / UV**", "**Austronet 203 B1 / UV**", "**Austronet 710 B1 / UV**" and "**Austronet 204 B1 / UV**", "**Austronet 720 B1 / UV**".
(for details see page 2,3)

Delivered: 2015-01-29

Content of request: Proof of flammability to classify building materials to class B1 "schwerentflammbar" according to DIN 4102-1

Assessment: The examined product meets the requirements of class B1 for "schwerentflammbare" (not easily flammable) building materials according to DIN 4102-1, if used suspended freely or with distance of >40 mm to the same or other plain materials (for details see page 5).

Validity of report: 2020-02-29

Sampling: The material was delivered by the client.

TEST REPORT

Remark: If the above-mentioned building material is not used as product according to MBO § 2, Abs. 9, Ziffer 1, there is no need for a general building supervisory test report.
This test report is not valid if the examined building material is used as product in the meaning of state building prescriptions (MBO § 17, Abs. 3).

This test report does not replace an eventually necessary proof of applicability concerning building supervisory or building laws in the meaning of state building prescriptions. This has to be verified by:

- "allgemeine bauaufsichtliche Zulassung" (general building inspectorate approval) or by
- "allgemeines bauaufsichtliches Prüfzeugnis (general building inspectorate certificate) or by
- "Zustimmung im Einzelfall (exceptional approval).

This test report can serve as a basis for building supervisory procedures for:

- regulated building products for the pre scribed proofs of conformity
- not regulated building products for the needed proofs of applicability.

This test report comprises 8 pages and 9 enclosures.

1 Description of test material

1.1 Test material (according to the sponsor)

The delivered materials are knitted nettings made of uncoated polyethylene flat yarn (HDPE) with a yarn thickness of approximately 30 µm. The knitted nettings are intended to be used as screen, in the textile architecture or for decorative purposes and were named with the trade names "Austronet 202 B1 / UV", "Austronet 700 B1 / UV", "Austronet 203 B1 / UV", "Austronet 710 B1 / UV" und "Austronet 204 B1 / UV", "Austronet 720 B1 / UV" by the sponsor.

1.2 Description of the delivered samples

For the tests the laboratory received 9 sections of uncoated knit fabrics (ribbon knits) made of plastic fibers. The materials consisted of plain, uncoated plastic tapes (flat yarn). The transversely and parallel to each arranged flat yarns were connected by longitudinally arranged flat yarns in mesh-like thread loops.

All samples were marked with the trade name. For the tests the laboratory received sections of materials with the following characteristics:

trade name	dimensions	colour	nominal weight
"Austronet 202 B1 / UV" und "Austronet 700 B1 / UV"	length: ca. 4m width: ca. 2 m	black, blue, white	105 g/m^2
"Austronet 203 B1 / UV" und "Austronet 710 B1 / UV"	length: ca. 1m width: ca. 1 m		140 g/m^2
"Austronet 204 B1 / UV" und "Austronet 720 B1 / UV"	length: ca. 4m width: ca. 2 m		200 g/m^2

Characteristic values: see paragraph 4.1; photos: see enclosures 4-9.
Other specifications are not known to the laboratory, samples are stored.

2 Preparation of samples

For the small burner (Brennkasten) test from all delivered materials samples for edge flame exposure (dimensions 190 mm x 90 mm) and samples for surface flame exposure (dimensions 230 mm x 90 mm) have been cut in longitudinal and transverse directions.

For the tests in the fire shaft (Brandschacht) 12 specimens were assembled, each specimen consisted of 4 samples each. From each of the products with the smallest and highest weight per unit area in each of the supplied colors the samples with dimensions 1000 mm x 190 mm have been cut each in longitudinal and transverse direction.
(Assignment of the samples see page 5 and 7)

Afterwards all samples were kept in a climate chamber acc. DIN 50014-23/50-2 until they reached constant weight.

3 Arrangement of samples

The tests in the fire shaft ("Brandschacht") have been performed acc. DIN 4102-1 and -16 (building materials class B1). The the small burner ("Brennkasten") tests have been performed acc. DIN 4102-1, chapter 6.2.5 (building materials class B2).

Arrangement of all samples: single layered, freely suspended.

Examination period: March 2015

4 Results

- Table 1 Material characteristics
- Table 2.1-2.6 Test results class B2 (Brennkasten), see enclosures 1-3
- Table 3.1-3.2 Test results class B1 (Brandschacht)

4.1 Material characteristics

Table 1

trade name	colour	manufacturer's data	measured values		
		weight per unit area [g/m²]	thickness (m.v.) [mm]	thickness (s) [mm]	weight per unit area [g/m²]
"Austronet 202 B1 / UV" and "Austronet 700 B1 / UV"	black	105	1,29	0,041	112
	blue		1,15	0,036	107
	white		1,36	0,072	109
"Austronet 203 B1 / UV" and "Austronet 710 B1 / UV"	black	140	1,21	0,033	131
	blue		1,26	0,034	140
	white		1,32	0,018	133
"Austronet 204 B1 / UV" and "Austronet 720 B1 / UV"	black	200	1,73	0,020	210
	blue		1,56	0,055	192
	white		1,42	0,054	196

./. not received/not measured
m.v. mean value
s standard deviation

4.2 Results of the fire behaviour

4.2.1 Test results class B2 (Brennkasten)

All building materials class B1 must also meet the requirements of materials class B2 (flammable). The material, tested in "Brennkasten" acc. DIN 50 050 meets the requirements class B2; the material does not show burning particles/droplets during these tests.
(Results see enclosures 1-3, tables 2.1-2.6)

4.2.2 Test results class B1 (Brandschacht)

The results of these tests are summarized in the following tables:

3.1 Tests on article "Austronet 202 B1 / UV" and "Austronet 700 B1 / UV" (minimum weight per unit area)

3.2 Tests on article "Austronet 204 B1 / UV" and "Austronet 720 B1 / UV" (maximum weight per unit area)

Table 3.1

Test results "Brandschachtprüfung" (part 1)								
line no.		test results specimen-no.						
		A	B	C	D	E	F	require-ments
1	Number of specimen arrangement acc. DIN 4102 –15 Table 1	1	1	1	1	1	1	
2	Maximal flame height above bottom edge ..... cm	20	20	20	20	20	20	*)
3	Time [1] ..... min	1	1	1	1	1	1	
4	Burning / melting through Time [1] .....min	1	1	1	1	1	1	
5	Reverse side of samples: Flames / glowing Time [1] .....min:s	./.	./.	./.	./.	./.	./.	
6	Discolouring Time [1] .....min:s	./.	./.	./.	./.	./.	./.	
7	Falling of burning droplets Begin [1].....min	No	No	No	No	No	No	
8	Extend: Sporadic falling of burning droplets							
9	Continuous falling of burning droplets							
10	Falling of burning parts Begin [1].....min:s	No	No	No	No	No	No	
11	Extend: Sporadic falling of burning parts							
12	Continuous falling of burning parts							
13	Afterflame time at the bottom of the sieve (max.) ..... min:s	./.	./.	./.	./.	./.	./.	
14	Impairment of the burner flames by dropping or falling Material Time [1] .....min:s	No	No	No	No	No	No	
15	Premature end of test	No	No	No	No	No	No	
16	Final occurrence of burning at the specimen [1].....min Time of eventually end of test [1] .....min:s	4	3	3	3	4	3	

[1] Indication of time: from the beginning of testing procedure
- No data / Not tested
. /. Not occurred
*) No cause for complaint

Test results "Brandschachtprüfung" (part 2)								
line no.		test results specimen-no.						
		A	B	C	D	E	F	require-ments
	Afterflame after end of test							
17	Time .....min:s	No	No	No	No	No	No	
18	Number of samples							
19	Front side of sample							
20	Back side of sample							
21	Flame length .....cm							
	Afterglow after end of test							
22	Time .....min:s	No	No	No	No	No	No	
23	Number of sample							
	Place of appearance:							
24	Lower half of sample							
25	Upper half of sample							
26	Front side of sample							
27	Back side of sample							
	Smoke density							
28	≤ 400 % min							
29	≥ 400 % min (very strong smoke density)	1,49	1,56	1,85	0,27	0,34	2,21	
30	Diagram fig. no.	./.	./.	./.	./.	./.	./.	
	Residual length							
31	Individual value .....cm	35 50 56 43	52 52 50 48	57 51 50 50	53 57 55 57	55 48 55 55	47 58 55 54	> 0
32	Average value .....cm	**46**	**50**	**52**	**55**	**53**	**53**	≥ 15
33	Photo of the test specimen fig. no.	2	4	6	8	10	12	
	Flue gas temperature							
34	Maximum of average value.°C	112	113	110	112	111	114	≤ 200
35	Time [1] .....min:s	10:00	9:54	9:46	9:48	9:52	9:38	
36	Diagram fig. no.	1	3	5	7	9	11	
37	Remarks: Line 32: There were no additional tests proceeded, because of the residual length of more then 45 cm. (Graphs and photos: see enclosures)							

[1] Indication of time: from the beginning of testing procedure
- Not tested
. /. Not occurred
*) No cause for complaint

test specimen	test-no.	product	colour	sample direction
A	527715-001	"Austronet 202 B1 / UV" and "Austronet 700 B1 / UV"	black	longitudinal
B	527715-002			transverse
C	527715-003		blue	longitudinal
D	527715-004			transverse
E	527715-005		white	longitudinal
F	527715-006			transverse

Table 3.2

Test results "Brandschachtprüfung" (part 1)								
line no.		test results specimen-no.						
		G	H	I	K	L	M	require-ments
1	Number of specimen arrangement acc. DIN 4102 –15 Table 1	1	1	1	1	1	1	-
2	Maximal flame height above bottom edge ..... cm	20	20	20	20	20	20	*)
3	Time [1] ..... min	1	1	1	1	1	1	
4	Burning / melting through Time [1] .....min	1	1	1	1	1	1	-
5	Reverse side of samples: Flames / glowing Time [1] .....min:s	./.	./.	./.	./.	./.	./.	-
6	Discolouring Time [1] .....min:s	./.	./.	./.	./.	./.	./.	-
7	Falling of burning droplets Begin [1].....min	No	Yes 2	Yes 5	Yes 4	Yes 4	No	-
8	Extend: Sporadic falling of burning droplets							
9	Continuous falling of burning droplets							
10	Falling of burning parts Begin [1].....min:s	No	No	No	No	No	No	-
11	Extend: Sporadic falling of burning parts							
12	Continuous falling of burning parts							
13	Afterflame time at the bottom of the sieve (max.) ..... min:s	./.	0:07	0:05	0:09	0:11	./.	-
14	Impairment of the burner flames by dropping or falling Material Time [1] .....min:s	No	No	No	No	No	No	-
15	Premature end of test	No	No	No	No	No	No	-
16	Final occurrence of burning at the specimen [1].....min	3	6	7	7	7	6	-
	Time of eventually end of test [1] .....min:s							

[1] Indication of time: from the beginning of testing procedure
- Not tested
. /. Not occurred
*) No cause for complaint

Test results "Brandschachtprüfung" (part 2)								
line no.		test results specimen-no.						
		G	H	I	K	L	M	require-ments
	Afterflame after end of test	No	No	No	No	No	No	-
17	Time .....min:s							
18	Number of specimen							
19	Front side of specimen							
20	Back side of specimen							
21	Flame length .....cm							
	Afterglow after end of test	No	No	No	No	No	No	-
22	Time .....min:s							
23	Number of specimen							
	Place of appearance:							
24	Lower half of specimen							
25	Upper half of specimen							
26	Front side of specimen							
27	Back side of specimen							
	Smoke density							
28	≤ 400 % min	4,81	0,99	1,79	2,79	6,28	8,7	
29	≥ 400 % min (very strong smoke density)	./.	./.	./.	./.	./.	./.	
30	Diagram fig. no.	14	16	18	20	22	24	
	Residual length							
31	Individual value .....cm	62 40 39 40	58 44 60 58	59 64 50 41	55 60 55 59	50 47 51 53	40 62 63 56	> 0
32	Average value .....cm	**45**	**55**	**53**	**57**	**50**	**55**	≥ 15
33	Photo of the test specimen fig. no.	13	15	17	19	21	23	
	Flue gas temperature							
34	Maximum of average value.°C	115	118	111	110	106	111	≤ 200
35	Time [1] .....min:s	6:46	9:48	9:58	1:34	9:38	9:50	
36	Diagram fig. no.	14	16	18	20	22	24	
37	Remarks: line 13: Afterflame time at the bottom of the sieve < 20 sec. is not rated as "falling of burning parts or droplets" line 32: There were no additional tests proceeded, because of the residual length of more then 45 cm. (Graphs and photos: see enclosures)							

[1] Indication of time: from the beginning of testing procedure
- No data / Not tested
. /. Not occurred
*) No cause for complaint

test specimen	test-no.	product	colour	sample direction
G	527715-007	"Austronet 204 B1 / UV" and "Austronet 720 B1 / UV"	black	longitudinal
H	527715-008			transverse
I	527715-009		blue	longitudinal
K	527715-010			transverse
L	527715-011		white	longitudinal
M	527715-012			transverse

5 Assessment

According to the test results in section 4.2 the material, described in section 1 and 4.1, fulfils the requirements of building materials class B1 according to DIN 4102-1 if the material is used suspended freely or with a distance of > 40 mm to the same or other plain materials.

The test results are valid for the tested weight per unit area from 105 g/m^2 - 200 g/m^2 and dyed in any color

The requirements of building materials class B2 are also fulfilled, no falling of burning parts or droplets occurred during this tests.

The proof of the use after

- exposure to outdoor climate conditions

was not subjects of the tests.

6 Special remarks

This report is only valid for the material as described under paragraph 1 and 4.1. In combination with other materials or with additional coatings or grounds etc. the burning behaviour may differ. This test report is not valid for the exposure to outdoor climate conditions.

This test report is not valid, as soon as the product is used as a building product in the sense of the "Landesbauordnungen" (state building regulations, MBO § 17, par. 3).

This test report is no substitute for a General Building Inspectorate Certificate.

This test report is granted without prejudice to the rights of third parties, or particular private proprietary rights.

In General Building Inspectorates procedures this test report can be based for

- regulated building materials for the required proof of accordance
- for not regulated building materials for the required proof of applicability.

This test report is valid until 2020-02-29, provided that the test methods, the classification rules and the technology do not change during this period.

Borkheide, 24th of March 2015

Head of the test laboratory
(Dipl.-Ing. Uwe Kühnast)

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In charge for testing
(Dipl.-Ing. Manfred Sailer)

This translation was issued on 27th of April 2015, in a case of doubt the German version is valid solely.

Test results class B2 (Brennkasten)

"Austronet 202 B1 / UV" und "Austronet 700 B1 / UV":

Table 2.1

	blue							white							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	1	1	1	1	-	1	1	1	1	1	1	-	s	-
Maximum flame height	3	1	2	3	4	4	-	2	3	2	3	4	3	-	cm	-
Time of the maximum	3	2	2	3	3	3	-	2	2	2	4	3	3	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	4	3	4	4	4	3	-	3	3	5	4	4	4	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 2 cm and approx. 2 cm in width, above sintered about 4-8 cm.																

Samples 1, 2: Edge flame exposure, longitudinal
Sample 3: Surface flame exposure, transverse
Samples 4, 5: Edge flame exposure, longitudinal
Sample 6: Surface flame exposure, transverse

Table 2.2: black, complete set of samples

	longitudinal							transverse							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	1	1	1	2	-	1	1	1	1	1	2	-	s	-
Maximum flame height	5	4	4	3	4	4	-	6	3	3	4	4	3	-	cm	-
Time of the maximum	5	4	6	4	3	5	-	5	3	3	3	3	3	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	14	20	8	4	6	6	-	6	4	5	8	6	4	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 2 cm and approx. 2 cm in width, above sintered about 4-8 cm.																

Samples 1-5: Edge flame exposure
Sample 6: Surface flame exposure

[1] No ignition within 20 seconds
./. Not occurred
dim. Dimension
Indication of time: from the beginning of testing procedure
Indication of measurements: from reference line of the flame

"Austronet 203 B1 / UV" und "Austronet 710 B1 / UV":

Table 2.3

	blue							white							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	2	1	1	2	-	1	1	2	1	1	2	-	s	-
Maximum flame height	2	3	3	4	3	1	-	2	2	2	2	3	2	-	cm	-
Time of the maximum	3	3	4	2	2	3	-	3	2	3	2	3	3	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	4	4	5	3	4	3	-	4	3	4	3	4	4	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 2 cm and approx. 2 cm in width, above sintered about 2-5 cm.																

Samples 1, 2: Edge flame exposure, longitudinal
Sample 3: Surface flame exposure, transverse
Samples 4, 5: Edge flame exposure, longitudinal
Sample 6: Surface flame exposure, transverse

Table 2.4: black, complete set of samples

	longitudinal							transverse							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	1	1	1	2	-	1	1	1	1	1	2	-	s	-
Maximum flame height	4	3	4	3	5	2	-	2	2	2	3	3	1	-	cm	-
Time of the maximum	4	4	4	3	4	3	-	2	2	2	2	3	4	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	5	4	4	3	5	4	-	3	5	4	5	3	4	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 2 cm and approx. 3 cm in width, above sintered about 2-5 cm.																

Samples 1-5: Edge flame exposure
Sample 6: Surface flame exposure

[1] No ignition within 20 seconds
./. Not occurred
dim. Dimension
Indication of time: from the beginning of testing procedure
Indication of measurements: from reference line of the flame

"Austronet 204 B1 / UV" und "Austronet 720 B1 / UV":

Table 2.5

	blue							white							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	2	1	1	2	-	1	1	2	1	1	2	-	s	-
Maximum flame height	2	3	2	5	4	2	-	3	3	2	2	4	4	-	cm	-
Time of the maximum	5	5	6	5	5	5	-	5	6	7	5	6	6	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	6	6	6	6	5	6	-	6	7	8	5	6	7	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 4 cm and approx. 2 cm in width, above sintered about 3-8 cm.																

Samples 1, 2: Edge flame exposure, longitudinal
Sample 3: Surface flame exposure, transverse
Samples 4, 5: Edge flame exposure, longitudinal
Sample 6: Surface flame exposure, transverse

Table 2.6: black, complete set of samples

	longitudinal							transverse							dim.	require-ments
Sample-No.	1	2	3	4	5	6	-	1	2	3	4	5	6	-	-	-
Ignition of the sample	1	1	1	1	1	4	-	1	1	1	1	1	3	-	s	-
Maximum flame height	4	1	3	2	4	2	-	5	6	5	5	5	5	-	cm	-
Time of the maximum	10	2	4	7	5	5	-	15	15	13	13	14	17	-	s	-
Flame tip reached the 150 mm test mark	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	≥ 20
Flame has extinguished before reaching the test mark	11	3	10	9	14	6	-	31	16	34	31	22	17	-	s	-
Ignition of filter paper	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	s	[1]
Smoke density (visual)	very low							very low							-	-
Flames have been extinguished	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
Afterburning time	./.	./.	./.	./.	./.	./.	-	./.	./.	./.	./.	./.	./.	-	-	-
View of the samples after the test (20 seconds after exposure the flame): The samples were destroyed at flame impingement area in transverse and longitudinal direction: max. length of approx. 2 cm and approx. 2 cm in width,																

Samples 1-5: Edge flame exposure
Sample 6: Surface flame exposure

[1] No ignition within 20 seconds
./. Not occurred
dim. Dimension
Indication of time: from the beginning of testing procedure
Indication of measurements: from reference line of the flame

Test specimen A

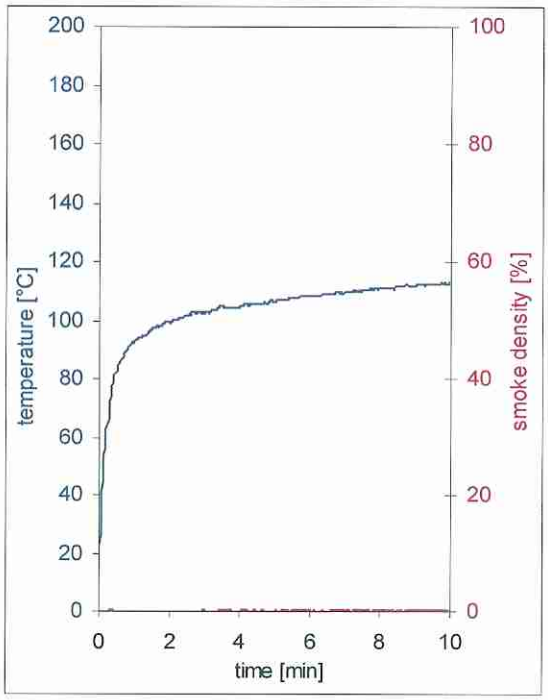

fig. 1
Graphs of the flue gas temperature and the smoke density

fig. 2
Photo of test specimen after the test

Test specimen B

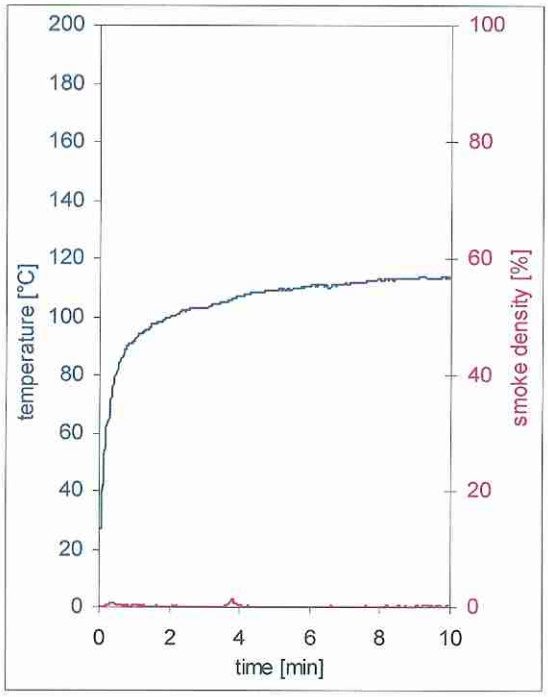

fig. 3
Graphs of the flue gas temperature and the smoke density

fig. 4
Photo of test specimen after the test

Test specimen C

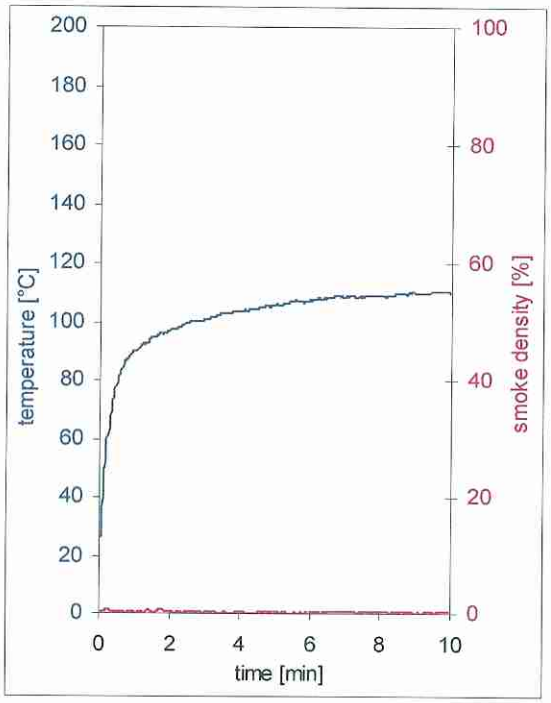

fig. 5
Graphs of the flue gas temperature and the smoke density

fig. 6
Photo of test specimen after the test

Test specimen D

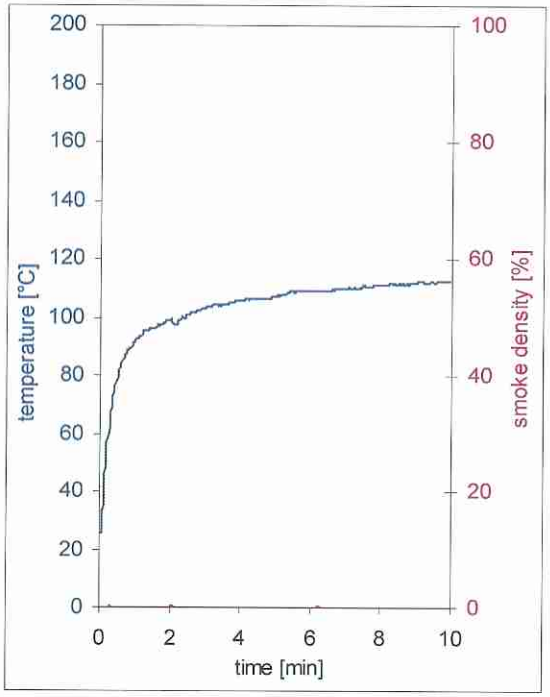

fig. 7
Graphs of the flue gas temperature and the smoke density

fig. 8
Photo of test specimen after the test

Test specimen E

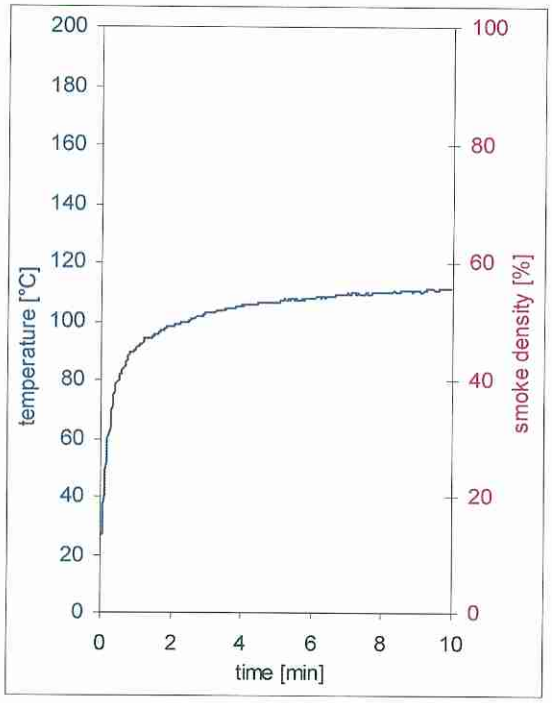

fig. 9
Graphs of the flue gas temperature and the smoke density

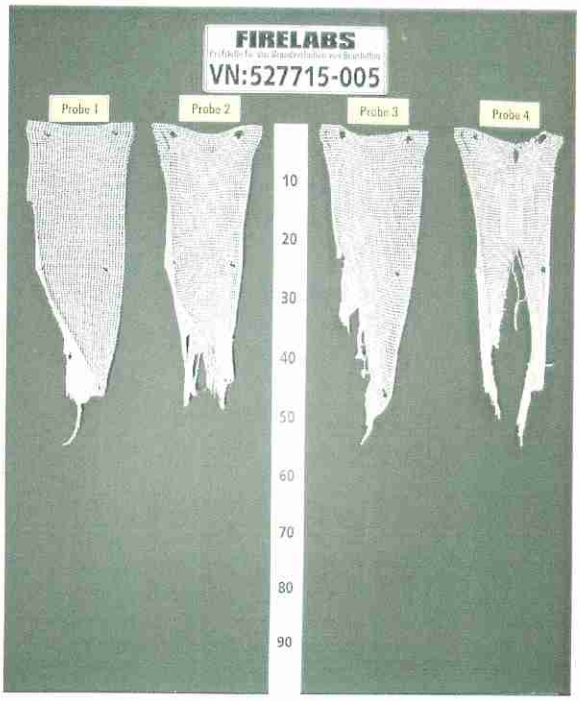

fig. 10
Photo of test specimen after the tes)

Test specimen F

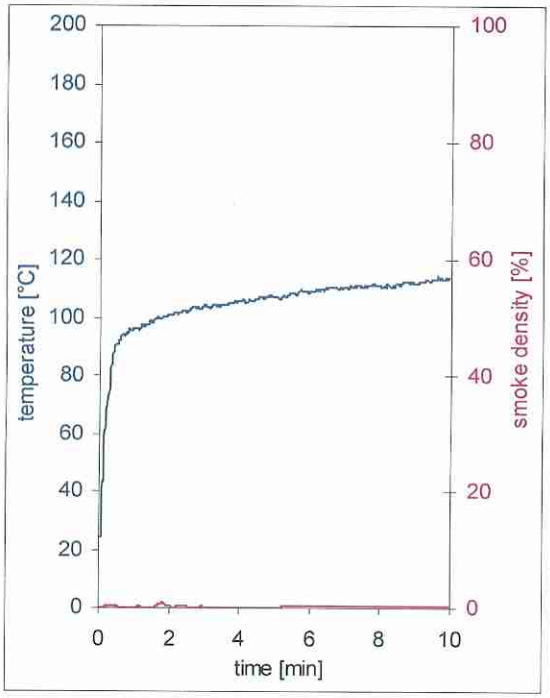

fig. 11
Graphs of the flue gas temperature and the smoke density

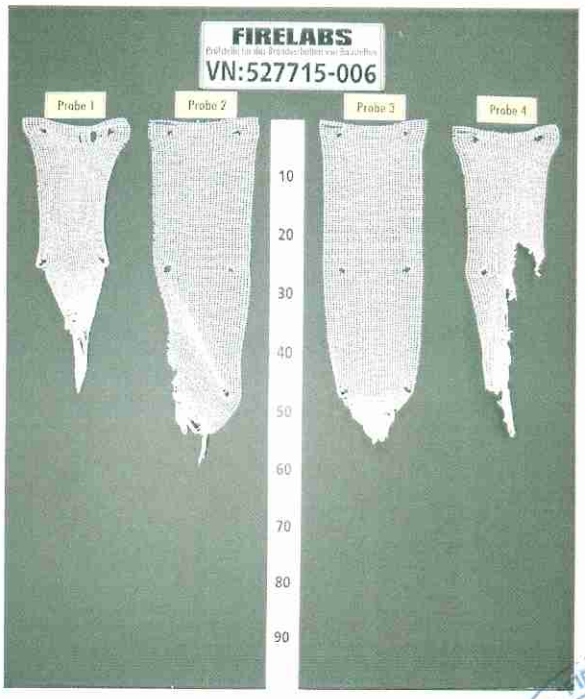

fig. 12
Photo of test specimen after the test

Test specimen G

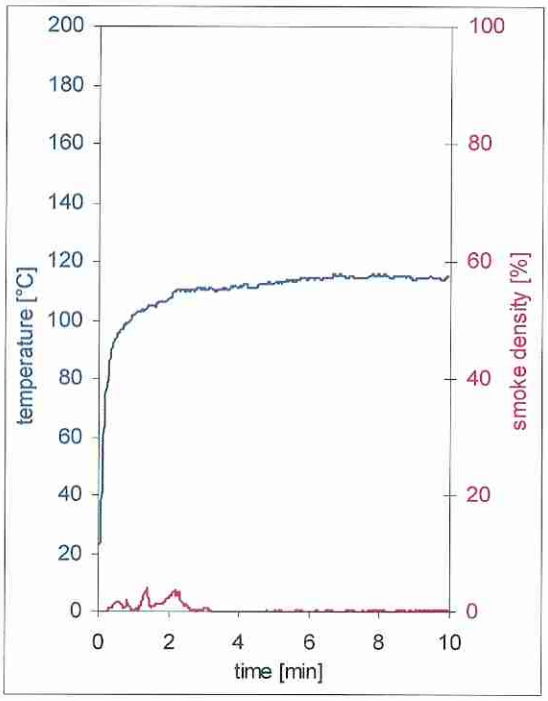

fig. 13
Graphs of the flue gas temperature and the smoke density

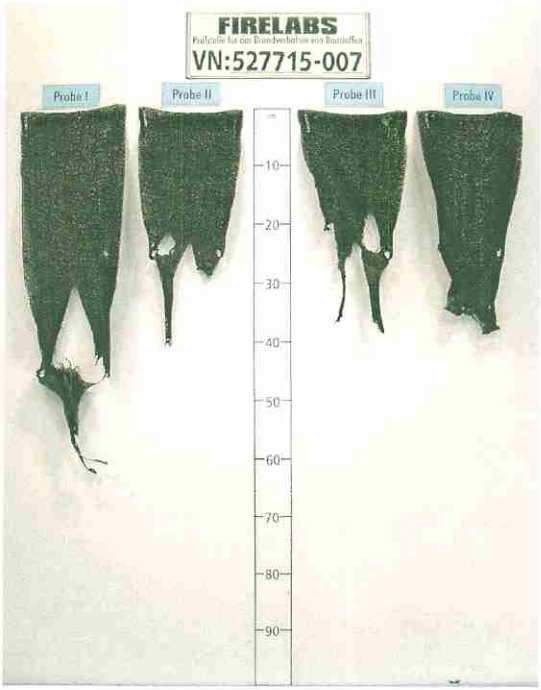

fig. 14
Photo of test specimen after the test

Test specimen H

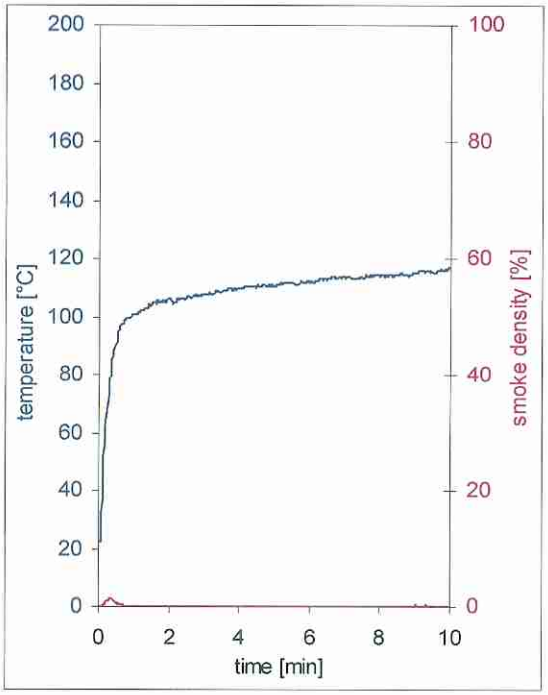

fig. 15
Graphs of the flue gas temperature and the smoke density

fig. 16
Photo of test specimen after the test

Test specimen I

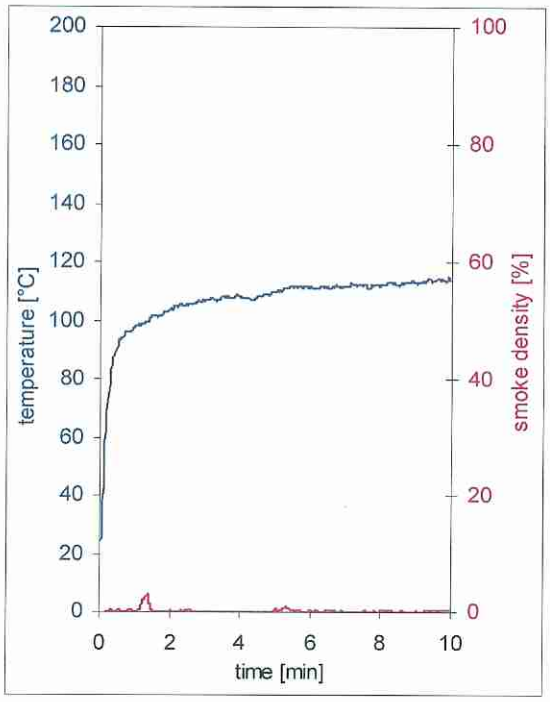

fig. 17
Graphs of the flue gas temperature and the smoke density

fig. 18
Photo of test specimen after the test

Test specimen K

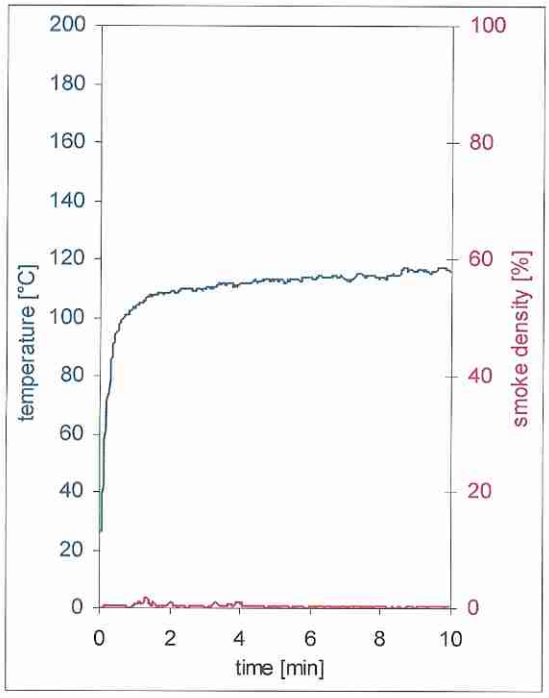

fig. 19
Graphs of the flue gas temperature and the smoke density

fig. 20
Photo of test specimen after the test

Test specimen L

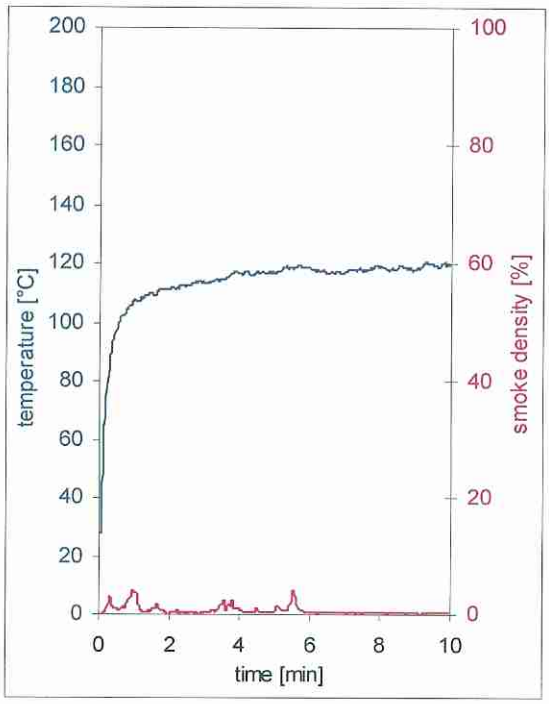

fig. 21
Graphs of the flue gas temperature and the smoke density

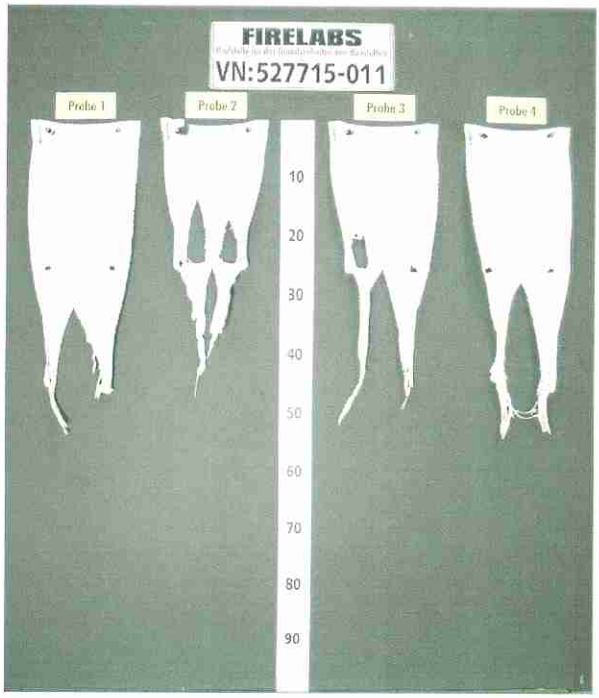

fig. 22
Photo of test specimen after the test

Test specimen M

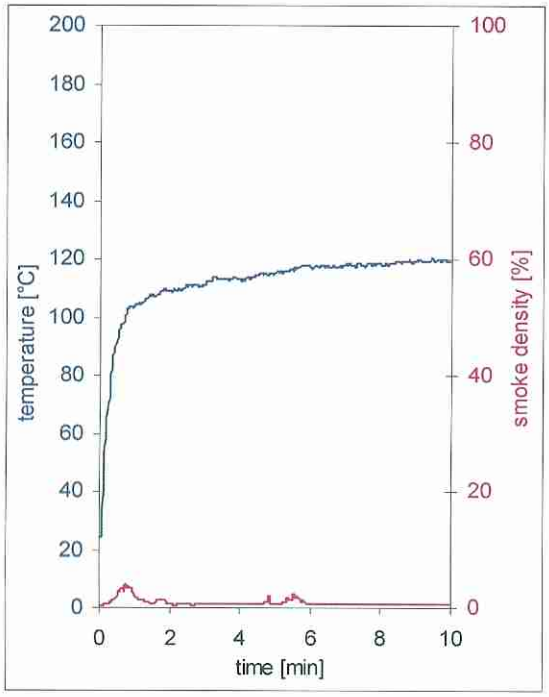

fig. 23
Graphs of the flue gas temperature and the smoke density

fig. 24
Photo of test specimen after the test