MFPA Leipzig GmbH
Testing, Inspection and Certification Authority for Construction Products and Construction Types

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Work Group 3.2 - Fire Behavior of Building Components
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- Certified translation from German -

Test Certificate No. PZ 3.1/12-156-1

of June 12, 2012
1st copy

Client:	Gebrüder Aurich GmbH Otto-Hahn-Strasse 11 42477 Radevormwald
Subject matter:	Test for flame retardant properties (building material class B1) according to DIN 4102 Part 1*, May 1998 issue
Object:	Woven and knitted fabrics from polyester, white color
Order date:	11/01/2011 and 06/01/2012
Samples received on:	17/01/2011 (number of receipt DZ 3.1/11-011) 11/01/2012 (number of receipt DZ 3.1/12-008)
Sampling:	by client
Identification:	without
Test date:	08 /20/04//18.05.2011 and 15/05/2012 (test in fire shaft), 12/04 /18/05/2011 and 07/05/2012 (test in fire box)
Prepared by:	Dipl.-Phys. Günter Brinkmann

This test certificate includes 15 text sheets and 14 Annexes.

1 Description of material

According to the client, the building products to be tested were white woven and knitted fabrics, respectively, from polyester which were provided with a flame retardant.
As indicated by the client, the products with the designation 350FRn and 3152FRn contained an alternative flame retardant as compared with other products.
According to the client, the materials are used to produce banners and flags for interior use in buildings. The manufacturer indicated that the materials are not backed by other building materials over the full surface when used in building engineering.

No other information about the materials and use were available to the test laboratory.

2 Preparation of samples

The samples for the fire test were cut to true dimensions by the test laboratory from the material provided by the client.
The samples were taken from the longitudinal and transverse direction of the material.

3 Material parameters

Parameters provided by client:

Designation:	Weight per unit area [g/m²]:
2187FR knitted fabric	approx. 50
3153FR knitted fabric	approx. 280
637FR woven fabric	approx. 68
6083FR woven fabric	approx. 330
3139FRN knitted fabric	approx. 315

MFPA Leipzig determined the following parameters:

Designation:	Weight per unit area [g/m²]:
2187FR knitted fabric	approx. 46
3153FR knitted fabric	approx. 277
637FR woven fabric	approx. 65
6083FR woven fabric	approx. 345
350FRn	approx. 112
3152FRn	approx. 205
3139FRN knitted fabric	approx. 307

4 Testing

The tests were carried out according to DIN 4102 Part 1 (May 1998 issue), DIN 4102 Part 15 (May 1990 issue) and DIN 4102 Part 16 (May 1998 issue).

The tests at the above building products were carried out in the fire shaft according to DIN 4102 Part 1, Section 6.1.2.2 and in the fire box according to DIN 4102 Part 1, Section 6.2.5.2 each with the samples in freely suspended arrangement.

5 Test results

The test results are summarized in the following tables 1 to 7.

Table 1: Test in fire shaft acc. to DIN 4102 Part 1, Section 6.1.2.2

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Specimen A: woven fabric 637FR, samples from longitudinal direction,
Specimen B: woven fabric 6083FR, samples from transverse direction,
Specimen C: knitted fabric 2187FR, samples from longitudinal direction,
Specimen D: knitted fabric 3153FR, samples from transverse direction;

Line No.			Measuring values for specimen A	B	C	D
1	No. of sample arrangement acc. to DIN 4102 Part 15 Table 1		1	1	1	1
2	Max. flame height above bottom edge of sample	cm	35	40	40	35
3	Time*)	min:s	0:15	0:05	0:02	2:00
4	Fusion/burning Time*)	min:s	0:02	0:05	0:02	0:04
5	Observations at rear side of sample Flames/glowing Time*)	min:s	./.	./.	./.	./.
6	Discoloration Time*)	min:s	./.	./.	./.	./.
7	Burning dripping down Beginning*)	min:s	./.	./.	./.	./.
8	Extent: occasionally dripping down sample material		-	-	-	-
9	continuously dripping down sample material		-	-	-	-
10	Burning dropping down sample parts Beginning*)	min:s	./.	./.	./.	./.
11	Extent: occasionally dropping down sample material		-	-	-	-
12	continuously dropping down sample material		-	-	-	-
13	Period of continued burning at screen bottom (max.)	min:s	-	-	-	-
14	Burner flame affected by dripping/dropping down parts Time*)	min:s	./.	./.	./.	./.
15	Premature end of test End of fire at samples*)	min:s	./.	./.	./.	./.
16	Time of test abortion, if any*)	min:s	./.	./.	./.	./.

*) Time from beginning of test
./. Event did not occur
- No information

Table 1 continued:

Line No.			Measuring values for specimens A	B	C	D
	<u>After-burning after end of test</u>					
17	Period	min:s	./.	./.	./.	./.
18	Number of samples		-	-	-	-
19	Front side of sample		-	-	-	-
20	Rear side of sample		-	-	-	-
21	Flame length	cm	-	-	-	-
	<u>After-glowing after end of test</u>					
22	Period	min:s	./.	./.	./.	./.
23	Number of samples		-	-	-	-
	Point of occurrence:					
24	Bottom sample half		-	-	-	-
25	Top sample half		-	-	-	-
26	Front side of sample		-	-	-	-
27	Rear side of sample		-	-	-	-
	<u>Smoke density</u>					
28	max. 400 % min	%min	< 1	2	< 1	4
29	> 400 % min (very strong smoke development)	%min	./.	./.	./.	./.
30	Diagram in Annex No.		5	6	7	8
	<u>Residual lengths</u>					
31	Individual value	cm	69; 70 69; 68	65; 62 66; 64	62; 61 72; 54	63; 64 62; 62
32	Mean value	cm	69	64	62	63
33	Photo of specimen in Annex No.		1	1	2	2
	<u>Flue gas temperature</u>					
34	Maximum of mean value	°C	119	112	120	116
35	Time*)	min:s	7:26	2:18	9:22	9:46
36	Diagram in Annex No.		5	6	7	8
37	<u>Remarks:</u> - none;					

*) Time from beginning of test
./. Event did not occur
- No information

Table 2: Test in fire shaft acc. to DIN 4102 Part 1, Section 6.1.2.2

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Specimen E: woven fabric 6083FR, samples from longitudinal direction,
Specimen F: knitted fabric 2187FR, samples from transverse direction,
Specimen G: 350FRn, samples from longitudinal direction,
Specimen H: 3152FRn, samples from longitudinal direction;

Line No.			Measuring values for specimen E	F	G	H
1	No. of sample arrangement acc. to DIN 4102 Part 15 Table 1		1	1	1	1
2	Max. flame height above bottom edge of sample	cm	40	35	40	40
3	Time*)	min:s	0:15	0:10	0:05	0:05
4	Fusion/burning Time*)	min:s	0:05	0:01	0:02	0:04
5	Observations at rear side of sample Flames/glowing Time*)	min:s	./.	./.	./.	./.
6	Discoloration Time*)	min:s	./.	./.	./.	./.
7	Burning dripping down Beginning*)	min:s	./.	./.	0:10	0:12
8	Extent: occasionally dripping down sample material		-	-	yes	yes
9	continuously dripping down sample material		-	-	no	no
10	Burning dropping down sample parts Beginning*)	min:s	./.	./.	./.	./.
11	Extent: occasionally dropping down sample material		-	-	-	-
12	continuously dropping down sample material		-	-	-	-
13	Period of continued burning at screen bottom (max.)	min:s	-	-	0:00	0:00
14	Burner flame affected by dripping/dropping down parts Time*)	min:s	./.	./.	./.	./.
15	Premature end of test End of fire at samples*)	min:s	./.	./.	./.	./.
16	Time of test abortion, if any*)	min:s	./.	./.	./.	./.

*) Time from beginning of test
./. Event did not occur
- No information

Table 2 continued:

Line No.			Measuring values for specimen E	F	G	H
	<u>After-burning after end of test</u>					
17	Period	min:s	./.	./.	./.	./.
18	Number of samples		-	-	-	-
19	Front side of sample		-	-	-	-
20	Rear side of sample		-	-	-	-
21	Flame length	cm	-	-	-	-
	<u>After-glowing after end of test</u>					
22	Period	min:s	./.	./.	./.	./.
23	Number of samples		-	-	-	-
	Point of occurrence:					
24	Bottom sample half		-	-	-	-
25	Top sample half		-	-	-	-
26	Front side of sample		-	-	-	-
27	Rear side of sample		-	-	-	-
	<u>Smoke density</u>					
28	max. 400 % min	%min	3	< 1	< 1	1
29	> 400 % min (very strong smoke development)	%min	./.	./.	./.	./.
30	Diagram in Annex No.		9	10	11	12
	<u>Residual lengths</u>					
31	Individual value	cm	73; 69 65; 67	54; 58 67; 58	68; 69 68; 69	69; 68 70; 69
32	Mean value	cm	68	59	68	69
33	Photo of specimen in Annex No.		-	-	3	3
	<u>Flue gas temperature</u>					
34	Maximum of mean value	°C	117	120	115	120
35	Time*)	min:s	9:18	9:38	8:46	9:26
36	Diagram in Annex No.		9	10	11	12
37	<u>Remarks:</u> - none;					

*) Time from beginning of test
./. Event did not occur
- No information

Table 3: Test in fire shaft acc. to DIN 4102 Part 1, Section 6.1.2.2

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Specimen A008: knitted fabric 3139FRN, samples from longitudinal direction,
Specimen B008: knitted fabric 3139FRN, samples from transverse direction;

Line No.			Measuring values for specimen A008	B008	-	-
1	No. of sample arrangement acc. to DIN 4102 Part 15 Table 1		1	1	-	-
2	Max. flame height above bottom edge of sample	cm	50	50	-	-
3	Time*)	min:s	0:02	0:10	-	-
4	Fusion/burning Time*)	min:s	0:06	0:06	-	-
5	Observations at rear side of sample Flames/glowing Time*)	min:s	./.	./.	-	-
6	Discoloration Time*)	min:s	./.	-	-	-
7	Burning dripping down Beginning*)	min:s	0:13	0:19	-	-
8	Extent: occasionally dripping down sample material		yes	yes	-	-
9	continuously dripping down sample material		no	no	-	-
10	Burning dropping down sample parts Beginning*)	min:s	./.	./.	-	-
11	Extent: occasionally dropping down sample material		-	-	-	-
12	continuously dropping down sample material		-	-	-	-
13	Period of continued burning at screen bottom (max.)	min:s	0:00	0:02	-	-
14	Burner flame affected by dripping/dropping down parts Time*)	min:s	./.	./.	-	-
15	Premature end of test End of fire at samples*)	min:s	./.	./.	-	-
16	Time of test abortion, if any*)	min:s	./.	./.	-	-

*) Time from beginning of test
./. Event did not occur
- No information

Table 3 continued:

Line No.			Measuring values for specimen			
			A_{008}	B_{008}	-	-
	<u>After-burning after end of test</u>					
17	Period	min:s	./.	./.	-	-
18	Number of samples		-	-	-	-
19	Front side of sample		-	-	-	-
20	Rear side of sample		-	-	-	-
21	Flame length	cm	-	-	-	-
	<u>After-glowing after end of test</u>					
22	Period	min:s	./.	./.	-	-
23	Number of samples		-	-	-	-
	Point of occurrence:					
24	Bottom sample half		-	-	-	-
25	Top sample half		-	-	-	-
26	Front side of sample		-	-	-	-
27	Rear side of sample		-	-	-	-
	<u>Smoke density</u>					
28	max. 400 % min	%min	3	5	-	-
29	> 400 % min (very strong smoke development)	%min	./.	./.	-	-
30	Diagram in Annex No.		13	14	-	-
	<u>Residual lengths</u>					
31	Individual value	cm	70; 68 70; 68	73; 71 70; 70	-	-
32	Mean value	cm	69	72	-	-
33	Photo of specimen in Annex No.		-	4	-	-
	<u>Flue gas temperature</u>					
34	Maximum of mean value	°C	109	105	-	-
35	Time*)	min:s	8:18	8:56	-	-
36	Diagram in Annex No.		13	14	-	-
37	<u>Remarks:</u> - none;					

*) Time from beginning of test
./. Event did not occur
- No information

Table 4: Test in fire box acc. to DIN 4102 Part 1, Section 6.2.5.2 (edge flaming)

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Samples 1, 3, 4 and 6: longitudinal direction,
Samples 2 and 5: transverse direction;

Samples 1 to 3: woven fabric 637FR,
Samples 4 to 6: woven fabric 6083FR;

Data acc. to DIN 4102 Part 1		Test results Sample No. 1	2	3	4	5	6
Ignition	s	1	1	1	1	1	1
Max. flame height	mm	140	110	90	50	40	50
Time of occurrence	s	12	7	7	6	6	6
Flame peak at measuring mark	s	./.	./.	./.	./.	./.	./.
Flame extinguishes before measuring mark is reached	s	14	21	15	7	7	7
Continued burning after end of test	s	./.	./.	./.	./.	./.	./.
Ignition of filter paper	s	./.	./.	./.	./.	./.	./.

Appearance of samples after fire tests:

At the flaming side, the samples were damaged at a length of max. 140 mm and at the bottom edge at a width of max. 15 mm.

No burning dropping/dripping down occurred.

Smoke development (visual): low moderate strong very strong

./. event did not occur

Table 5: Test in fire box acc. to DIN 4102 Part 1, Section 6.2.5.2 (edge flaming)

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Samples 1, 3 and 4: longitudinal direction,
Samples 2, 5 and 6: transverse direction;

Samples 1 to 3: knitted fabric 2187FR,
Samples 4 to 6: knitted fabric 3153FR;

Data acc. to DIN 4102 Part 1		Test results Sample No. 1	2	3	4	5	6
Ignition	s	1	1	1	1	1	1
Max. flame height	mm	20	20	20	30	40	40
Time of occurrence	s	2	2	2	5	5	4
Flame peak at measuring mark	s	./.	./.	./.	./.	./.	./.
Flame extinguishes before measuring mark is reached	s	2	2	2	6	8	11
Continued burning after end of test	s	./.	./.	./.	./.	./.	./.
Ignition of filter paper	s	./.	./.	./.	./.	./.	./.

Appearance of samples after fire tests:

At the flaming side, the samples were damaged at a length of max. 140 mm and at the bottom edge at a width of max. 15 mm.

No burning dropping/dripping down occurred.

Smoke development (visual): low moderate strong very strong

./. event did not occur

Table 6: Test in fire box acc. to DIN 4102 Part 1, Section 6.2.5.2 (edge flaming)

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Samples 1, 3 and 4: longitudinal direction,
Samples 2, 5 and 6: transverse direction;

Samples 1 to 3: 350FRn,
Samples 4 to 6: 3152FRn;

Data acc. to DIN 4102 Part 1		Test results Sample No. 1	2	3	4	5	6
Ignition	s	1	1	1	1	1	1
Max. flame height	mm	20	20	20	40	40	40
Time of occurrence	s	2	2	2	3	2	2
Flame peak at measuring mark	s	./.	./.	./.	./.	./.	./.
Flame extinguishes before measuring mark is reached	s	3	2	2	3	3	3
Continued burning after end of test	s	./.	./.	./.	./.	./.	./.
Ignition of filter paper	s	./.	./.	./.	./.	./.	./.

Appearance of samples after fire tests:

At the flaming side, the samples were damaged at a length of max. 75 mm and at the bottom edge at a width of max. 20 mm.

No burning dropping/dripping down occurred.

Smoke development (visual): low moderate strong very strong

./. event did not occur

Table 7: Test in fire box acc. to DIN 4102 Part 1, Section 6.2.5.2 (edge flaming)

Woven and knitted fabric, resp., from polyester, white color,
Freely suspended sample arrangement;

Probe 1: longitudinal direction,
Samples 2 and 3: transverse direction;

Samples 1 to 3: knitted fabric 3139FRN;

Data acc. to DIN 4102 Part 1		Test results Sample No. 1	2	3	-	-	-
Ignition	s	1	1	1	-	-	-
Max. flame height	mm	30	60	50	-	-	-
Time of occurrence	s	5	4	4	-	-	-
Flame peak at measuring mark	s	./.	./.	./.	-	-	-
Flame extinguishes before measuring mark is reached	s	5	5	4	-	-	-
Continued burning after end of test	s	./.	./.	./.	-	-	-
Ignition of filter paper	s	./.	./.	./.	-	-	-

Appearance of samples after fire tests:

At the flaming side, the samples were damaged at a length of max. 68 mm and at the bottom edge at a width of max. 20 mm.

No burning dropping/dripping down occurred.

Smoke development (visual): low moderate strong very strong

./. event did not occur

6 Assessment

6.1 Test in fire box acc. to DIN 4102 Part 1, Section 6.2.5.2

The white woven and knitted fabrics of polyester with weights per unit area from approx. 46 g/m² to approx. 345 g/m² met the requirements for building materials of building material class B2 (normally inflammable) according to DIN 4102 Part 1, Section 6.2.

The materials are deemed non-burning dropping down (dripping down) when tested according to DIN 4102 Part 1, Section 6.2.6.

6.2 Test in fire shaft acc. to DIN 4102 Part 1, Section 6.1.2.2

The white woven and knitted fabrics of polyester with weights per unit area from approx. 46 g/m² to approx. 345 g/m² in freely suspended sample arrangement met the test in the fire shaft according to DIN 4102 Part 1, Section 6.1.2.2.

The materials are deemed non-burning dropping down (dripping down) when tested according DIN 4102 Part 16, Section 9.3.

The following assessment shall be applicable to materials of white color:

2187FR	3139FRN
637FR	6101FRN
350FR	2136FRN
379FR	19FRN
2152V3FR	373FR
3151FR	3118FR
3153FR	3151FRN
6083FR	3284FRN
350FRn	6081FRN
3152FRn	6039 FRN

Thus the products mentioned can be classified in building material class B1 (hardly inflammable) according to DIN 4102 under the following conditions:

- The mentioned white woven and knitted fabrics of polyester with weights per unit area from approx. 46 g/m² to approx. 345 g/m² shall be arranged to equal of other two-dimensional materials at a distance of > 40 mm.
- The products mentioned shall not be exposed to the weather in the open.

7 Specific notes

This test certificate is based on the content of test certificate PZ 3.1/11-096-2 of MFPA Leipzig of 07/06/2012.

When permanently used in buildings and building structures, the banners and flags can be deemed buildings products according to § 2 Section 9 of the Model Building Regulation. Suitability of the mentioned products as building products must not be verified by proof of usability by the building inspectorate in accordance with the building codes of the states of the Federal Republic of Germany.

This test certificate is used as basis for the prescribed proof of usability in the building authority procedure.
This test certificate shall not substitute the general test certificate of the building inspectorate, if any, required in the building inspectorate procedure. It shall be used only as basis for the preparation of a general test certificate of the building inspectorate.

The results of the tests exclusively refer to the described test objects but not to the main unit.

The validity of this test certificate expires on 07/04/2016.

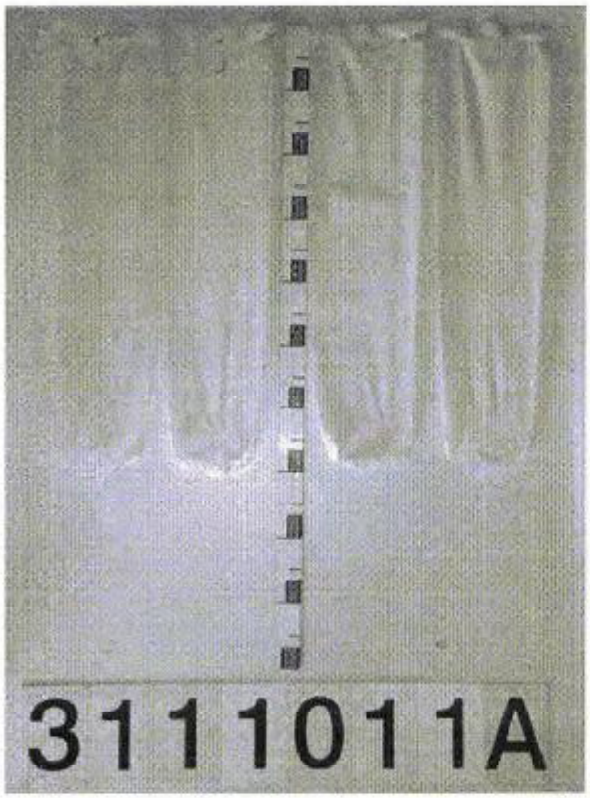
Leipzig, June 12, 2012

Dr.-Ing. P. Nause
Head of business division

Dipl.-Phys. G. Brinkmann
Head of test laboratory

Having been publicly appointed and generally sworn in as a translator for English by the President of the Leipzig Regional Court, I hereby certify the above translation of the document submitted to me as an original in the German language to be correct and complete.

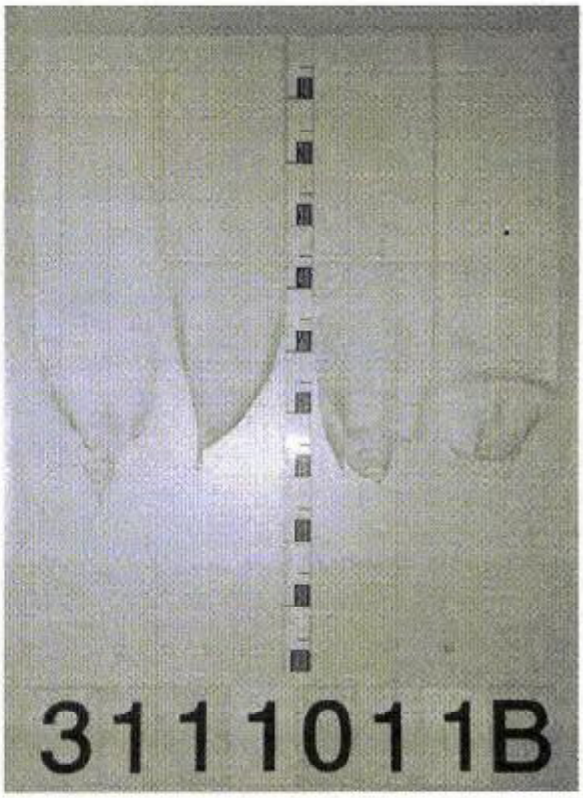
Leipzig, 20/12/2012



Damage of fire shaft samples:
Specimen A;

Woven fabric of polyester 637FR,
white color,

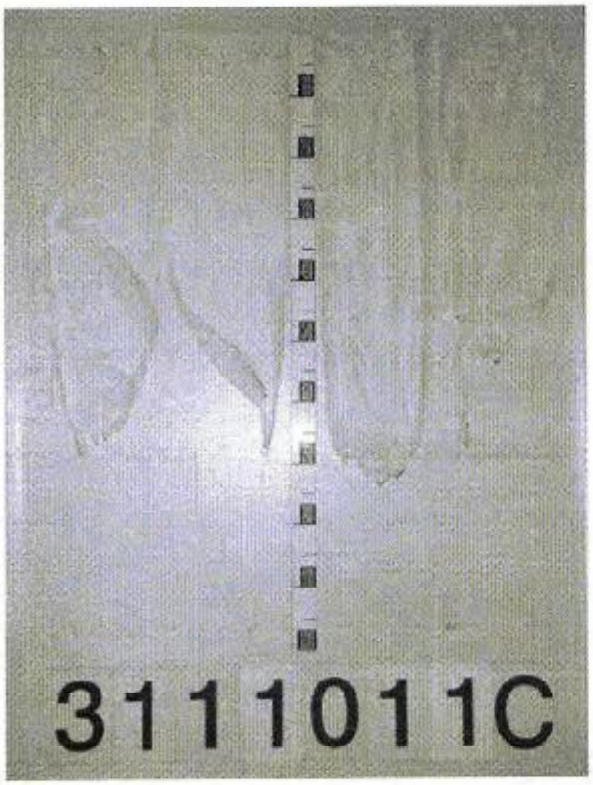
Samples from longitudinal direction,
Freely suspended sample arrangement;



Damage of fire shaft samples:
Specimen B;

Woven fabric of polyester 6083FR,
white color,

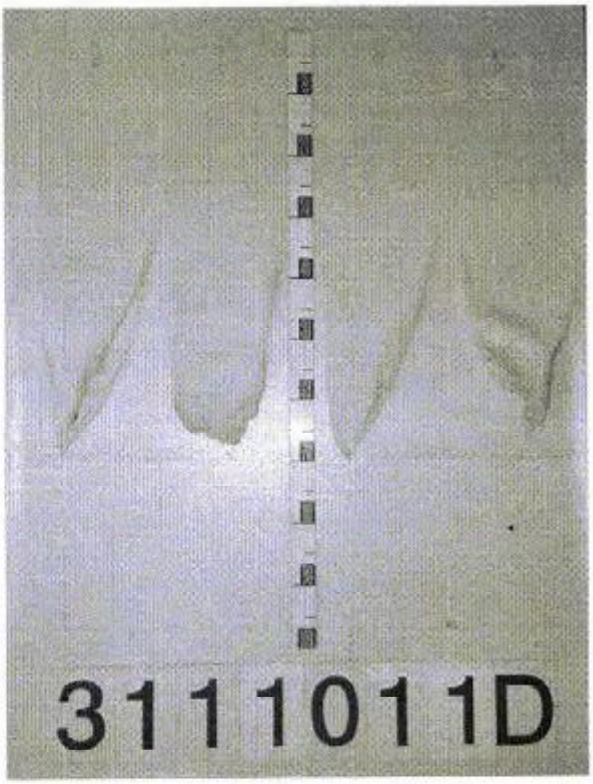
Samples from transverse direction,
Freely suspended sample arrangement;



Damage of fire shaft samples:
Specimen C;

Knitted fabric of polyester 2187FR,
white color,

Samples from longitudinal direction,
Freely suspended sample arrangement;



Damage of fire shaft samples:
Specimen D;

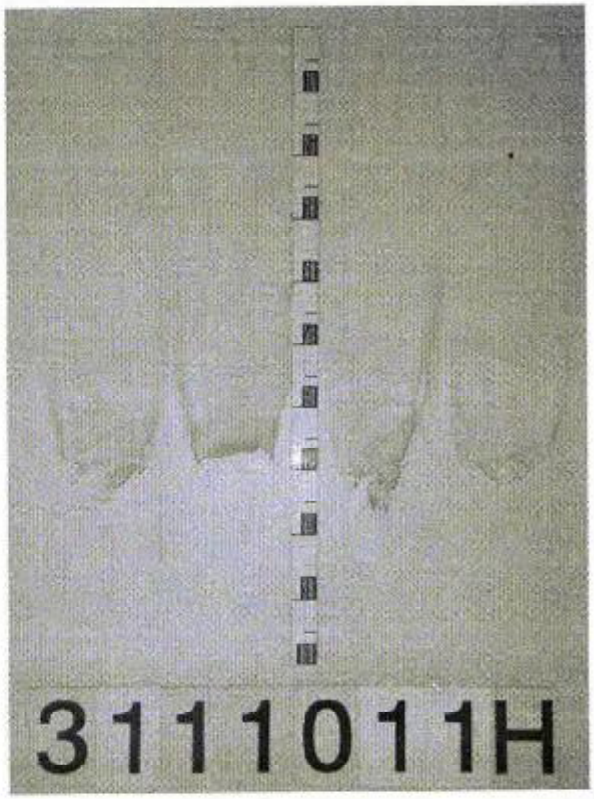
Knitted fabric of polyester 3153FR,
white color,

Samples from longitudinal direction,
Freely suspended sample arrangement;

Damage of fire shaft samples:
Specimen G;

Woven and/or knitted fabric of polyester
350FRn,
white color,

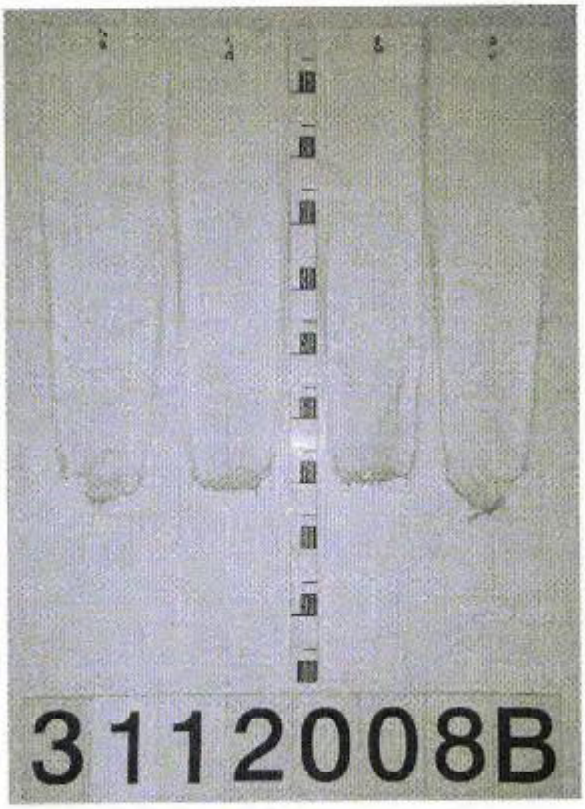
Samples from longitudinal direction,
Freely suspended sample arrangement;



Damage of fire shaft samples:
Specimen H;

Woven and/or knitted fabric of polyester
3152FRn,
white color,

Samples from longitudinal direction,
Freely suspended sample arrangement;



Damage of fire shaft samples:
Specimen B008;

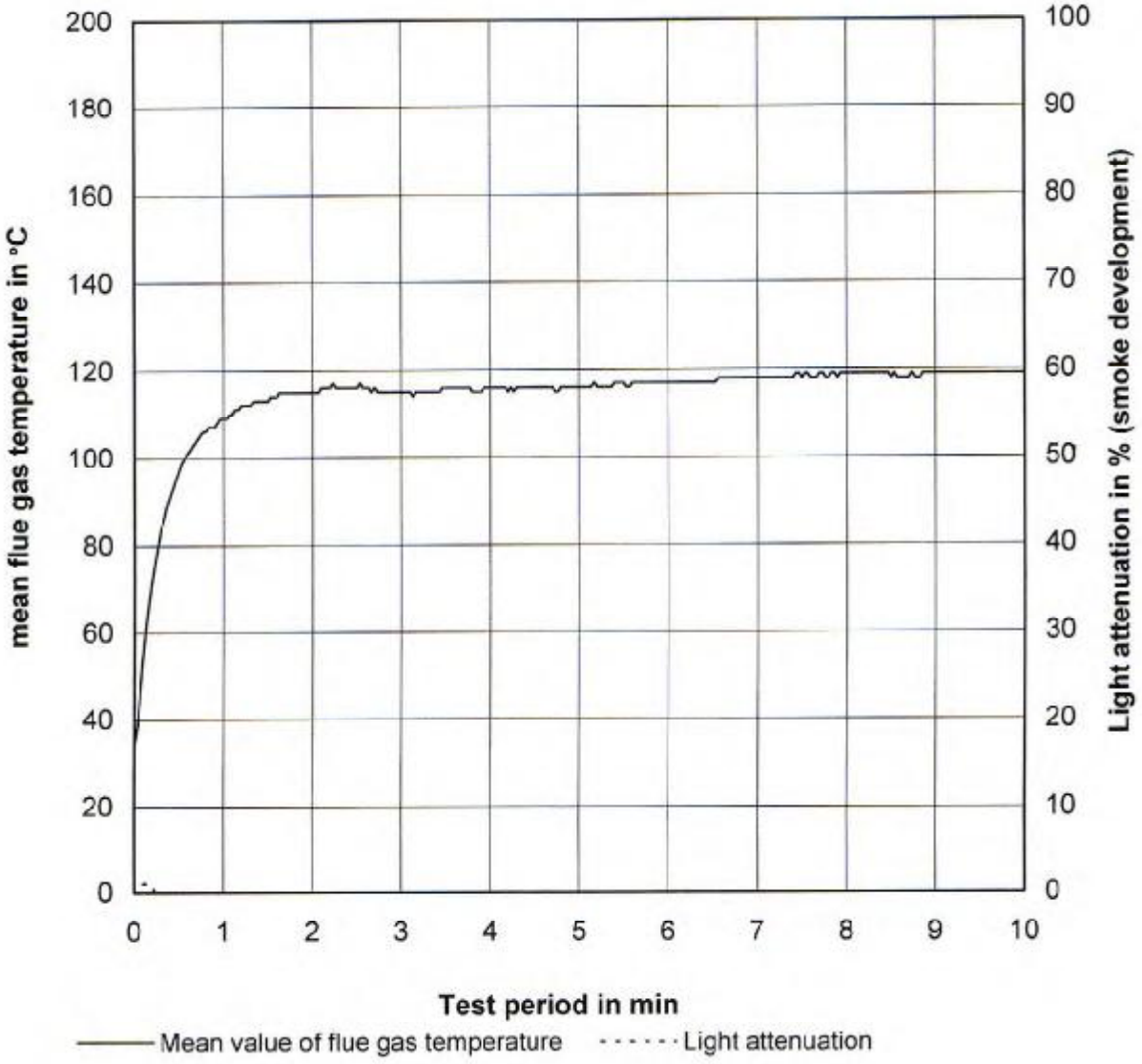
Woven and/or knitted fabric of polyester 3139FRN,
white color,

Samples from transverse direction,
Freely suspended sample arrangement;

Flue gas temperatures and smoke development
Fire shaft test on 08.04.2011

Specimen A: Woven fabric of polyester 637FR, white color,
Weight per unit area approx. 65 g/m²,
Freely suspended sample arrangement
Sample from longitudinal direction

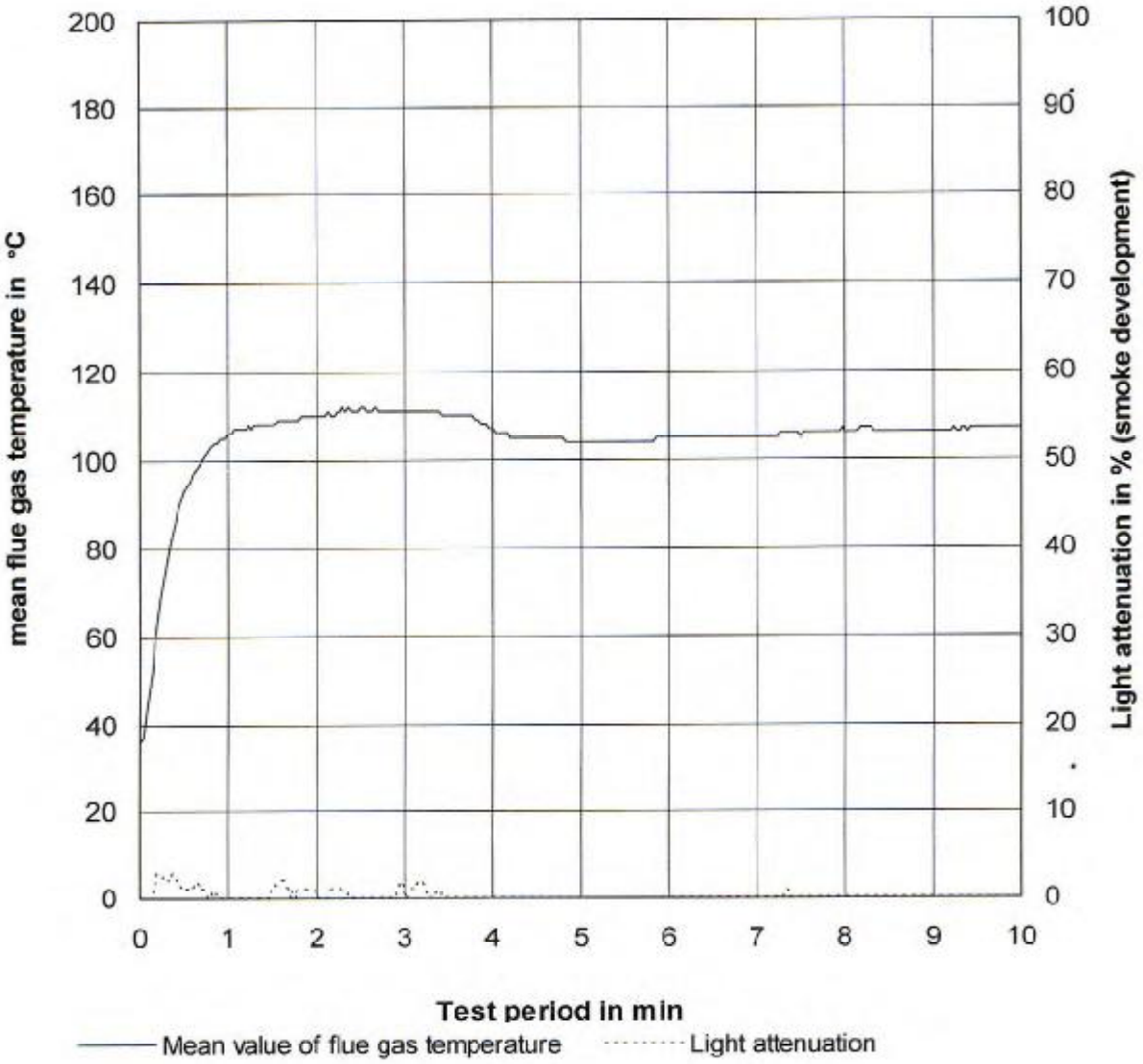
Maximum of mean flue gas temperature: 119 °C after 7:26 min:s
Area integral of smoke density < 1 %min



Flue gas temperature and smoke development
Fire shaft test on 08.04.2011

Specimen B: Woven fabric of polyester 6083FR, white color,
Weight per unit area approx. 345 g/m²,
Freely suspended sample arrangement,
Samples from transverse direction;

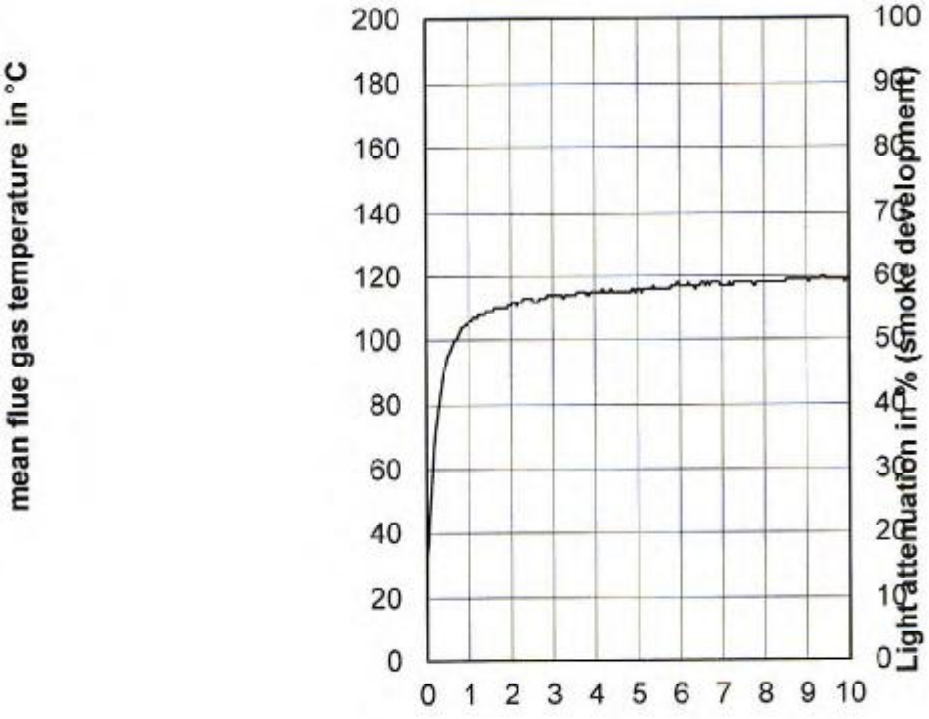
Maximum of mean flue gas temperature: 112 °C after 2:18 min:s
Area integral of smoke density: 2 %min



Flue gas temperatures and smoke development
Fire shaft test on 08.04.2011

Specimen C: Knitted fabric of polyester 2187FR, white color,
Weight per unit area approx. 46 g/m²,
Freely suspended sample arrangement,
Samples from longitudinal direction;

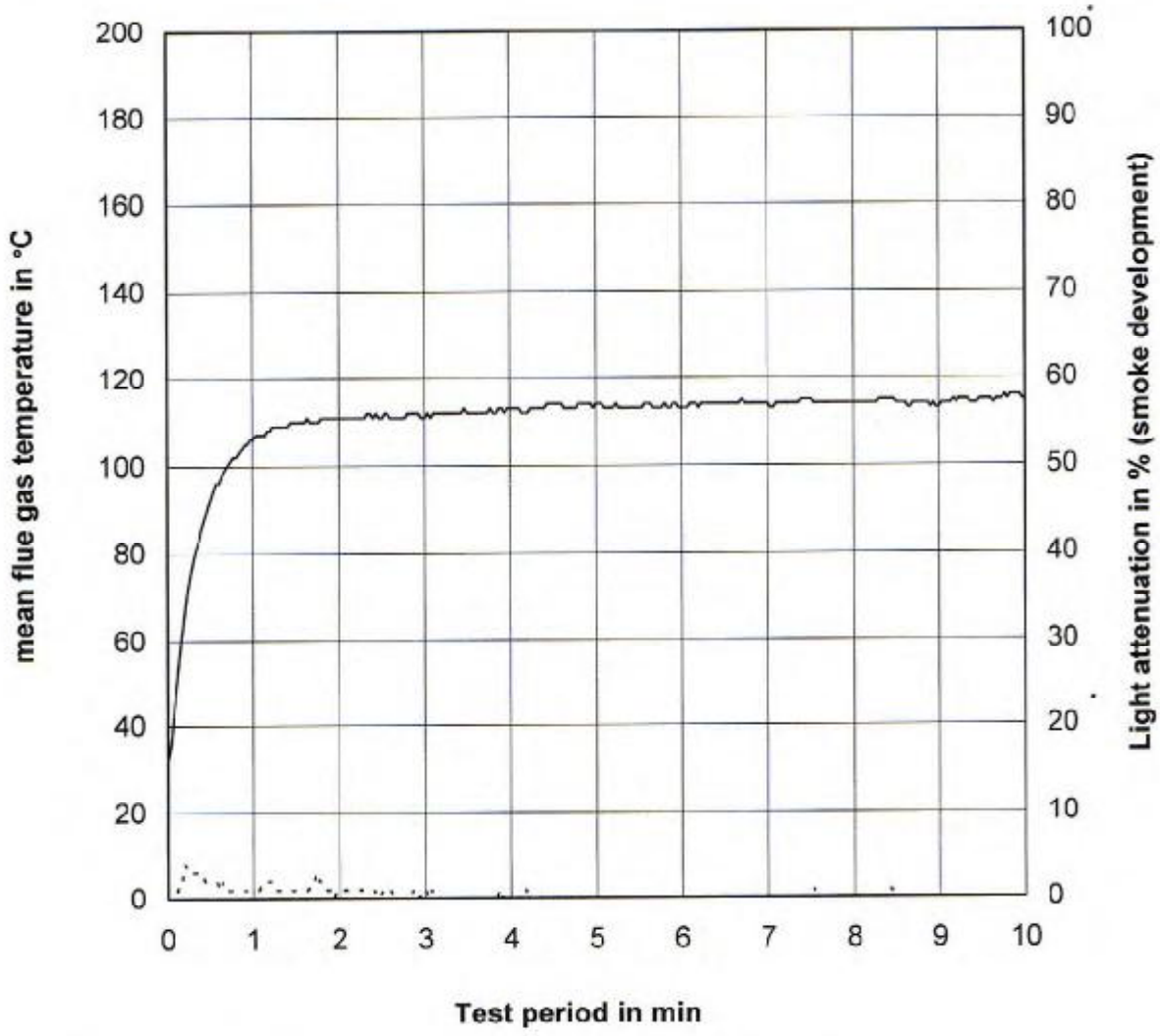
Maximum of mean flue gas temperature: 120 °C after 9:22 min:s
Area integral of smoke density: < 1 %min



Flue gas temperature and smoke development
Fire shaft test on 08.04.2011

Specimen D: Knitted fabric of polyester 3153FR, white color,
Weight per unit area approx. 277 g/m²,
Freely suspended sample arrangement,
Samples from transverse direction;

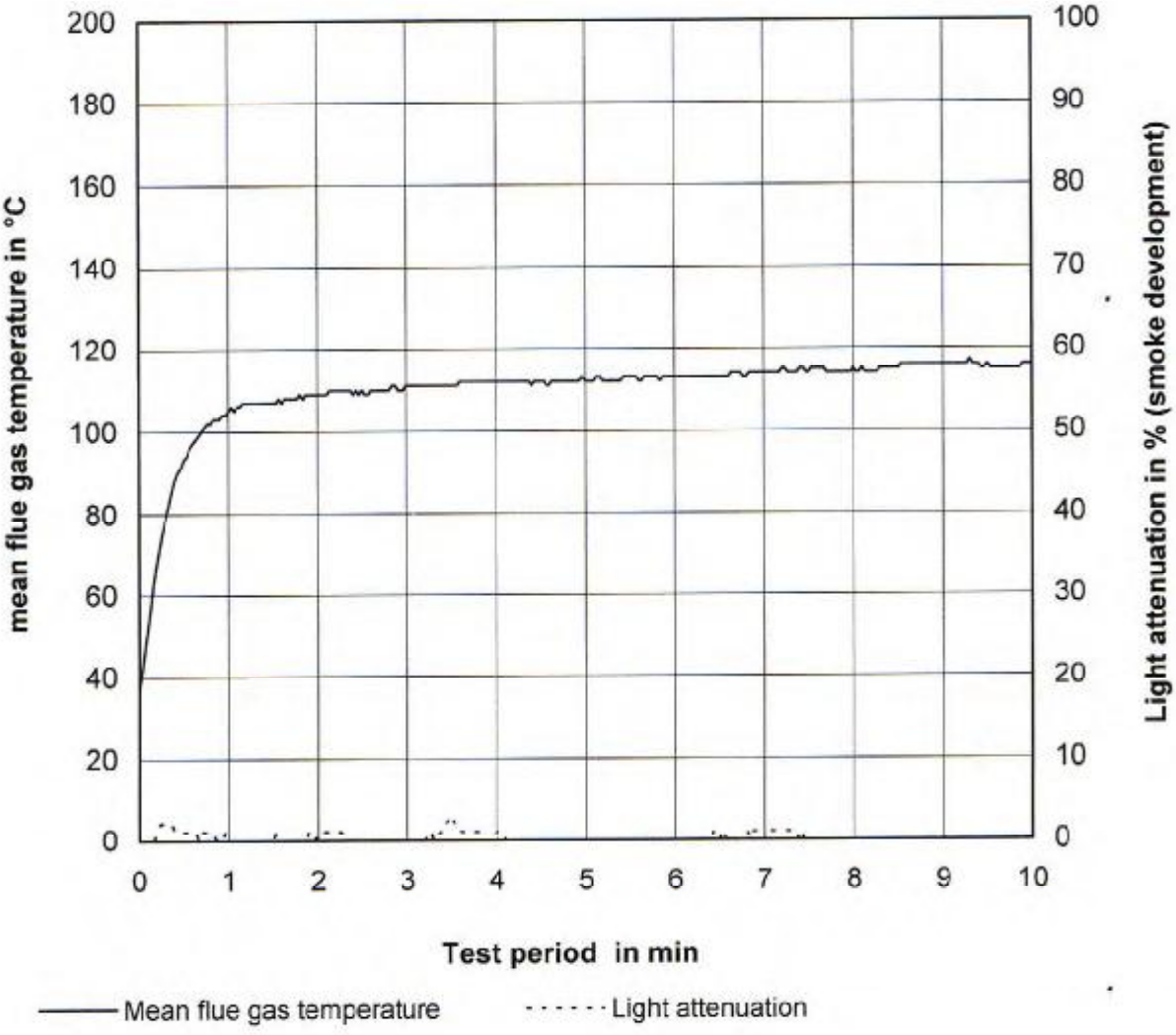
Maximum of mean flue gas temperature: 116 °C after 9:46 min:s
Area integral of smoke density: 4 %min



Flue gas temperature and smoke development
Fire shaft test on 08.04.2011

Specimen E : Woven fabric of polyester 6083FR, white color,
Weight per unit area approx. 345 g/m²,
Freely suspended sample arrangement,
Samples from longitudinal direction

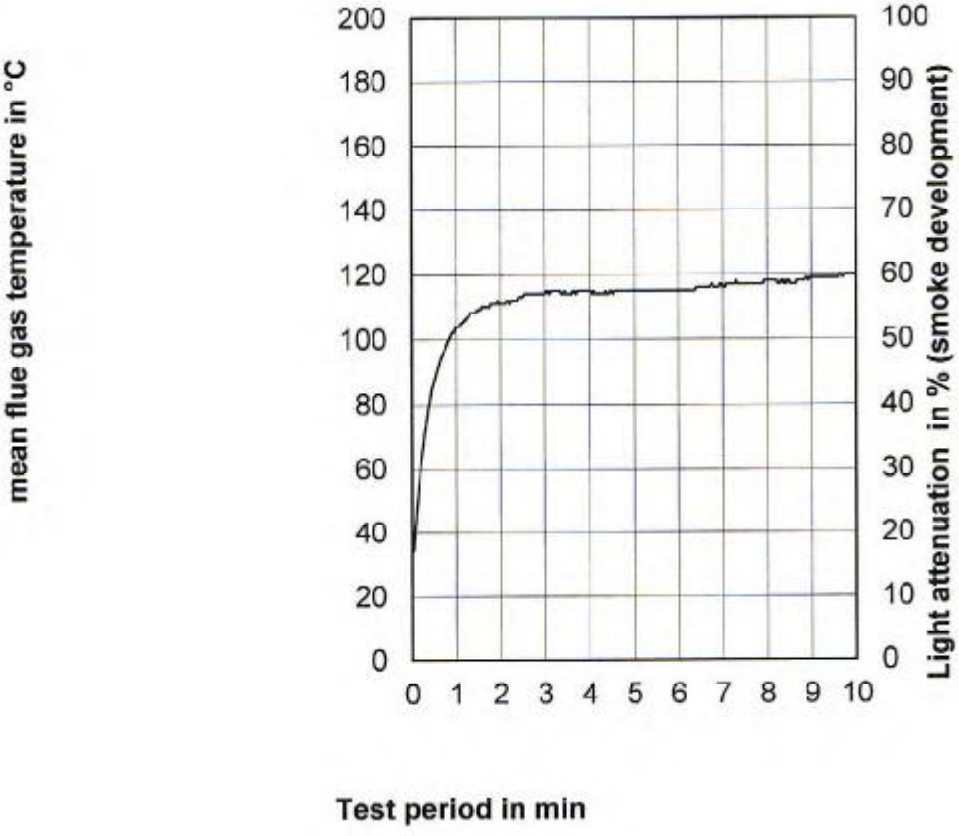
Maximum of mean flue gas temperature: 117 °C after 9:18 min:s
Area integral of smoke density: 3 %min



Flue gas temperatures and smoke development
Fire shaft test on 20.04.2011

Specimen F: Knitted fabric of polyester 2187FR, white color,
Weight per unit area approx. 46 g/m²,
Freely suspended sample arrangement,
Samples from transverse direction;

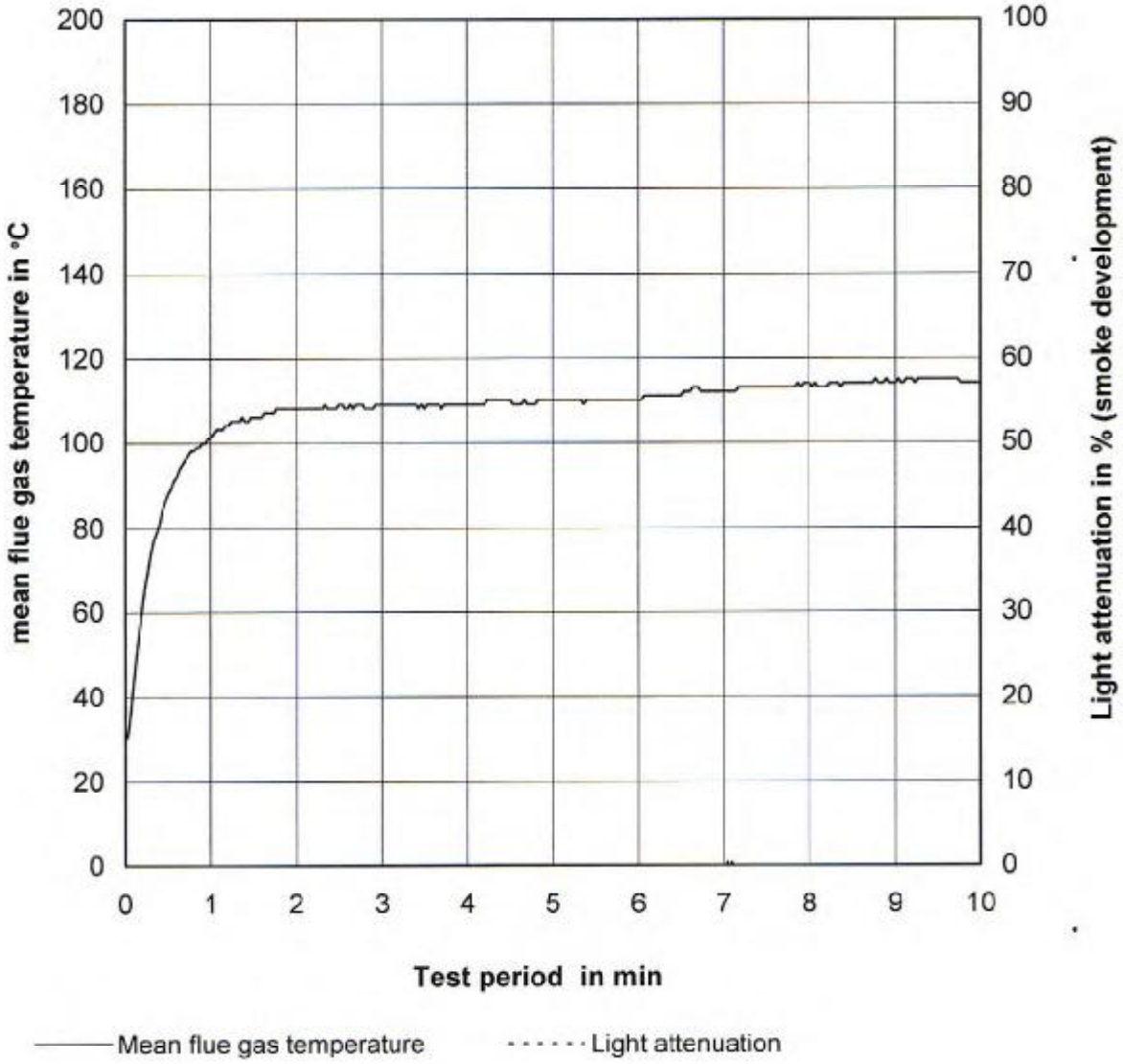
Maximum of mean flue gas temperature: 120 °C after 9:38 min:s
Area integral of smoke density: < 1 %min



Flue gas temperature and smoke development
Fire shaft test on 18.05.2011

Specimen G: Woven and/or knitted fabric of polyester 350FRn, white color,
Weight per unit area approx. 112 g/m²,
Freely suspended sample arrangement,
Samples from longitudinal direction

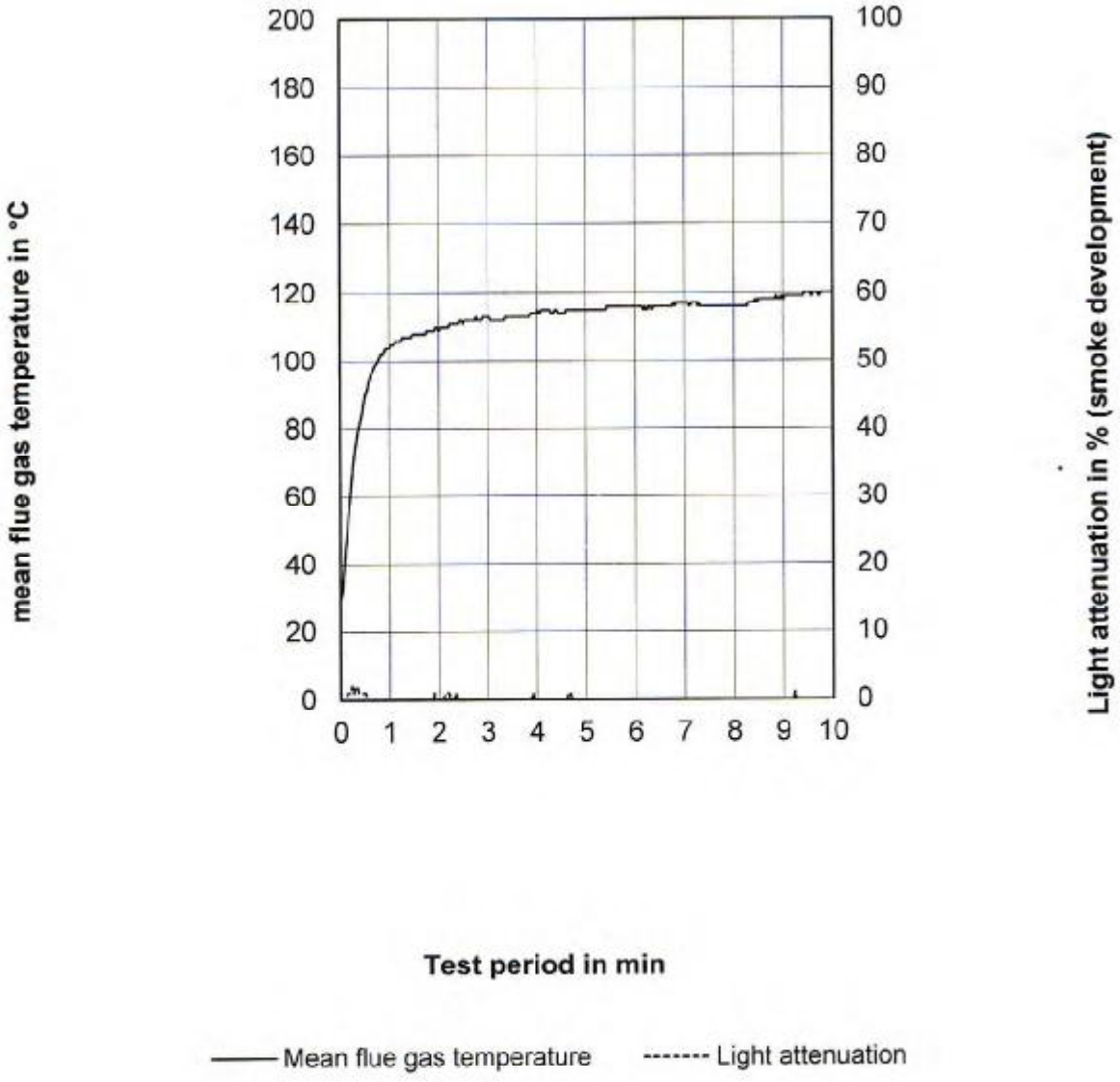
Maximum of mean flue gas temperature:	115 °C after 8:46 min:s
Area integral of smoke density	< 1 %min



Flue gas temperature and smoke development
Fire shaft test on 18.05.2011

Specimen H: Woven and/or knitted fabric of polyester 3152FRn, white color,
Weight per unit area approx. 205 g/m²,
Freely suspended sample arrangement,
Samples from longitudinal direction

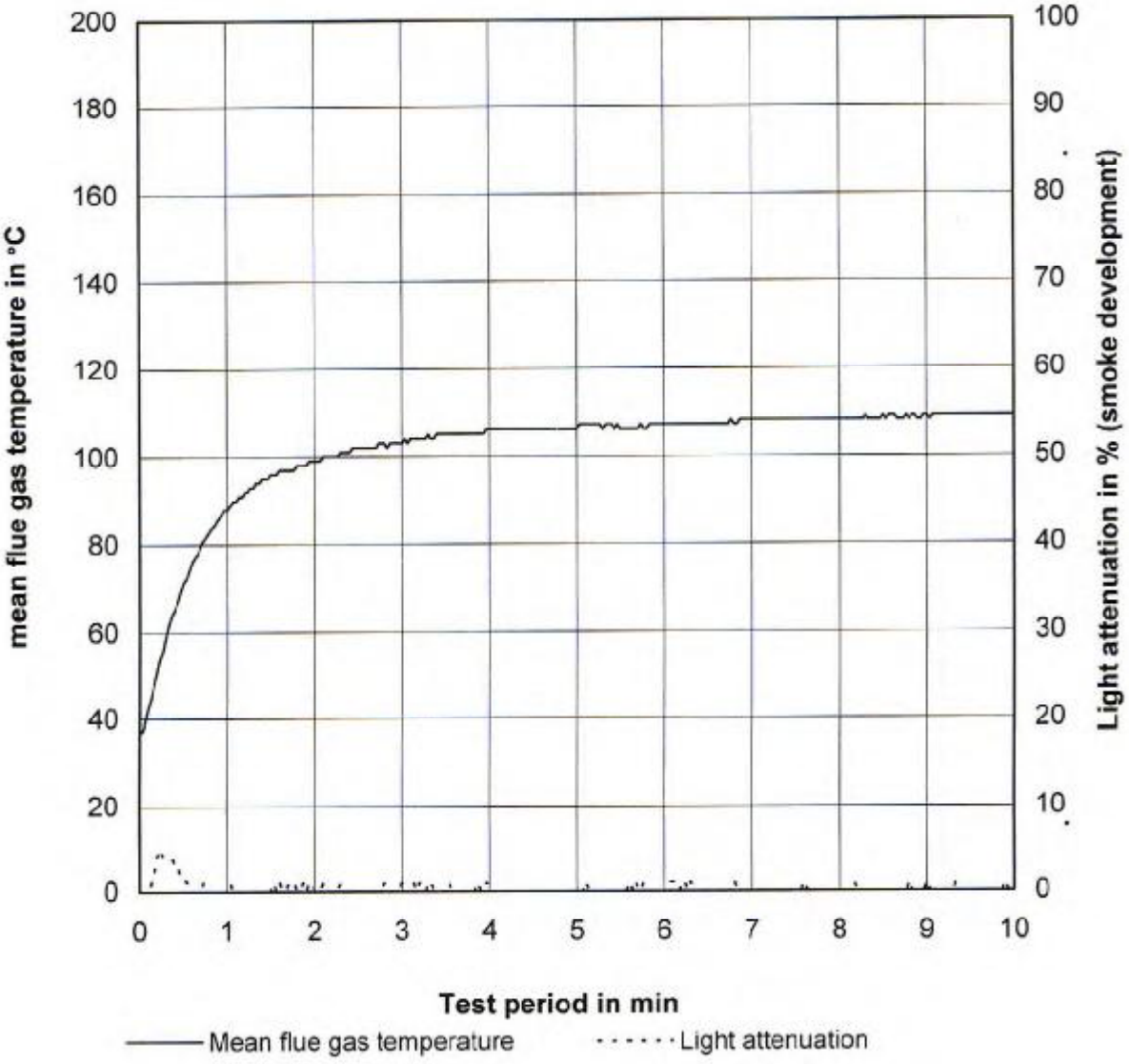
Maximum of mean flue gas temperature: 120 °C after 9:26 min:s
Area integral of smoke density: 1 %min



Flue gas temperature and smoke development
Fire shaft test on 15.05.2012

Specimen A006 : Woven and/or knitted fabric of polyester 3139FRN, white color,
Weight per unit area approx. 307 g/m²,
Freely suspended sample arrangement,
Samples from longitudinal direction

Maximum of mean flue gas temperature: 109 °C after 8:18 min:s
Area integral of smoke density: 3 %min



Flue gas temperatures and smoke development
Fire shaft test on 15.05.2012

Specimen B008 : Woven and/or knitted fabric of polyester 3139FRN, white color,
Weight per unit area approx. 307 g/m²,
Freely suspended sample arrangement,
Samples from transverse direction;

Maximum of mean flue gas temperature: 105 °C after 8:56 min:s
Area integral of smoke density: 5 %min