Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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Prüfinstitut Hoch
Lerchenweg 1
D-97650 Fladungen
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Hoch Fladungen

Test laboratory for the fire behavior of building materials, Dipl.-Ing. (FH) Andreas Hoch
Testing, supervising and certifying body, authorized by the building supervision authority

TEST REPORT
PZ-Hoch-240738

for the proof of fire behaviour according to DIN 4102, part 1

Translation of the German test report – no guarantee for translation of technical terms

company

description of samples	fabric consisting of 100% Cotton in different variants and colours
name of the material	**„Schleiernessel" / „Baumwoll-Cretonne"** **„Dekomolton" / „Baumwollnessel"** **„Eventmolton" / „Bühnenmolton"** **„Satinmolton" / „Kalmuck"**
sampling	by the company itself
content of request	Proof of flammability to classify building materials to class B1 ("schwerentflammbar") according to DIN 4102, part 1
validity of test report	31.05.2029
result	**The examined product meet in raw white, in any colour or bleached the requirements of class B1 for hardly flammable ("schwerentflammbare") building materials according to DIN 4102, pt. 1 (May 1998), suspended freely or with distance of >40 mm to same or other plain materials.**

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This test report includes 11 pages and 11 enclosures.

Remark: If the building material mentioned above is not used as a product according to MBO § 2, Abs. 9, Ziffer1, 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 as defined by 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 as defined by State Building Prescriptions. This has to be certified instead 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 underlie building supervisory procedures

- for regular building products for the prescribed proofs of conformity
- for irregular building products for the required proofs of applicability.

Without written consent of the test laboratory, this test report may only be published or duplicated during its denoted period of validity, providing that no changes to appearance or content are made.

member of egolf
notified body no.: 1508

By the DAkkS according to DIN EN ISO/IEC 17025 accredited test laboratory.
The accreditation is valid for the testing methods specified in the certificate.

DAkkS Deutsche Akkreditierungsstelle D-PL-11065-01-00

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1. Description of test material in condition as delivered

PN 39069 "Schleiernessel" colour: black
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 97 g/m² thickness: about 0,28 mm

PN 39070 "Schleiernessel" colour: light grey
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 92 g/m² thickness: about 0,25 mm

PN 39071 "Baumwoll-Cretonne" colour: black
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 170g/m² thickness: about 0,32 mm

PN 39072 "Dekomolton" colour: light red
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 176g/m² thickness: about 0,81 mm

PN 39073 "Baumwollnessel" colour: black
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 223 g/m² thickness: about 0,34 mm

PN 39074 "Baumwollnessel" colour: grey
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 209 g/m² thickness: about 0,33 mm

PN 39075 "Eventmolton" colour: black
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 288 g/m² thickness: about 1,06 mm

PN 39076 "Bühnenmolton" colour: red
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 352g/m² thickness: about 1,35 mm

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PN 39077 "Satinmolton" (bleached) colour: white
-fabric consisting of 100% Cotton-
side A: smoother surface
characteristic values determined by the test laboratory:
area weight: about 309 g/m² thickness: about 0,69 mm

PN 39078 "Satinmolton" (bleached) colour: grey
-fabric consisting of 100% Cotton-
side A: smoother surface
characteristic values determined by the test laboratory:
area weight: about 315 g/m² thickness: about 0,75 mm

PN 39079 "Kalmuck" colour: light beige
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 570g/m² thickness: about 1,67 mm

PN 39080 "Kalmuck" (bleached) colour: white
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 613g/m² thickness: about 1,55 mm

PN 39081 "Kalmuck" colour: grey
-fabric consisting of 100% Cotton-
There is no difference between side A and side B.
characteristic values determined by the test laboratory:
area weight: about 531g/m² thickness: about 1,54 mm

The testing laboratory is not provided with further details concerning composition of the tested building materials. Samples are deposited.

2. Preparation of samples

Samples with a size of 1000 mm height and 190 mm width where cut from the material for fire testing.
The samples were kept in climate chamber 23/50 until they reached constant weight.

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3. Arrangement of samples mounting: freely suspended

#7820:	flaming side A in warp direction	PN39081
#7821:	flaming side B in weft direction	PN39081
#7822:	flaming side A in warp direction	PN39080
#7825:	flaming side A in warp direction	PN39079
#7824:	flaming side A in warp direction	PN39079
#7823:	flaming side A in warp direction	PN39079
#7819:	flaming side B in weft direction	PN39078
#7818:	flaming side A in warp direction	PN39077
#7817:	flaming side A in warp direction	PN39076
#7816:	flaming side B in weft direction	PN39075
#7815:	flaming side A in warp direction	PN39074
#7814:	flaming side B in weft direction	PN39073
#7813:	flaming side A in warp direction	PN39072
#7799:	flaming side B in weft direction	PN39071
#7798:	flaming side A in warp direction	PN39070
#7797:	flaming side B in weft direction	PN39069

4. Date of test CW 21 until CW in 2024

5.1 Results (part 1) The test has been performed according to DIN 4102 (Mai 1998)

line no.	Measurement	Result with the tested specimen						Dim.
	Test number	#7820	#7821	#7822	#7825	#7824	#7823	
	flaming direction	warp	weft	warp	warp	warp	warp	
	side	A	B	A	A	A	A	
	sample-no	39081		39080	39079			
	fabric	Kalmuck						
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1	1	1	1	---
2	Maximum flame height above bottom edge of specimen	60	60	70	80	70	70	---
3	Time [1]	0:17	0:12	0:44	0:40	0:35	0:40	---
4	Burn-through / melting Time [1]	0:45	0:45	0:55	0:13	0:44	0:14	---
5	Observations on the back side of specimen Flames / Glowing	X	X	X	X	X	X	---
	Time [1]	1:40	2:05	2:15	2:05	3:00	1:50	./.
6	Change of colour Time [1]	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.
7	Falling of burning droplets Start [1]	./.	./.	./.	./.	./.	./.	min:s
	Extent							
8	sporadic falling of burning droplets [2]	-	-	-	-	-	-	
9	continuous falling of burning droplets [2]	-	-	-	-	-	-	min:s
10	Falling of burning parts Start [1]	./.	./.	./.	./.	./.	./.	min:s
	Extent							
11	sporadic falling of burning parts [2]	-	-	-	-	-	-	
12	continuous falling of burning parts [2]	-	-	-	-	-	-	

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Fire Test Certificate - Specimen

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line no.	Measurement	Result with the tested specimen						Dim.
	Test number	#7820	#7821	#7822	#7825	#7824	#7823	
	flaming direction	warp	weft	warp	warp	warp	warp	
	side	A	B	A	A	A	A	
	sample-no	**39081**		**39080**		**39079**		
13	Burning duration at sieve plate (max.)	./.	./.	./.	./.	./.	./.	min:s
14	Impairment of burner by dropping or falling material: Time [1]	./.	./.	./.	./.	./.	./.	min:s
15	Premature end of test Final occurrence of burning at the specimen [1]	1:15	1:10	1:20	1:20	2:00	1:50	min:s
16	Time of eventually end of test [1]	./.	./.	./.	./.	./.	./.	min:s
17	Afterburning after end of test Time [1]	./.	./.	./.	./.	./.	./.	min:s
18	Number of specimen	-	-	-	-	-	-	
19	Front side of specimen [2]	-	-	-	-	-	-	
20	Rear side of specimen [2]	-	-	-	-	-	-	
21	flame length	-	-	-	-	-	-	cm
22	Afterglow after end of test Time [1]	./.	./.	./.	./.	./.	./.	min:s
23	Number of specimen Place of appearance							
24	Lower half of the specimen [2]	-	-	-	-	-	-	
25	Upper half of the specimen [2]	-	-	-	-	-	-	
26	Front side of specimen [2]	-	-	-	-	-	-	
27	Rear side of specimen [2]	-	-	-	-	-	-	
28	Density of smoke ≤ 400 % * min	13	13	18	16	19	16	% * min
29	> 400 % * min [4]	-	-	-	-	-	-	% * min
30	Diagram in enclosure no.	1	1	1	2	2	2	
31	Residual lengths: individual values [3] Specimen 1	35	38	35	31	32	26	cm
	Specimen 2	30	35	34	29	31	27	cm
	Specimen 3	33	35	31	26	31	25	cm
	Specimen 4	36	37	33	28	33	24	cm
32	Average residual length [3]	**34**	**36**	**33**	**29**	**32**	**26**	
33	Photo of specimen in enclosure no.	1	1	1	2	2	2	
34	Flue gas temperature Maximum of average values	119	116	119	119	120	122	°C
35	Time [1]	01:47	09:45	02:48	02:45	02:33	02:39	min:s
36	Diagram in enclosure no.	1	1	1	2	2	2	
37	Remarks: - none -							

[1] indication of times relative to beginning of test
[2] checked if applicable
[3] indication of carrier/foam layer separated in case of fire-proofing agents
[4] very strong development of smoke

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5.2 Results (part 2) The test has been performed according to DIN 4102 (Mai 1998)

line no.	Measurement	Result with the tested specimen						Dim.
	Test number	#7819	#7818	#7817	#7816	#7815	#7814	
	flaming direction	weft	warp	warp	weft	warp	weft	
	side	B	A	A	B	A	B	
	sample-no	39078	39077	39076	39075	39074	39073	
	fabric	Satin		Bühnen	Event	Baumwollnessel		
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1	1	1	1	---
2	Maximum flame height above bottom edge of specimen	60	70	60	60	60	60	---
3	Time [1]	0:15	0:20	0:21	0:10	0:11	0:11	---
4	Burn-through / melting Time [1]	0:23	0:22	0:28	0:30	0:13	0:15	---
5	Observations on the back side of specimen Flames / Glowing	./.	./.	./.	./.	./.	./.	---
	Time [1]	./.	./.	./.	./.	./.	./.	./.
6	Change of colour Time [1]	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.
7	Falling of burning droplets Start [1]	./.	./.	./.	./.	./.	./.	min:s
	Extent							
8	sporadic falling of burning droplets [2]	-	-	-	-	-	-	
9	continuous falling of burning droplets [2]	-	-	-	-	-	-	min:s
10	Falling of burning parts Start [1]	./.	./.	./.	./.	./.	./.	min:s
	Extent							
11	sporadic falling of burning parts [2]	-	-	-	-	-	-	
12	continuous falling of burning parts [2]	-	-	-	-	-	-	
13	Burning duration at sieve plate (max.)	./.	./.	./.	./.	./.	./.	min:s
14	Impairment of burner by dropping or falling material: Time [1]	./.	./.	./.	./.	./.	./.	min:s
15	Premature end of test Final occurrence of burning at the specimen [1]	0:30	0:30	1:00	1:00	0:25	0:35	min:s
16	Time of eventually end of test [1]	./.	./.	./.	./.	./.	./.	min:s
17	Afterburning after end of test Time [1]	./.	./.	./.	./.	./.	./.	min:s
18	Number of specimen	-	-	-	-	-	-	
19	Front side of specimen [2]	-	-	-	-	-	-	
20	Rear side of specimen [2]	-	-	-	-	-	-	
21	flame length	-	-	-	-	-	-	cm

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Fire Test Certificate - Specimen

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line no.	Measurement	Result with the tested specimen						Dim.
	Test number	#7819	#7818	#7817	#7816	#7815	#7814	
	flaming direction	weft	warp	warp	weft	warp	weft	
	side	B	A	A	B	A	B	
	sample-no	39078	39077	39076	39075	39074	39073	
	fabric	Satin		Bühnen	Event	Baumwollnessel		
	Afterglow after end of test	-	-	-	-	-	-	
22	Time [1]	./.	./.	./.	./.	./.	./.	min:s
23	Number of specimen							
	Place of appearance							
24	Lower half of the specimen [2]	-	-	-	-	-	-	
25	Upper half of the specimen [2]	-	-	-	-	-	-	
26	Front side of specimen [2]	-	-	-	-	-	-	
27	Rear side of specimen [2]	-	-	-	-	-	-	
	Density of smoke							
28	≤ 400 % * min	9	10	4	9	1	5	% * min
29	> 400 % * min [4]	-	-	-	-	-	-	% * min
30	Diagram in enclosure no.	3	3	3	4	4	4	
	Residual lengths: individual values [3]							
31	Specimen 1	46	41	42	35	43	52	cm
	Specimen 2	42	42	44	35	42	49	cm
	Specimen 3	49	42	43	36	32	45	cm
	Specimen 4	46	41	42	35	35	45	cm
32	Average residual length [3]	46	42	43	35	38	48	
33	Photo of specimen in enclosure no.	3	3	3	4	4	4	
34	Flue gas temperature							
35	Maximum of average values	114	111	117	115	116	116	°C
	Time [1]	09:54	0:25	09:48	10:00	09:42	09:54	min:s
36	Diagram in enclosure no.	3	3	3	4	5	6	
37	Remarks: - none -							

[1] indication of times relative to beginning of test
[2] checked if applicable
[3] indication of carrier/foam layer separated in case of fire-proofing agents
[4] very strong development of smoke

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5.3 Results (part 3) The test has been performed according to DIN 4102 (Mai 1998)

line no.	Measurement	Result with the tested specimen				Dim.
	Test number	#7813	#7799	#7798	#7797	
	flaming direction	warp	weft	warp	weft	
	side	A	B	A	B	
	sample-no	39072	39071	39070	39069	
	fabric	Deko	BW-Cretonne	Schleiernessel		
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1	1	---
2	Maximum flame height above bottom edge of specimen	60	60	60	50	---
3	Time [1]	0:09	0:11	0:08	0:08	---
4	Burn-through / melting Time [1]	0:16	0:14	0:08	0:10	---
5	Observations on the back side of specimen Flames / Glowing Time [1]	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.
6	Change of colour Time [1]	--- ./.	--- ./.	--- ./.	--- ./.	--- ./.
7	Falling of burning droplets Start [1]	./.	./.	./.	./.	min:s
8	Extent sporadic falling of burning droplets [2]	-	-	-	-	
9	continuous falling of burning droplets [2]	-	-	-	-	min:s
10	Falling of burning parts Start [1]	./.	./.	./.	./.	min:s
11	Extent sporadic falling of burning parts [2]	-	-	-	-	
12	continuous falling of burning parts [2]	-	-	-	-	
13	Burning duration at sieve plate (max.)	./.	./.	./.	./.	min:s
14	Impairment of burner by dropping or falling material: Time [1]	./.	./.	./.	./.	min:s
15	Premature end of test Final occurrence of burning at the specimen [1]	0:30	1:05	0:19	0:55	min:s
16	Time of eventually end of test [1]	./.	./.	./.	./.	min:s
17	Afterburning after end of test Time [1]	./.	./.	./.	./.	min:s
18	Number of specimen	-	-	-	-	
19	Front side of specimen [2]	-	-	-	-	
20	Rear side of specimen [2]	-	-	-	-	
21	flame length	-	-	-	-	cm

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Fire Test Certificate - Specimen

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line no.	Measurement	Result with the tested specimen				Dim.
	Test number	#7813	#7799	#7798	#7797	
	flaming direction	warp	weft	warp	weft	
	side	A	B	A	B	
	sample-no	39072	39071	39070	39069	
	fabric	Deko	BW-Cretonne	Schleiernessel		
	Afterglow after end of test	-	-	-	-	
22	Time [1]	./.	./.	./.	./.	min:s
23	Number of specimen					
	Place of appearance					
24	Lower half of the specimen [2]	-	-	-	-	
25	Upper half of the specimen [2]	-	-	-	-	
26	Front side of specimen [2]	-	-	-	-	
27	Rear side of specimen [2]	-	-	-	-	
	Density of smoke					
28	≤ 400 % * min	4	4	2	1	% * min
29	> 400 % * min [4]	-	-	-	-	% * min
30	Diagram in enclosure no.	5	5	5	6	
	Residual lengths: individual values [3]					
31	Specimen 1	40	46	51	79	cm
	Specimen 2	42	50	40	74	cm
	Specimen 3	40	50	46	76	cm
	Specimen 4	42	52	46	74	cm
32	Average residual length [3]	41	50	46	76	
33	Photo of specimen in enclosure no.	5	5	5	6	
34	Flue gas temperature					
	Maximum of average values	112	116	113	118	°C
35	Time [1]	09:39	10:00	07:39	07:37	min:s
36	Diagram in enclosure no.	5	5	5	6	
37	Remarks: - none -					

[1] indication of times relative to beginning of test
[2] checked if applicable
[3] indication of carrier/foam layer separated in case of fire-proofing agents
[4] very strong development of smoke

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6. **Explanations concerning the testing procedure** -none-

7. **Summary of results and additional establishments to Fire Behaviour**

lineno.	Measurement / test-no.	Result with the tested specimen						dimension
		#7820 warp dir. side A	#7821 weft dir. side B	#7822 warp dir. side A	#7825 warp dir. side A	#7824 warp dir. side A	#7823 warp dir. side A	
	sample-no	39081		39080	39079			
	fabric	Kalmuck						
1	residual length	34	36	33	29	32	26	cm
2	max. smoke temperature	119	116	119	119	120	122	°C
3	integral of smoke density	13	13	18	16	19	16	%min
4	remarks: none							

lineno.	Measurement / test-no.	Result with the tested specimen						dimension
		#7819 weft dir. side B	#7818 warp dir. side A	#7817 warp dir. side A	#7816 weft dir. side B	#7815 warp dir. side A	#7814 weft dir. side B	
	sample-no	39078	39077	39076	39075	39074	39073	
	fabric	Satin		Bühnen	Event	Baumwollnessel		
1	residual length	46	42	43	35	38	48	cm
2	max. smoke temperature	114	111	117	115	116	116	°C
3	integral of smoke density	9	10	4	9	1	5	%min
4	remarks: none							

lineno.	Measurement / test-no.	Result with the tested specimen				dimension
		#7813 warp dir. side A	#7799 weft dir. side B	#7798 warp dir. side A	#7797 weft dir. side B	
	sample-no	39072	39071	39070	39069	
	fabric	Deko	BW-Cretonne	Schleiernessel		
1	residual length	41	50	46	76	cm
2	max. smoke temperature	112	116	113	118	°C
3	integral of smoke density	4	4	2	1	%min
4	remarks: none					

According to DIN 4102, pt. 1, hardly flammable ("schwerentflammbare") building materials must meet the requirements of class B2.

After performing additional tests in the ignitability apparatus, this could be verified (encl. 7 - 11).

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8. Special remarks

- This report is only valid for the material as described in paragraph 1. In combination with other materials or with additional coatings or primers etc., the burning behaviour may differ.
- This test report is not valid for the exposure to outdoor climate conditions, washing or cleaning with chemicals.
- This test report is not valid if the material is used as a building product in the sense of the State Building Regulations ("Landesbauordnungen", 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, in particular private proprietary rights.
- For legal interests, only the German original version is relevant.
- In General Building Inspectorates procedures, this test report can be used for
  - regular building materials for the required proof of accordance
  - for not regular building materials for the required proof of applicability

9. Validity

This test report is valid until the denoted date on page 1. The test report becomes invalid in case the standards on which these tests are based are changed.

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Fladungen, 10.06.2024

Clerk in charge:

(Dipl.-Ing. (FH) Jürgen Hammer)

Hoch Fladungen

Head of test laboratory:

(Dipl.-Ing. (FH) Andreas Hoch)

Fire Test Certificate - Specimen

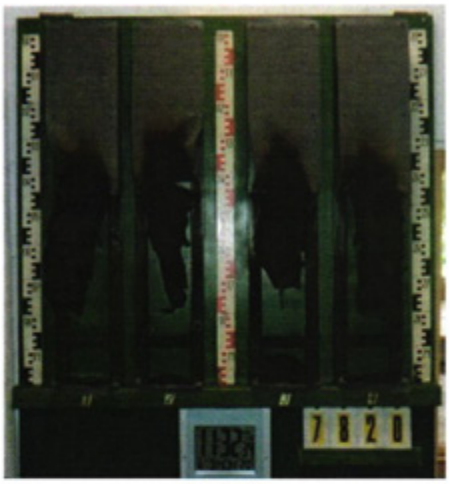
Fabric: Cotton Calico 3.0
Type: B1

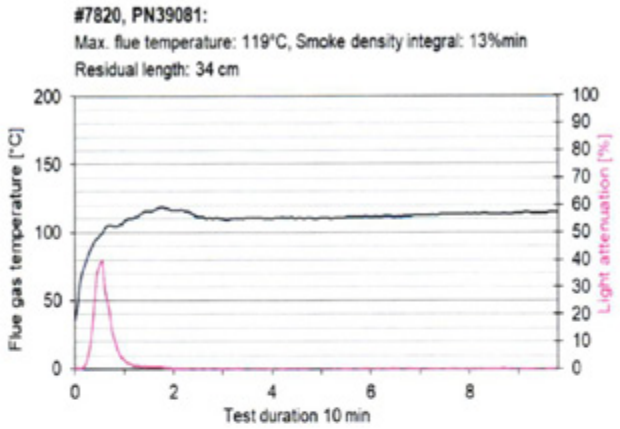
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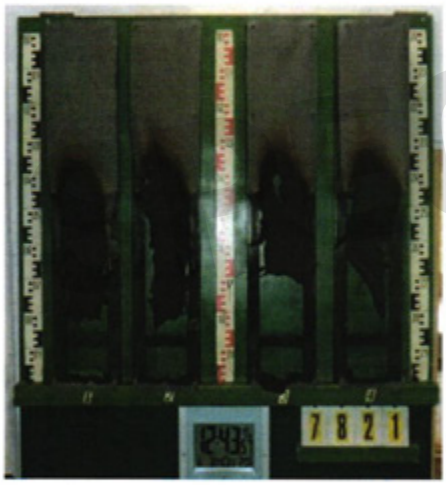
enclosure 1 test report
PZ-Hoch-240738

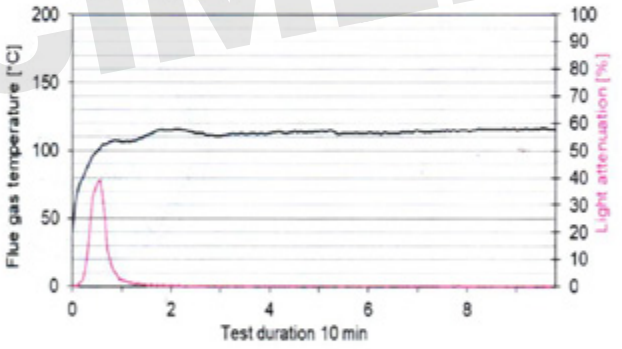
Fire shaft test #7820





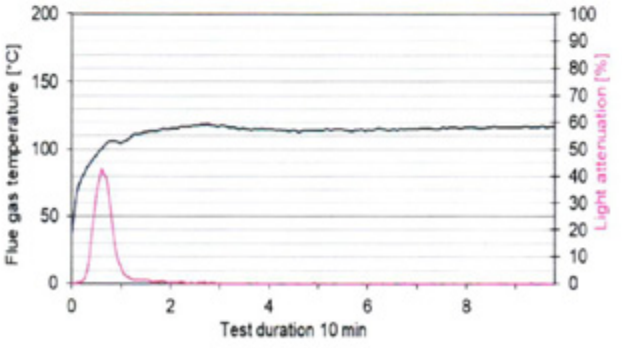
Fire shaft test #7821





Fire shaft test #7822





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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

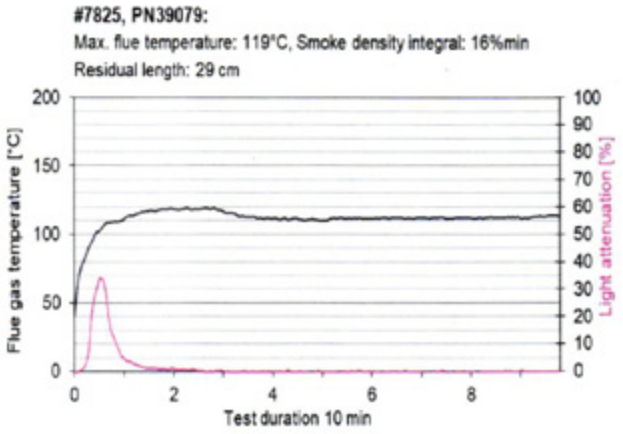
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enclosure 2 test report
PZ-Hoch-240738

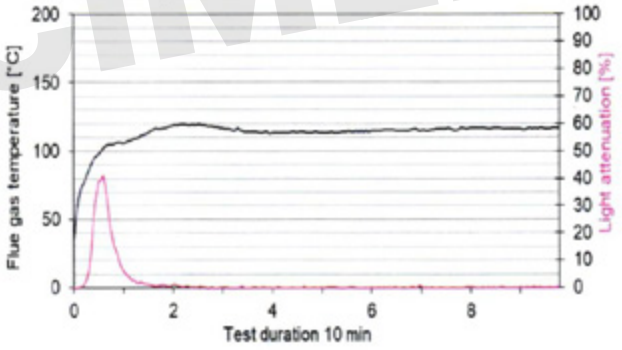
Fire shaft test #7825





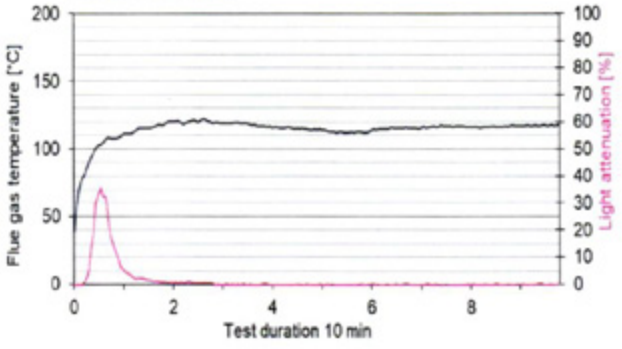
Fire shaft test #7824





Fire shaft test #7823





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Fire Test Certificate - Specimen

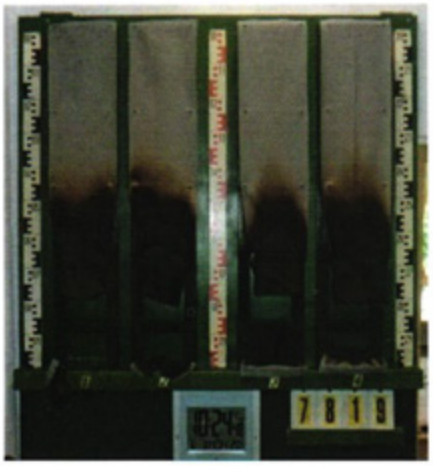
Fabric: Cotton Calico 3.0
Type: B1

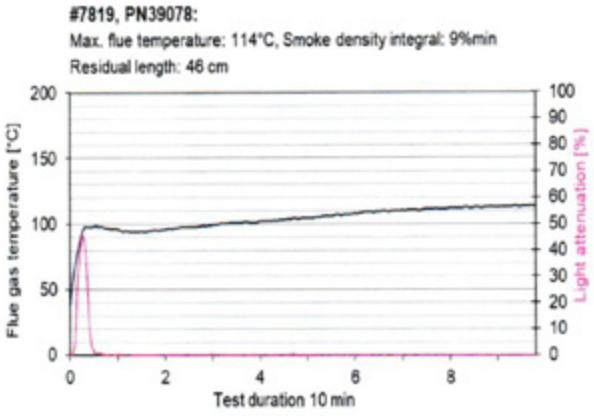
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enclosure 3 test report
PZ-Hoch-240738

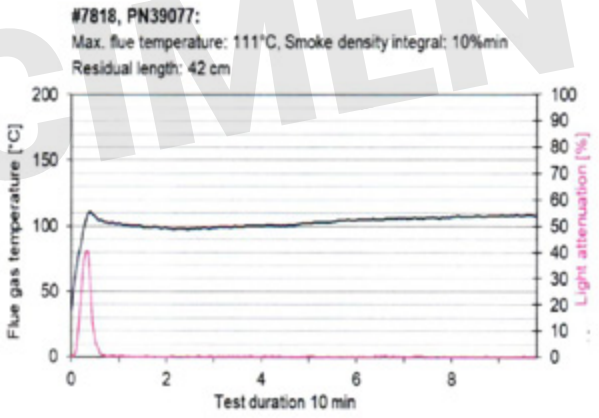
Fire shaft test #7819



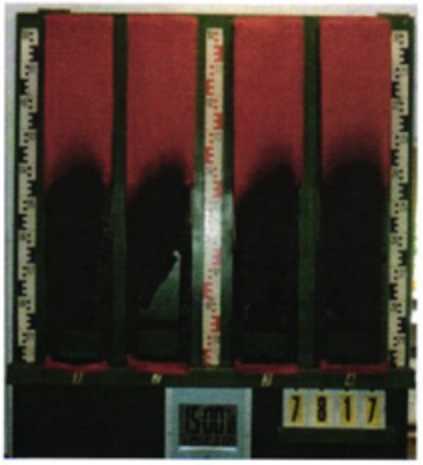


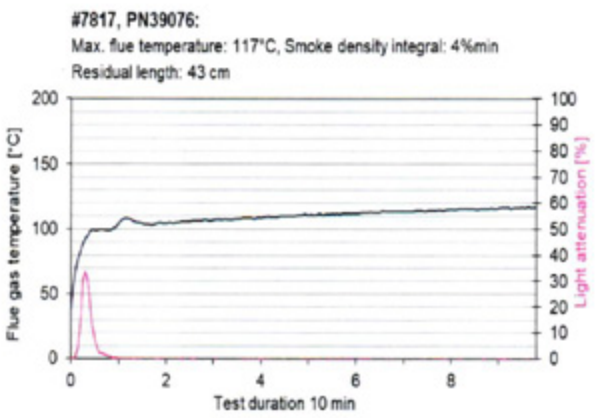
Fire shaft test #7818





Fire shaft test #7817





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Fire Test Certificate - Specimen

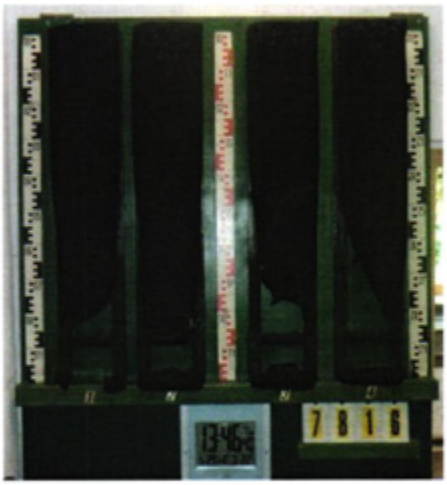
Fabric: Cotton Calico 3.0
Type: B1

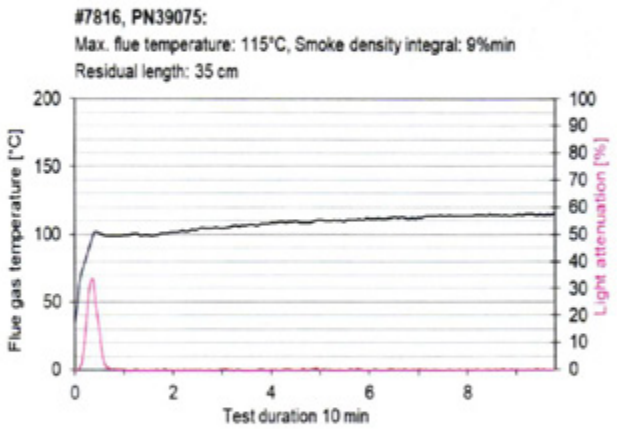
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enclosure 4 test report
PZ-Hoch-240738

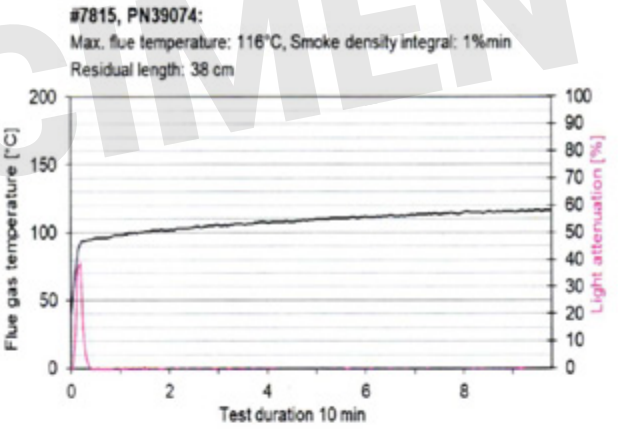
Fire shaft test #7816



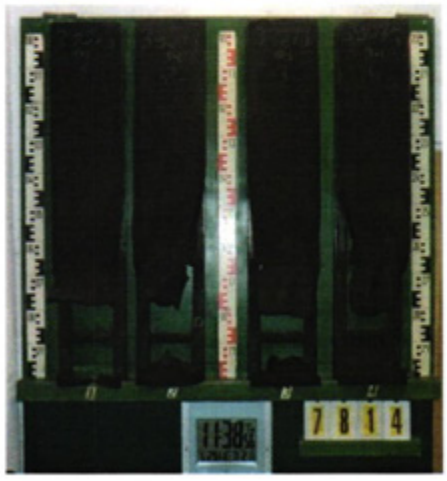


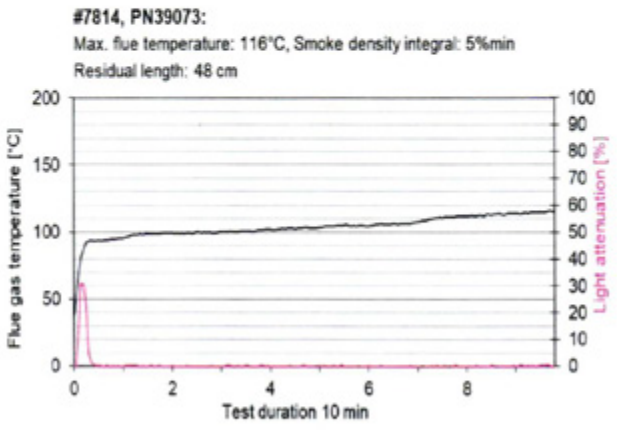
Fire shaft test #7815





Fire shaft test #7814





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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

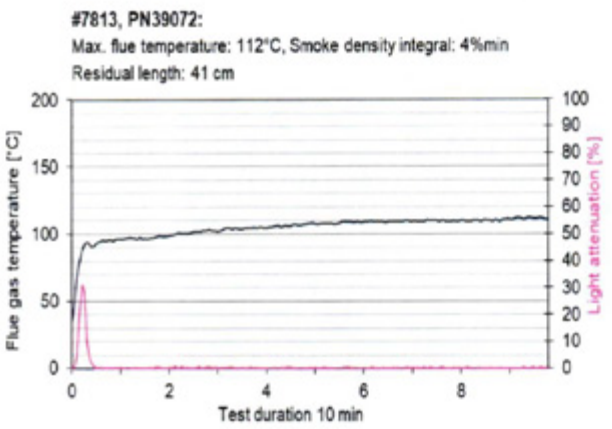
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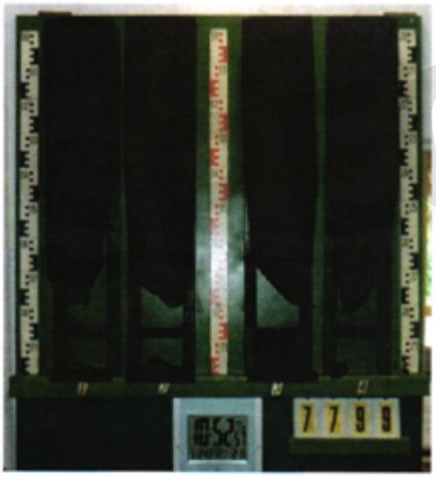
enclosure 5 test report
PZ-Hoch-240738

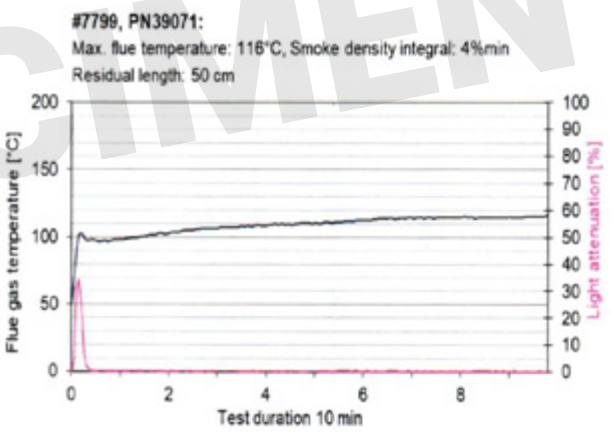
Fire shaft test #7813



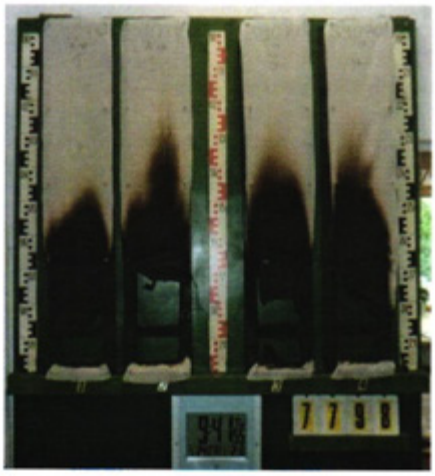


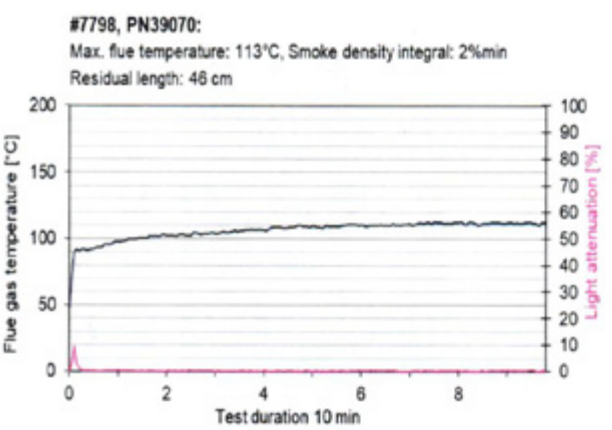
Fire shaft test #7799





Fire shaft test #7798





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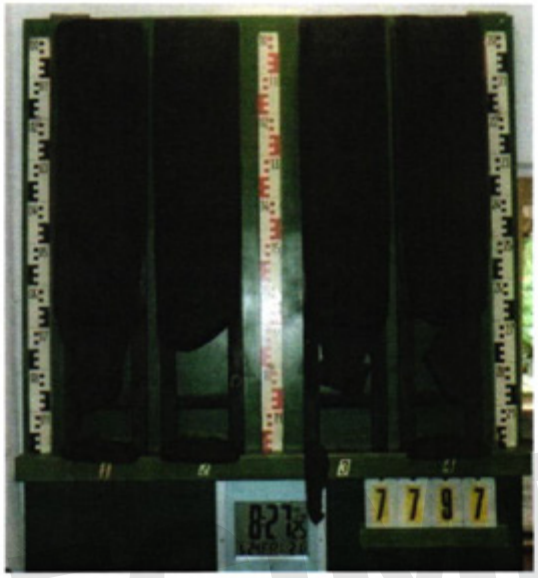
Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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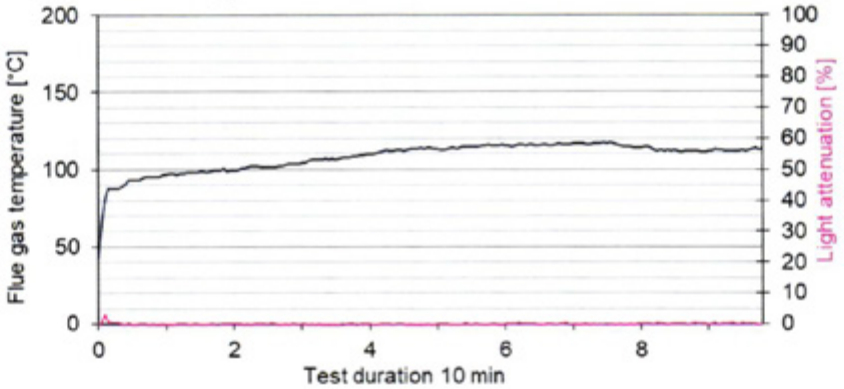
Fire shaft test #7797



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measurement

#7797, PN39069:
Max. flue temperature: 118°C, Smoke density integral: 1%min
Residual length: 76 cm



Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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enclosure 7 test report
PZ-Hoch-240738

Test for normal flammability
classifying B2 according to DIN 4102 with fire tests according to EN ISO 11925-2

1. Description of test material in condition as delivered cf. page 2
2. Preparation of samples
   Samples for the ignitability apparatus were cut from the sample.
   The samples were kept in a climate 23/50 until they reached constant weight.
   Durance of flaming: 15 seconds
3. Arrangement of samples freely suspended
   Flaming side A and side B in warp and in weft direction
4. Date of test CW 20 in 2024
5. Results

PN 39070:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AS	BS	AK	BK	BK	BS	AS	BS	AK	BK	BK	BS	
ignition[1)]	1	1	1	1	1	1	2	2	2	1	1	2	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	s
maximum flame height	**5**	**6**	**5**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**4**	**6**	cm
time of max. flame height	5	3	3	3	2	4	5	5	5	3	3	4	s
Self-cessation of flames[1)]	6	5	5	4	4	5	6	6	6	5	5	6	s
end of glowing	15	16	16	15	15	15	15	15	15	15	15	15	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	s
smoke development (visually)	little						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	s
Appearance after test: burned out till max. width 2 cm x height 7 cm													

PN 39070:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	-/-	2	-/-	-/-	--	--	4	3	2	2	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**2**	**2**	**2**	**2**	**--**	**--**	**3**	**4**	**4**	**4**	--	--	cm
time of max. flame height	-/-	5	-/-	-/-	--	--	6	6	4	5	--	--	s
Self-cessation of flames[1)]	-/-	15	-/-	-/-	--	--	8	8	7	6	--	--	s
end of glowing	15	15	15	15	--	--	15	15	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	very little						little						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2 cm x height 9 cm													

[1)] time denoted relative to beginning of test [2)] during 20 Sec -/- no occurrence -- no information
A side A B side B K warp S weft

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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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enclosure 8 test report
PZ-Hoch-240738

PN 39071:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	1	1	1	1	--	--	3	3	3	3	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**4**	**4**	**4**	**5**	--	--	**5**	**6**	**6**	**6**	--	--	cm
time of max. flame height	3	2	3	3	--	--	7	10	9	9	--	--	s
Self-cessation of flames[1)]	5	5	5	5	--	--	10	11	11	11	--	--	s
end of glowing	15	16	15	16	--	--	16	16	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 1,7 cm x height 8 cm													

PN 39072:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	2	2	2	1	--	--	3	4	3	3	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**5**	**4**	**3**	**3**	--	--	**5**	**5**	**5**	**5**	--	--	cm
time of max. flame height	6	7	4	5	--	--	7	11	9	11	--	--	s
Self-cessation of flames[1)]	10	9	7	8	--	--	13	14	15	14	--	--	s
end of glowing	16	16	15	15	--	--	16	16	16	16	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	little						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 7,5 cm													

PN 39073:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	1	1	1	2	--	--	3	3	3	3	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**3**	**3**	**4**	**3**	--	--	**5**	**5**	**4**	**4**	--	--	cm
time of max. flame height	5	5	6	5	--	--	9	13	11	9	--	--	s
Self-cessation of flames[1)]	7	8	8	7	--	--	15	15	15	15	--	--	s
end of glowing	16	15	15	15	--	--	./.	15	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	little						heavy						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 1,5 cm x height 6,0 cm													

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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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enclosure 9 test report
PZ-Hoch-240738

PN 39074:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	1	1	1	1	--	--	3	4	3	3	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**5**	**5**	**4**	**3**	--	--	**5**	**5**	**5**	**5**	--	--	cm
time of max. flame height	7	8	5	4	--	--	7	8	9	10	--	--	s
Self-cessation of flames[1)]	10	9	7	6	--	--	10	11	15	15	--	--	s
end of glowing	16	15	15	15	--	--	-/-	-/-	-/-	-/-	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						heavy						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 8,0 cm													

PN 39075:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	5	4	4	4	--	--	4	4	5	3	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**4**	**3**	**3**	**3**	--	--	**2**	**5**	**4**	**4**	--	--	cm
time of max. flame height	6	8	10	9	--	--	6	13	11	12	--	--	s
Self-cessation of flames[1)]	8	10	14	12	--	--	15	15	15	15	--	--	s
end of glowing	15	16	15	16	--	--	15	15	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	little						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,3 cm x height 7,0 cm													

PN 39076:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	2	1	2	3	--	--	6	5	6	5	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**3**	**3**	**3**	**3**	--	--	**2**	**2**	**2**	**2**	--	--	cm
time of max. flame height	5	4	7	8	--	--	15	15	8	7	--	--	s
Self-cessation of flames[1)]	7	14	15	13	--	--	10	15	15	15	--	--	s
end of glowing	16	15	15	17	--	--	15	15	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						heavy						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 6,0 cm													

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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

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enclosure 10 test report
PZ-Hoch-240738

PN 39077:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	1	1	1	1	--	--	-/-	-/-	10	9	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**5**	**4**	**5**	**4**	--	--	**2**	**2**	**5**	**5**	--	--	cm
time of max. flame height	10	11	9	11	--	--	-/-	-/-	14	13	--	--	s
Self-cessation of flames[1)]	13	14	11	13	--	--	-/-	-/-	15	15	--	--	s
end of glowing	16	15	16	15	--	--	15	16	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 9,0 cm													

PN 39078:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	5	1	1	2	--	--	-/-	6	7	5	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**3**	**3**	**3**	**4**	--	--	**2**	**5**	**4**	**3**	--	--	cm
time of max. flame height	9	7	6	8	--	--	-/-	14	12	10	--	--	s
Self-cessation of flames[1)]	12	11	11	11	--	--	-/-	15	15	15	--	--	s
end of glowing	15	15	15	15	--	--	-/-	15	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	little						little						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 8,0 cm													

PN 39079:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	5	3	4	3	--	--	-/-	-/-	-/-	-/-	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	**2**	**3**	**2**	**2**	--	--	**2**	**2**	**2**	**2**	--	--	cm
time of max. flame height	6	8	7	8	--	--	-/-	-/-	-/-	-/-	--	--	s
Self-cessation of flames[1)]	15	15	15	15	--	--	-/-	-/-	-/-	-/-	--	--	s
end of glowing	22	22	22	22	--	--	15	15	-/-	-/-	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 6,0 cm													

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Fire Test Certificate - Specimen

Fabric: Cotton Calico 3.0
Type: B1

J&C Joel
Inspiration in every performance

Hoch Fladungen
Prüfinstitut Hoch
Lerchenweg 1
D-97650 Fladungen

enclosure 11 test report
PZ-Hoch-240738

PN 39080:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	2	2	2	2	--	--	2	2	2	2	--	--	cm
time of max. flame height	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Self-cessation of flames[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
end of glowing	22	22	22	22	--	--	-/-	16	15	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	little						little						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 5,0 cm													

PN 39081:	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
side/direction	AK	BK	AS	BS	--	--	AK	BK	AS	BS	--	--	
ignition[1)]	6	7	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
measurement mark reached[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
maximum flame height	2	2	2	2	--	--	2	2	2	2	--	--	cm
time of max. flame height	10	10	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Self-cessation of flames[1)]	15	15	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
end of glowing	15	18	22	22	--	--	-/-	-/-	12	15	--	--	s
flames were extinguished after[1)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visually)	moderate						moderate						
dropping of burning material[1)2)]	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. width 2,0 cm x height 6,0 cm													

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[1)] time denoted relative to beginning of test
A side A B side B K warp S weft

[2)] during 20 Sec -/- no occurrence -- no information

6. Remarks and explanations to the testing procedure - none –
7. Opinion concerning the dropping of burning material
The test for normal flammability shows no dropping burning material.