Prüfinstitut Hoch
Lerchenweg 1
D-97650 Fladungen
Tel.: 09778–7480-200, Fax: 09778–7480-209
notified body no.: 1508 Mitglied der
hoch.fladungen@t-online.de www.brandverhalten.de

Hoch
Fladungen

Prüfinstitut für das Brandverhalten von Bauprodukten, Dipl.-Ing. (FH) Andreas Hoch
Bauaufsichtlich anerkannte Prüf-, Überwachungs- und Zertifizierungsstelle

TEST REPORT

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

Nr. PZ-Hoch-07841-2

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

Company:	**Julius Heywinkel GmbH** Textil- und Kunststoffwerk Heywinkelstraße 1 D-49565 Bramsche
Description of samples:	PVC coated polyester fabric, plain (white) and printed
Name of the material:	**„Artikel 6803 291“**
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:	September 30th 2012*)
Result:	**The plain and printed examined product meets the requirements of class B1 for “schwerentflammbare” (hardly flammable) building materials according to DIN 4102, part 1 (May 1998) , suspended freely or with distance of >40 mm to same or other plain materials.**

This test report includes 4 pages and 3 enclosures.

Remark: If the above mentioned building material is not used as 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 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 underlie building supervisory procedures

- for regular building products for the prescribed proofs of conformity
- for non regular building products for the needed proofs of applicability.

This test report must not be published and copied without preceding agreement of the test laboratory and if agreed, only during validity and unchanged concerning appearance and contents.

*) prolongation on request.

1. Description of test material in condition as delivered

PN 7111: PVC coated polyester fabric; on both sides white

name of the material: **„Artikel 6803 291“**

top side: plane back side: structured

characteristic values determined by the test laboratory:
area weight: about 390 g/m² thickness: about 0,33 mm

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

PN 7112: PVC coated polyester fabric; one sided printed

name of the material: **„Artikel 6803 291“**

top side: plane, printed (Schwarzdruck)
The black print consists of all color nuances of the fundamental colors. Therefore all basic colors are covered.

back side: white, structured

characteristic values determined by the test laboratory:
area weight: about 390 g/m² thickness: about 0,34 mm

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

2. Preparation of samples:

The samples were kept in climate chamber 23/50 until they reached constant weight.

3. Arrangement of samples: freely suspended

#7285:	flaming the printed side in warp direction	PN 7112
#7297:	flaming the printed side in weft direction	PN 7112
#7286:	flaming the side B in weft direction	PN 7111
# 7296	flaming the side B in wrap direction	PN 7111

4. Date of test week 36 in 2007

5. Results: The test has been examined according to DIN 4102 (Mai 1998)

line No.	Measurement / Test number	Result with the tested specimen #7285 printed top side warp direction	#7297 printed top side weft direction	#7286 white back side weft direction	#7296 white back side warp direction	Dim.
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1	1	
2	Maximum flame height above bottom edge of the specimen	40	40	40	40	cm
3	Time [1]	0:11	0:14	0:16	0:14	min:s
4	Burn through / melting Time [1]	0:05	0:06	0:05	0:04	min:s
	Observations on the back side of the specimen					
	Flames / Glowing	---	---	---	---	
5	Time [1]	./.	./.	./.	./.	min:s
	Change of color	---	---	---	---	
6	Time [1]	./.	./.	./.	./.	min:s
	Falling of burning droplets					
	Start [1]	./.	./.	./.	./.	
7	Extent					min:s
	sporatic falling of burning droplets [2]					
8	continuous falling of burning droplets	---	---	---	---	
9	[2]	---	---	---	---	min:s

line No.	Measurement / Test number	Result with the tested specimen #7285 printed top side warp direction	#7297 printed top side weft direction	#7286 white back side weft direction	#7296 white back side warp direction	Dim.
	Falling of burning droplets					
	Start [1]	./.	./.	./.	./.	
10	Extent					min:s
	sporatic falling of burning droplets [2]					
11	continuous falling of burning droplets [2]	---	---	---	---	
12		---	---	---	---	
13	Afterflame time at the bottom of the sieve (max.)	./.	./.	./.	./.	min:s
	Impairment of the burner by dropping or falling material:					
14	Time [1]	./.	./.	./.	./.	min:s
	Premature end of test					
15	Final occurance of burning at the specimen [1]	./.	./.	./.	./.	min:s
16	Time of eventually end of test [1]	./.	./.	./.	./.	min:s
	Afterflame after end of test					
17	Time [1]	./.	./.	./.	./.	min:s
18	Number of specimen	---	---	---	---	
19	Front side of specimen [2]	---	---	---	---	
20	Back side of specimen [2]	---	---	---	---	
21	flame length	---	---	---	---	cm
	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	Back side of specimen [2]	---	---	---	---	
	Density of smoke					
28	≤ 400 % * min	36	53	46	49	% * min
29	> 400 % * min [4]	---	---	---	---	% * min
30	Diagram: encl. no.	1	---	2	---	
	Residual lengths: individual value [3]					
	Specimen 1	64	64	64	67	cm
31	Specimen 2	65	66	60	61	cm
	Specimen 3	71	66	63	63	cm
	Specimen 4	63	60	65	58	cm
32	Average value, individual test [3]	**61**	**64**	**63**	**62**	
33	Photo of specimen in enclosure no.	1	---	2	---	
	Flue gas temperature					
34	Maximum of average value	106	119	105	121	°C
35	Time [1]	10:00	9:43	9:37	9:58	min:s
36	Diagram: encl. no.	1	---	2	---	
37	Remarks: - none -					

1) indication of times: from the begin of testing procedure
2) checked off if applicable
3) indication of carrier/foam layer separated in case of fire-proofing agents
4) very strong development of smoke

6. Explanations concerning the testing procedure:

There were no additional tests proceeded because of the residual length of more than 45 cm.

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

lineno.	Measurementt test-no.	Result with the tested specimen #7285 printed top side warp direction	 #7297 printed top side weft direction	 #7286 white bottom side weft direction	 #7296 white bottom side warp direction	dimen-sion
1	residual length	61	64	63	62	cm
2	max. smoke temperature	106	119	105	121	°C
3	density of smoke - integral	36	53	46	49	%min
4	remarks: -none-					

According to DIN 4102, part 1, "schwerentflammbare" (hardly flammable) building materials must meet the requirements of class B2.
Pursuant to additional tests in the ignitability apparatus this can be determined (appendix 3).

8. Special remarks:

- This report is only valid for the material as described under paragraph 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, washing or cleaning with chemicals.
- This test report is not valid, as soon as the fabric is used as a building product in the sense of the "Landesbauordnungen" (state building requirements, 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, im particular private proprietary rights.
- For legal interests only the German original version is relevant.
- In General Building Inspectorates procedures this test report can be based 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 mentioned date on page 1. The test report becomes invalid in case the standards on which the tests are based are changed.

Fladungen, February 11th 2008

clerk in charge:

Tina Zitzmann

(Dipl.-Ing.(FH) Tina Zitzmann)

ANERKANNTE PRÜF-, ÜBERWACHUNGS- UND ZERTIFIZIERUNGSSTELLE
Hoch
FLADUNGEN

Head of the test laboratory:

Andreas Hoch

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