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www.reaction-to-fire.de

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-200085

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

result	The 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.
validity of test report	31.01.2025
content of request	Proof of flammability to classify building materials to class B1 "schwerentflammbar" according to DIN 4102, part 1
sampling	by the company itself
name of the material	"Wilson"
description of samples	fabric consisting of 100% Polyester FR colour: petrol / petrol-grey
	NL-5753 Deurne
company	Vescom B.V. St. Jozefstraat 20

This test report includes 4 pages and 4 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This test report must not be published and copied without preceding agreement of the test laboratory and if agreed, only during validity and unchanged concerning appearance and contents.





1. Description of test material in condition as delivered

PN 30677: "Wilson" colour: petrol / petrol-grey

- fabric consisting of 100% Polyester FR side A: mainly petrol side B: petrol-grey <u>characteristic values determined by the test laboratory:</u> area weight: about 520 g/m² thickness: about 1.57 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 mounting: freely suspended

#3206	flaming side A in warp direction
#3207	flaming side B in warp direction
#3208	flaming side A in weft direction

- 4. Date of test CW 04 in 2020
- 5. <u>Results</u> The test has been examined according to DIN 4102 (Mai 1998)

	Measurement	Re	sult with th	ne tested s	pecimer	n	Dim.
no	Test number	#3206	#3207	#3208			
line	flamed direction flamed side	warp A	warp B	weft A			
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1			
2 3	Maximum flame height above bottom edge of the specimen Time ¹⁾	40 0:06	30 0:02	30 0:02			cm min:s
4	Burn through / melting Time ¹⁾	0:10	0:10	0:09			min:s
5	Observations on the back side of the specimen Flames / Glowing Time ¹⁾ Change of color	. <i>J.</i> . <i>J.</i> . <i>J.</i>	.I. .I. .I.	.1. .1. .1.	.J. .J. .J.	.I. .I. .I.	min:s
7 8 9	Falling of burning droplets Start ¹⁾ Extent sporatic falling of burning droplets ²⁾ continuous falling of burning droplets ²⁾			.1. .1. .1. .1.			min:s
10	Falling of burning droplets Start ¹⁾ Extent	./. ./.	./. ./.	./. ./.	./. ./.	./. ./.	min:s
12	continuous falling of burning droplets ²⁾	./.	./.	./.	./.	./.	



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	Measurement	Re	sult with th	he tested s	pecime	n	Dim.
0 U	Test number	#3206	#3207	#3208			
line	flamed direction	warp	warp	weft			
	flamed side	A	В	A			
13	Attendame time at the bottom of the sieve (max)	,	,	,	,	,	minie
	Impairment of the burner by dropping	./.	./.	./.	./.	./.	11111.5
	or falling material:						
14	Time ¹⁾	./.	./.	./.	./.	./.	min:s
15	Premature end of test	,					
	Final occurance of burning at the	./.	./.	./.	./.	./.	min:s
16	Time of eventually end of test ¹⁾	./.	.1.	./.	./.	./.	min:s
	Afterflame after end of test						
17	Time ¹⁾	./.	./.	./.	./.	./.	min:s
18	Number of specimen	./.			./.	./.	
20	Back side of specimen ²⁾	./.	./. ./.		./.	./.	
21	flame length	./.	./.	./.	./.	./.	cm
	Afterglow after end of test	./.	./.	./.	./.	./.	
22	Time ¹⁾	./.	./.	./.	./.	./.	min:s
23	Number of specimen	./.	./.	./.	./.	./.	
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 -/	./.	./.	./.	./.	./.	
28	$\frac{\text{Density of smoke}}{\sqrt{400\% * \min}}$	1	1	1			0/ +
29	$> 400 \% * min^{4}$		1		/	/	% * min % * min
30	Diagram: encl. no.	1	2	3			
	Residual lengths: individual value ³⁾						
	Specimen 1	61	65	63		. 6,	cm
31	Specimen 2 Specimen 2	60 62	63	61			cm
	Specimen 4	61	61	64			cm
32	Average value, individual test ³⁾	61	63	65			
33	Photo of specimen in enclosure no.	1	2	3			
31	Flue gas temperature	118	120	121			°C
25	Maximum of average value	00:04	07:40	00:45			
35	Time ¹⁾	09.21	07:40	09:45			min:s
36	Diagram: encl. no.	1	2	3			
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 \geq than 45 cm.

7. Summary of results and additional establishments to Fire Behaviour

en .	measurement	Result with the tested specimen								
ŭ O	test-no.	#206	#3207	#3208			din nsia			
	flamed direction flamed side	warp A	warp B	weft A						
1	residual length	61	63	65			cm			
2	max. smoke temperature	118	120	121			°C			
3	density of smoke - integral	1	1	1			%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 4).

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
 - o regular building materials for the required proof of accordance
 - o 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.

SERWACHUNGS. Fladungen, 05,02.2020 clerk in charge PRUF Fladunger (Dipl.-Ing.(FH) Jürgen Hammer)

Head of the test laboratory:

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



Prüfinstitut Hoch Lerchenweg 1 D-97650 Fladungen













Test for normal flammability classifying B2 according to DIN 4102

- 1. Description of test material in condition as delivered look at page 2
- 2. Preparation of samples

Out of the material there have been cut samples for the ignitability apparatus. The samples were kept in a climate 23/50 until they reached constant weight.

3. Arrangement of samples -freely suspended-

Flaming in warp and weft direction / side A and side B

- 4. Date of test CW 06 in 2020
- 5. Results

"Wilson": flaming side A in warp direction	surface-test						edge-test						
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	Dim
ignition ¹⁾	4	4	4	4	4		1						s
reaching the mark of measurement ¹⁾²⁾	-/-	-/-	-/-	-/-	-/-		-/-						s
max. flame height	13	13	9	11	12		11						cm
time	20	20	20	20	20		15						
self cessation of the flames end of afterflame ¹⁾	-/-	-/	-/-	./.	-/-		17						s
end of glowing ¹⁾	-/-	-/-	-/-	-/-	-/-		-/-						s
flames were extinguished after ¹⁾	25	25	25	25	25		-/-						
smoke development (visual)			mode	rate		I			mode	erate			./.
dropping of burning material during 20 s1)	-/-	13	-/-	-/-	17		-/-						s
Appearance after test: burned out till max. height 10 cm x width 8 cm													
"Wilson": additional tests			edge	test				s	urfac	e-tes	st		
"Wilson": additional tests samples no.	1	2	edge 3	- test 4	5	6	1	s 2	urfac 3	e-tes	st 5	6	Dim
"Wilson": additional tests samples no. ignition ¹⁾	1	2 1	edge 3 1	- test 4	5	6	1	s 2 4	urfac 3 4	e-te: 4	st 5 	6	s Dim
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾	1 1 -/-	2 1 -/-	edge- 3 1 -/-	-test 4 	5 	6 	1 4 -/-	s 2 4 -/-	urfac 3 4 -/-	e-te: 4 	5 	6 	s Dim
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height	1 1 -/- 6	2 1 -/- 4	edge- 3 1 -/- 7	-test 4 	5 	6 	1 4 -/- 9	s 2 4 -/- 5	urfac 3 4 -/- 5	4 	st 5 	6 	s s cm
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time	1 1 -/- 6 12	2 1 -/- 4 8	edge- 3 1 -/- 7 20	-test 4 	5 	6 	1 4 -/- 9 10	s 2 4 -/- 5 10	urfac 3 4 -/- 5 10	4 	5 	6 	s s cm
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time self cessation of the flames end of afterflame ¹⁾	1 -/- 6 12 14	2 1 -/- 4 8 10	edge- 3 1 -/- 7 20 -/-	-test 4 	5 	6 	1 4 -/- 9 10 19	s 2 4 -/- 5 10 15	urfac 3 4 -/- 5 10 15	4 	st 5 	6 	s s s
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time self cessation of the flames end of afterflame ¹⁾ end of glowing ¹⁾	1 -/- 6 12 14 -/-	2 1 -/- 4 8 10 -/-	edge- 3 1 -/- 7 20 -/- -/-	-test 4 	5 	6 	1 4 -/- 9 10 19 -/-	s 2 4 -/- 5 10 15 -/-	urfac 3 4 -/- 5 10 15 -/-	4 	st 5 	6 	s s s s s
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time self cessation of the flames end of afterflame ¹⁾ end of glowing ¹⁾ flames were extinguished after ¹⁾	1 -/- 6 12 14 -/- -/-	2 1 -/- 4 8 10 -/- -/-	edge- 3 1 -/- 7 20 -/- -/- 30	-test 4 	5 	6 	1 4 -/- 9 10 19 -/- -/-	s 2 4 -/- 5 10 15 -/- -/-	urfac 3 4 -/- 5 10 15 -/- -/-	4 	st 5 	6 	s s s s s s s
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time self cessation of the flames end of afterflame ¹⁾ end of glowing ¹⁾ flames were extinguished after ¹⁾ smoke development (visual)	1 -/- 6 12 14 -/- -/-	2 1 -/- 4 8 10 -/- -/-	edge- 3 1 -/- 7 20 -/- -/- 30 mode	-test 4 rate	5 	6 	1 4 -/- 9 10 19 -/- -/-	s 2 4 -/- 5 10 15 -/- -/-	urfac 3 4 -/- 5 10 15 -/- -/- -/- mode	4 erate	st 5 	6 	s s s s s s
"Wilson": additional tests samples no. ignition ¹⁾ reaching the mark of measurement ¹⁾²⁾ max. flame height time self cessation of the flames end of afterflame ¹⁾ end of glowing ¹⁾ flames were extinguished after ¹⁾ smoke development (visual) dropping of burning material during 20 s ¹⁾	1 -/- 6 12 14 -/- -/-	2 1 -/- 4 8 10 -/- -/- r -/-	edge- 3 1 -/- 7 20 -/- -/- 30 mode -/-	-test 4 rate 	5 	6 	1 4 -/- 9 10 19 -/- -/-	s 2 4 -/- 5 10 15 -////-	urfac 3 4 -/- 5 10 15 -/- -/- mode -/-	4 erate	st 5 	6 	s s s s s s s s

¹⁾ time mentioned from the beginning of the test²⁾ during 20 Sec -/- no app

-/- no appearance -- 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 burning dripping material.

P06-04-FB05 eng Rev01