

TEST-CERTIFICATE

No. 230009142

English version

Sponsor: Kinnasand GmbH
Danziger Straße 6

26655 Westerstede

Date of application: 22.08.2013
Date of sampling: Samples were sent in by the sponsor
Samples delivered on 26.08.2013
Date of testing: 16.09.2013, 17.09.2013 and 02.10.2013

Order

Testing according to DIN 4102-1 (May 1998) class B1

Description / Name of tested product

Grey decoration fabric „UNIX“

Applied test procedure

DIN 4102 part 1 (May 1998)

Remark: This test certificate is a translation of the original test certificate 230009142 issued 14.10.2013 in German language and is only allowed to be used together with the original test certificate.

This test certificate is valid until 13.10.2018.

The test results only relate to the above named product.

Any change in form or content to a test certificate can only be made by the approval of MPA NRW.

This test certificate consists of 8 pages and 1 appendix.

Name of tested product: "UNIX"

Description:

Polyester fabric
 Colour: grey

(Information given by the sponsor)

Colour of the tested fabric: grey

Table 1: Specific values of the tested material

		Minimum value	Arithmetic value	Maximum value
Thickness	mm	--	0,61	--
Mass per unit area	g/m ²	--	261	--
Density	kg/m ³	--	--	--

Special notes: None

row-no.		Results of the Brandschacht test (part 1)			
		measurements test specimen			
		A	B		
1	<u>No. of test specimen arrangement according to DIN 4102, part 15, table 1</u>	1	1		
2	<u>Max. flame height above bottom edge</u>	40	40		
	cm				
	<u>Time</u> ¹⁾	0:30	0:30		
	min : s				
4	<u>Melt through / burn through</u>				
	<u>Time</u> ¹⁾	0:04	0:04		
	min : s				
5	<u>Observations on the backside of the specimens</u>				
	<u>Flames/smouldering</u>	-- ²⁾	-- ²⁾		
	<u>Time</u> ¹⁾				
	min : s				
6	<u>Discolouration</u>	-- ²⁾	-- ²⁾		
	<u>Time</u> ¹⁾				
	min : s				
7	<u>Burning droplets</u>				
	<u>Start</u> ¹⁾	0:33	0:06		
	min : s				
	<u>Extent</u>				
8	sporadic burning droplets	X	X		
9	continually falling particles	-- ²⁾	-- ²⁾		
10	<u>Falling particles which burns</u>				
	<u>Start</u> ¹⁾	-- ²⁾	-- ²⁾		
	min : s				
11	sporadic falling parts	-- ²⁾	-- ²⁾		
12	continually falling particles	-- ²⁾	-- ²⁾		
13	<u>Duration of the burning on the screen bottom (max.)</u>				
	min : s	-- ²⁾	-- ²⁾		
14	<u>Interference of the burner flame by dripping /falling particles</u>				
	<u>Time</u> ¹⁾	-- ²⁾	-- ²⁾		
	min : s				
15	<u>Early termination of the test</u>				
	<u>End of burning at the specimen</u> ¹⁾	-- ²⁾	-- ²⁾		
	min : s				
16	<u>Time of early cancellation of the test</u> ¹⁾	-- ²⁾	-- ²⁾		
	min : s				

¹⁾ Time counting from the start of the test

row-no.		Results of the Brandschichttest (part 2)				measurements test specimen				
		A		B						
17	<u>Continuous burning after termination of the test</u> Duration min : s	-- ²⁾		-- ²⁾						
18	Number of specimens	-- ²⁾		-- ²⁾						
19	Front side of the specimen	-- ²⁾		-- ²⁾						
20	Back side of the specimen	-- ²⁾		-- ²⁾						
21	Flame length cm	-- ²⁾		-- ²⁾						
22	<u>Smouldering after termination of the test</u> Duration min : s	-- ²⁾		-- ²⁾						
23	Number of specimens	-- ²⁾		-- ²⁾						
24	<u>Location</u> Lower half of the specimens	-- ²⁾		-- ²⁾						
25	Upper half of the specimens	-- ²⁾		-- ²⁾						
26	Front side of the specimen	-- ²⁾		-- ²⁾						
27	Backside of the specimen	-- ²⁾		-- ²⁾						
28	<u>Smoke development</u> ≤ 400 % x min	3		14						
29	> 400 % x min	-- ²⁾		-- ²⁾						
30	Diagram in appendix	--		1						
31	<u>Residual lengths</u> Single values cm	58	62	61	62					
		60	54	60	62					
32	Average values cm	59 ³⁾		61 ³⁾						
33	Photo of the specimen on page	5		--						
34	<u>Smoke temperature</u> Maximum value of the averaged values °C	114		120						
35	Time ¹⁾ min : s	6:40		8:57						
36	Diagram in appendix Nr.	--		1						
37	<u>Remarks:</u> The tests were performed on free hanging samples. Test A: The samples were flamed in production direction. Test B: The samples were flamed across the production direction. 2) Did not occur 3) Due to the residual length of > 45 cm further tests were not necessary.									



Picture 1: Appearance of specimen A after the test

Results of the B2-testing according to DIN 4102-01

(Tests with flaming the edge of free hanging samples)

Protection of edges: none

Point of flame attack: lower edge of the front side, flaming the fabric in production direction

Specimen No.	1	2	3	4	5
(Times stated from start of test)					
Ignition (s)	1	1	1	1	1
Flame passing the limit mark (s)	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Self extinguishment (s)	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Max. height of the flame (cm)	9	11	10	11	11
Continuous burning after 20 s	27	27	31	22	23
Continuous smouldering after 20 s	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Extinguishment of flames / glowing after passing the limit mark	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Smoke development (visual observation)	low				
Falling of burning particles / droplets time (s)	22	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾

Remarks: 1) Did not occur

Point of flame attack: lower edge of the front side, flaming the fabric across the production direction

Specimen No.	1	2	3	4	5
(Times stated from start of test)					
Ignition (s)	1	1	1	1	1
Flame passing the limit mark (s)	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Self extinguishment (s)	11	9	4	3	5
Max. height of the flame (cm)	5	5	4	2	4
Continuous burning after 20 s	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering after 20 s	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Extinguishment of flames / glowing after passing the limit mark	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Smoke development (visual observation)	low				
Falling of burning particles / droplets time (s)	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾

Remarks: 1) Did not occur

Results of the B2-testing according to DIN 4102-01
 (Tests with flaming the surface of free hanging samples)

Point of flame attack: 40 mm above the lower edge of the front side, flaming the fabric in production direction

Specimen No.	1	2	3	4	5
(Times stated from start of test)					
Ignition (s)	1	1	1	1	1
Flame passing the limit mark (s)	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Self extinguishment (s)	15	8	10	5	9
Max. height of the flame (cm)	7	3	7	4	8
Continuous burning after 20 s	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering after 20 s	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Extinguishment of flames / glowing after passing the limit mark	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Smoke development (visual observation)	low				
Falling of burning particles / droplets time (s)	22	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾

Remarks: 1) Did not occur

Assessment

- The product described on page 2 fulfilled the requirements of building products according to Baustoffklasse B2. According to the results, the product as tested in the described arrangement also fulfils the requirements of building products according to Baustoffklasse B1. In consequence the product can be classified as

Baustoffklasse B1 (schwerentflammbare Baustoffe)

according to DIN 4102 part 1 (Mai 1998). This assessment is only valid, if the distance to equal or other plane building products is > 40 mm. The surface of the fabric may be printed, but not be covered with paints, coatings or similar products. The product may not be exposed to the weather outside.

- The material does not produce burning droplets / particles.

Special remark

- The validity of this test certificate ends on 13.10.2018. The period of validity can be extended on application.
- Since the material is used as decoration fabric, it is no building product according to §2 chapter 9 no. 1 MBO. An allgemeines bauaufsichtliches Prüfzeugnis of the test institute respectively an allgemeine bauaufsichtliche Zulassung of Deutsches Institut für Bautechnik, Berlin is not necessary.
- This test certificate is not the requested approval, if the tested material is used as building product according to the German building regulations.

Marking

The above mentioned material has to be marked as following:

- "Only schwerentflammbar (class DIN 4102-B1) in a distance of > 40 mm to equal or other plane building products"

The marking shall be done on the material, on an enclosed paper or on the packaging or, if this would be too difficult, on the delivery-note or on an enclosure to the delivery-note.

This test certificate is solely valid in combination with the original test certificate issued in German language and dated of 28.06.2013. In case of doubt, the certificate issued in German language is valid solely.

Erwitte, 14.10.2013

On behalf



Dipl.-Ing. Schreiner

Deputy Head of testing body

Date of issue of this English version: 28.11.2013

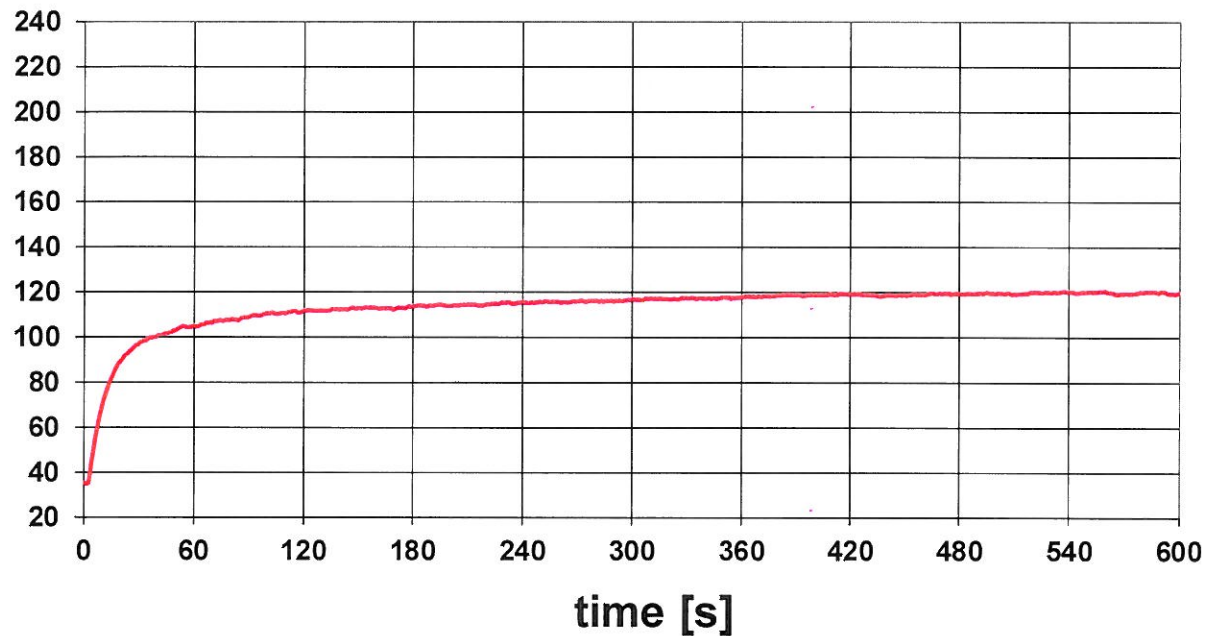


Max. flue gas-temperature = 120 °C
at [min : s] 08 : 57

Enclosure 1 of test report
no. 230009142 of 14.10.2013

Smoke-development [% x min 14

Average flue gas-temperature



Smoke-development

