

TEST CERTIFICATE

No. 230009855

English version

Sponsor: MAGIC FX
Schouwrooij 27

5281 RE Boxtel
The Netherlands

Date of application: 19.12.2014
Date of sampling: Samples were sent in by the sponsor
Samples delivered on 27.01.2015 and 12.03.2015
Date of testing: 09.02.2015, 24.03.2015, 26.03.2015 and 01.04.2015

Order

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

Description / Name of tested product

Paper in different colours for the production of decoration articles

Applied test procedure

DIN 4102 part 1 (May 1998)

Remark: This test certificate is a translation of the original test certificate 230009855 issued 16.04.2015 in German language and is only allowed to be used together with the original test certificate.

This test certificate is valid until 15.04.2020.
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.

Description:

Paper in different colours

Thickness: 0.02 mm

(Information given by the sponsor)

Colour of the delivered papers: a) yellow, b) red, c) blue

Table 1: Specific values of the tested material

		Minimum value	Arithmetic value	Maximum value
Thickness	mm	--	0.03	--
Mass per unit area	g/m ²	--	22	--
Density	kg/m ³	--	--	--

Special notes: None

Results of the Brandschacht test (part 1)					
row-no.	Colour of the tested paper:	yellow A	measurements test specimen		
1	<u>No. of test specimen arrangement according to DIN 4102, part 15, table 1</u>	7			
2	<u>Max. flame height above bottom edge</u>	40			
	cm				
	<u>Time</u> ¹⁾	0:30			
	min : s				
4	<u>Melt through / burn through</u>				
	<u>Time</u> ¹⁾	0:01			
5	<u>Observations on the backside of the specimens</u>				
	<u>Flames/smouldering</u>	-- ²⁾			
6	<u>Time</u> ¹⁾	min : s			
	<u>Discolouration</u>	-- ²⁾			
7	<u>Time</u> ¹⁾	min : s			
	<u>Burning droplets</u>	-- ²⁾			
8	<u>Start</u> ¹⁾	min : s			
	<u>Extent</u>	-- ²⁾			
9	sporadic burning droplets	-- ²⁾			
	continually falling particles	-- ²⁾			
10	<u>Falling particles which burns</u>				
	<u>Start</u> ¹⁾	0:19			
11	sporadic falling parts	x			
	continually falling particles	-- ²⁾			
13	<u>Duration of the burning on the screen bottom (max.)</u>				
	min : s	-- ²⁾			
14	<u>Interference of the burner flame by dripping /falling particles</u>				
	<u>Time</u> ¹⁾	min : s	-- ²⁾		
15	<u>Early termination of the test</u>				
	<u>End of burning at the specimen</u> ¹⁾	min : s	-- ²⁾		
16	<u>Time of early cancellation of the test</u> ¹⁾	min : s	-- ²⁾		

¹⁾ Time counting from the start of the test

row-no.		Results of the Brandschachttest (part 2)							
		measurements test specimen							
		A							
	<u>Continuous burning after termination of the test</u>								
17	Duration min : s	-- ²⁾							
18	Number of specimens	-- ²⁾							
19	Front side of the specimen	-- ²⁾							
20	Back side of the specimen	-- ²⁾							
21	Flame length cm	-- ²⁾							
	<u>Smouldering after termination of the test</u>								
22	Duration min : s	-- ²⁾							
23	Number of specimens	-- ²⁾							
	<u>Location</u>								
24	Lower half of the specimens	-- ²⁾							
25	Upper half of the specimens	-- ²⁾							
26	Front side of the specimen	-- ²⁾							
27	Backside of the specimen	-- ²⁾							
	<u>Smoke development</u>								
28	≤ 400 % x min	4							
29	> 400 % x min	-- ²⁾							
30	Diagram in appendix	1							
	<u>Residual lengths</u>								
31	Single values cm	41	46						
		50	44						
32	Average values cm	45 ³⁾							
33	Photo of the specimen on page	5							
	<u>Smoke temperature</u>								
34	Maximum value of the averaged values °C	116							
35	Time ¹⁾ min : s	9:53							
36	Diagram in appendix Nr.	1							
37	<u>Remarks:</u> For the test the paper was tied on a reinforcement steel mat. 2) Did not occur 3) Due to the average residual length of 45 cm further tests were not necessary according to DIN 4102-16 section 5.2 b).								



Picture 1: Appearance of specimen A after the test

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

(Tests with flaming the edge)

Protection of edges: --

Point of flame attack: lower edge of the front side, flaming of the yellow paper, tied on a wire netting mat

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)	7	6	4	8	5
Max. height of the flame (cm)	4	3	3	4	4
Continuous burning after	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering	22	10	17	12	20
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

Point of flame attack: lower edge of the front side, flaming of the red paper, tied on a wire netting mat

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)	2	2	2	2	2
Max. height of the flame (cm)	6	7	5	5	6
Continuous burning	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering	17	15	16	16	15
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 edge)

Protection of edges: --
 Point of flame attack: lower edge of the front side, flaming of the blue paper, tied on a wire netting mat

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)	2	10	11	2	8
Max. height of the flame (cm)	8	9	7	6	9
Continuous burning	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering	16	14	16	10	16
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

(Tests with flaming the surface)

Point of flame attack: 40 mm above the lower edge of the front side, flaming of the blue paper, tied on a wire netting mat

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)	9	7	10	5	7
Max. height of the flame (cm)	5	5	4	4	5
Continuous burning	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾	-- ¹⁾
Continuous smouldering	-- 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

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 paper may be printed, but not be covered with paints, coatings or similar products. The resistance of the fire behaviour against climatic influences in the outside was not proofed. Therefore the product may be used as schwerentflammbar only inside of buildings or in otherwise weather protected areas.

- The material does not produce burning particles.

Special remark

- The validity of this test certificate ends on 15.04.2020. The period of validity can be extended on application.
- Since the material is used for the production of decoration articles 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 16.04.2015. In case of doubt, the certificate issued in German language is valid solely.

Erwitte, 16.04.2015

On behalf


Dipl.-Ing. Rademacher

Head of testing body



Dipl.-Ing. Schreiner

Engineer in charge

Date of issue of this English version: 16.04.2015

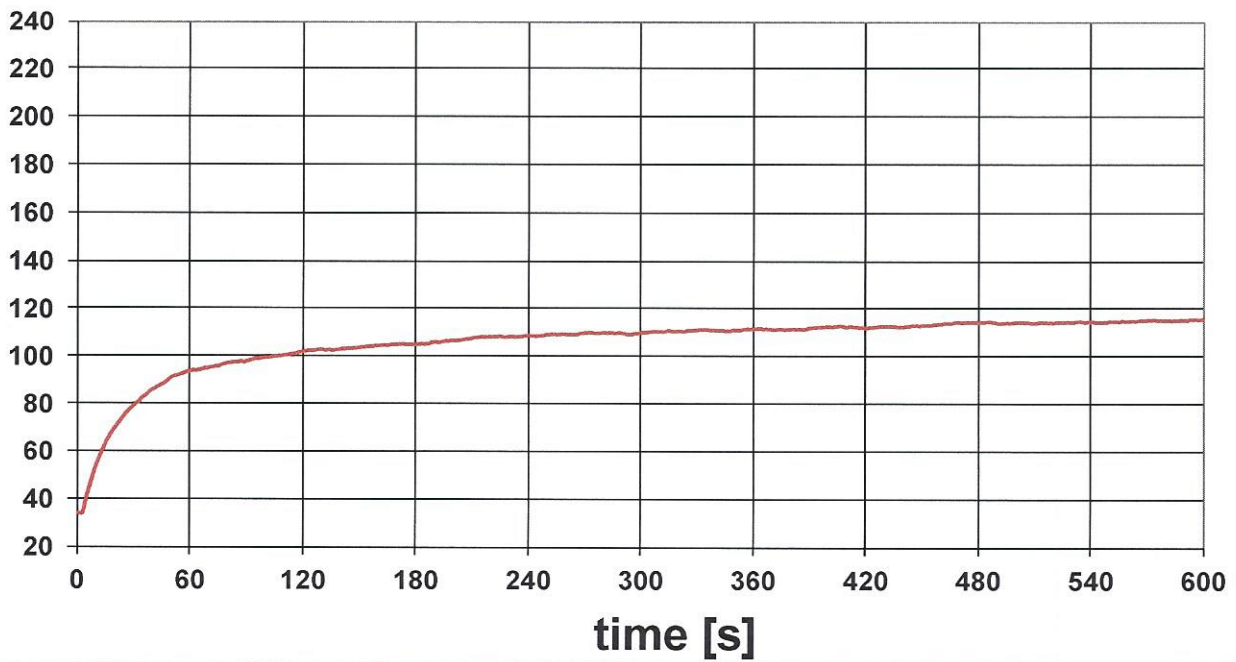
Max. flue gas-temperature = 116 °C
 at [min : s] 09 : 53

Enclosure 1 of test report
 no. 230009855 of 16.04.2015

Smoke-development [% x min]: 4

T [°C]

Average flue gas-temperature



RD [%]

Smoke-development

