

TEST CERTIFICATE

No. 231001685-2

dated 16.09.2022

English version

This test certificate replaces the test certificate no. 231001685 dated 06.09.2022 that is no longer valid now.

Sponsor: MAGIC FX
Schouwrooij 27

5281 RE Boxtel
THE NETHERLANDS

Date of order: 22.06.2022
Date of sampling: The test material was taken and delivered by the sponsor
Receipt of the specimens: 24.06.2022
Date of the tests: In the period 11.08.2022 to 02.09.2022

Order

Testing on building material classification B1 according to DIN 4102-1.

Description / designation of the test specimen

Paper in different colours

Description of the underlying test method

DIN 4102-1:1998-05 considering DIN 4102-15:1990-05 and DIN 4102-16:2021-01

This test certificate does not replace any required proof of usability. It serves as a basis for applying for one.

The test certificate is valid until 05.09.2027.

The test results solely relate to the above-mentioned test specimen described on page 2.

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This test certificate has 11 pages and 1 annex.



1. Description of the testing material

1.1 Information by the sponsor:

Paper in different colours for the production of decorative items, e.g. confetti.

Thickness: approx. 0.02 mm

Weight per unit area: approx. 22 g/m²

1.2 Values determined during sample preparation at MPA NRW:

The sponsor sent in several sheets of paper in DIN A4 size in 3 different colours (red, black and white) for the tests.

Weight per unit area: 20.7 g/m² on average

Thickness: 0.02 mm on average

To prepare the samples for the test in the "Brandschacht", individual sheets of paper were stapled together with metal staples.

Remark:

The test in the "Brandschacht" was carried out without substrate (free hanging samples).

"Brandschacht"- specimen A, D and E: made of white paper

"Brandschacht"- specimen B: made of black paper

"Brandschacht"- specimen C: made of red paper

2. Test results

2.1 Results from the "Brandschachtprüfung" according to DIN 4102-15 and DIN 4102-16

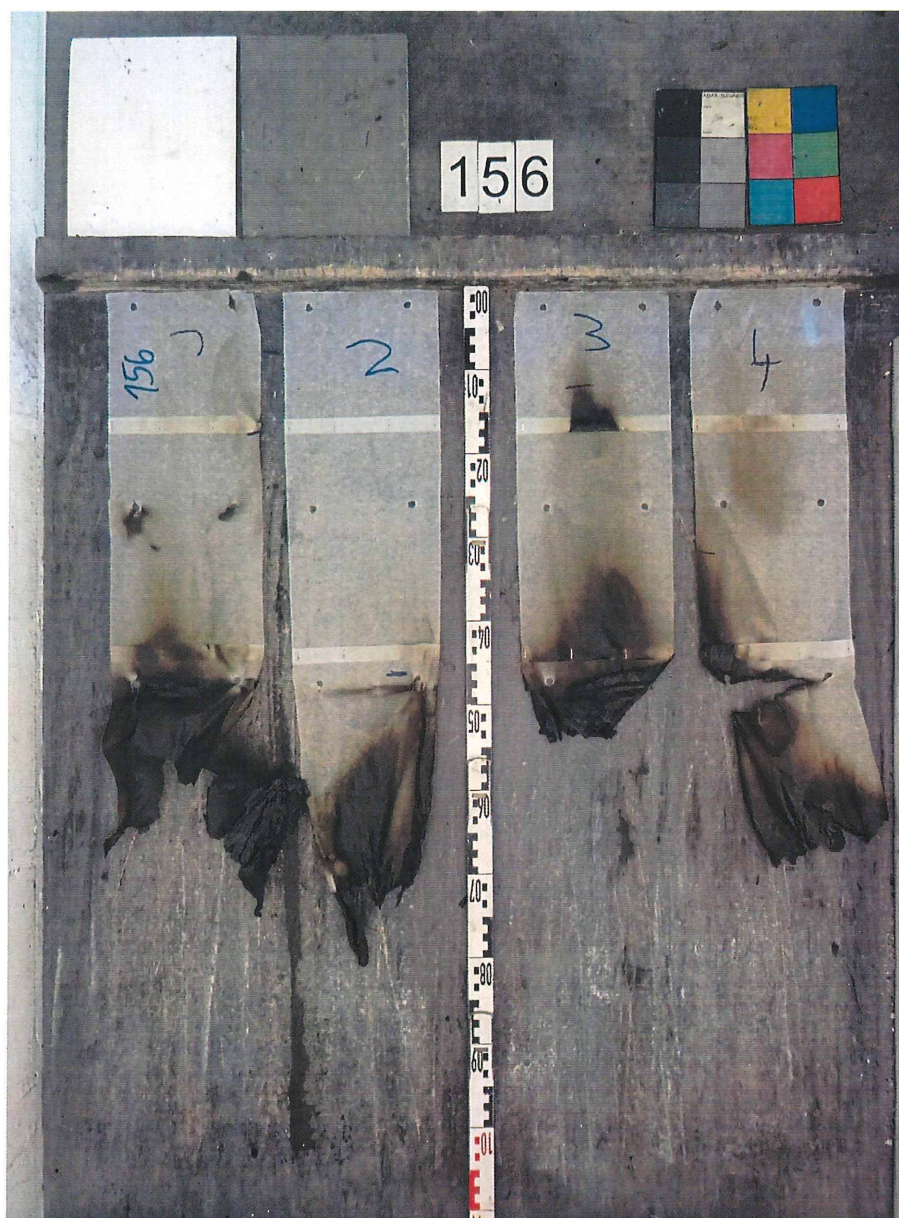
No.		Measurements Test specimen			
		A	B	C	D
1	<u>No. of test specimen arrangement according to DIN 4102 Part 15, table 1</u>	1	1	1	1
2	<u>Max. flame height above the bottom edge in</u> cm	50	50	50	50
	Time ¹⁾ min : s	0:30	0:30	0:30	0:30
4	<u>Melt through / burn through time¹⁾</u> min : s	--	--	--	--
5	<u>Observations on the backside of the specimens</u> Flames/smouldering Time ¹⁾ min : s	--	--	--	--
6	Discolouration Time ¹⁾ min : s	--	--	--	--
7	<u>Burning droplets</u> Start ¹⁾ min : s	--	--	--	--
8	<u>Extent</u> Sporadic falling droplets/particles	--	--	--	--
9	Continually falling particles	--	--	--	--
10	<u>Falling of burning particles</u> Start ¹⁾ min : s	--	--	--	--
11	Sporadic falling particles	--	--	--	--
12	Continually falling particles	--	--	--	--
13	Duration of the burning on the screen bottom (Max.) min : s	--	--	--	--
14	<u>Interference of the burner flame by dripping /falling particles (material)</u> Time ¹⁾ min : s	--	--	--	--
15	<u>Early determination of the test</u> End of burning at the specimen ¹⁾ min : s	--	--	--	--
16	Time of early cancellation of the test ¹⁾ min : s	--	--	--	--

¹⁾ Time counting from the start of the test

Line no.		Measured values Specimen			
		E			
1	<u>No. of test specimen arrangement according to DIN 4102</u> <u>Part 15, table 1</u>	1			
2	<u>Max. flame height above the bottom</u> <u>edge in</u> cm	50			
	Time ¹⁾ min : s	0:30			
4	<u>Melt through / burn through</u> <u>time¹⁾</u> min : s	--			
5	<u>Observations on the backside of the specimens</u> Flames/smouldering Time ¹⁾ min : s	--			
6	Discolouration Time ¹⁾ min : s	--			
7	<u>Burning droplets</u> Start ¹⁾ min : s	--			
8	<u>Extent</u>	--			
9	Sporadic falling droplets/particles	--			
	Continually falling particles	--			
10	<u>Falling of burning particles</u> Start ¹⁾ min : s	--			
11	Sporadic falling particles	--			
12	Continually falling particles	--			
13	Duration of the burning on the screen bottom (Max.) min : s	--			
14	<u>Interference of the burner flame by dripping /falling particles (material)</u> Time ¹⁾ min : s	--			
15	<u>Early determination of the test</u> End of burning at the specimen ¹⁾ min : s	--			
16	Time of early cancellation of the test ¹⁾ min : s	--			

¹⁾ Time counting from the start of the test

Line no.		Measured values Specimen							
		E							
	<u>Continuous burning after termination of the test</u>								
17	Duration min : s	--							
18	Number of specimens	--							
19	Front side of the specimen	--							
20	Back side of the specimen	--							
21	Flame length cm	--							
	<u>Smouldering after termination of the test</u>								
22	Duration min : s	--							
23	Number of specimens	--							
	<u>Location</u>								
24	Lower part of the specimen	--							
25	Upper part of the specimen	--							
26	Front side of the specimen	--							
27	Back side of the specimen	--							
	<u>Smoke density</u>								
28	≤ 400 % x min	12							
29	≥ 400 % x min	--							
30	Diagram in annex no.	--							
	<u>Residual lengths</u>	45	42						
31	Single values cm	25	30						
32	Average values of the single tests cm	36							
33	Picture of the specimen on page	5							
	<u>Smoke gas temperature</u>								
34	Max. value of the average values °C	116							
35	Time ¹⁾ min : s	9:01							
36	Diagram in annex no.	--							
37	<u>Remarks:</u> -- = not observed or not applicable								



Appearance of the samples of specimen A after the fire test in the "Brandschacht"

2.2 Test results according to DIN 4102-1 clause 6.2 (B2 test)

2.2.1 Test with flame exposure to the edge

Date of the tests: 18.08.2022 Number of specimen: 6
Specimen arrangement: without substrate (free hanging) Colour: red
Point of flame attack: bottom specimen front edge
Edge protection: none (without edge protection)

Specimen No.	1	2	3	4	5
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	2	2	2	2
Max. flame height 1 – 20. s (cm)	3	6	4	6	6
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

Date of the tests: 18.08.2022 Number of specimen: 6
Specimen arrangement: without substrate (free hanging) Colour: black
Point of flame attack: bottom specimen front edge
Edge protection: none (without edge protection)

Specimen No.	6	7	8	9	10
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	2	2	3	2
Max. flame height 1 – 20. s (cm)	6	3	5	7	4
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

Date of the tests: 18.08.2022
 Specimen arrangement: without substrate (free hanging)
 Point of flame attack: bottom specimen front edge
 Edge protection: none (without edge protection)

Number of specimen: 6
 Colour: white

Specimen No.	11	12	13	14	15
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	2	2	2	2
Max. flame height 1 – 20. s (cm)	3	7	9	8	13
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

2.2.2 Test with flame exposure to the surface

Date of the tests: 18.08.2022
 Specimen arrangement: without substrate (free hanging)
 Point of flame attack: bottom specimen front edge
 Edge protection: none (without edge protection)

Number of specimen: 6
 Colour: red

Specimen No.	16	17	18	19	20
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	4	5	7	4
Max. flame height 1 – 20. s (cm)	5	7	6	7	5
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

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Date of the tests: 18.08.2022 Number of specimen: 6
 Specimen arrangement: without substrate (free hanging) Colour: black
 Point of flame attack: bottom specimen front edge
 Edge protection: none (without edge protection)

Specimen No.	6	7	8	9	10
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	3	2	2	2
Max. flame height 1 – 20. s (cm)	6	9	11	7	3
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

Date of the tests: 18.08.2022 Number of specimen: 6
 Specimen arrangement: without substrate (free hanging) Colour: white
 Point of flame attack: bottom specimen front edge
 Edge protection: none (without edge protection)

Specimen No.	11	12	13	14	15
(Times from the beginning of the test)					
Ignition (s)	1	1	1	1	1
Reaching the measuring mark (s)	no	no	no	no	no
Self-extinguishment of flames (s)	2	2	2	2	2
Max. flame height 1 – 20. s (cm)	6	7	6	5	6
Flames/ after glowing extinguished after	--	--	--	--	--
Smoke production (visual)	low				
Flaming droplets /particles, time (s)	no	no	no	no	no

3. Assessment

The tested samples of the product described on page 2 fulfil the requirements of class B2.
As the results show, the samples of the product in the tested arrangement also met the requirements for building materials in building material class B1.
Therefore, the material can be classified as

“Baustoffklasse B1”

(“schwerentflammbare” building products) according to DIN 4102-1 (May 1998).

The building product **does not show flaming droplets/particles**.

4. Special information

The fire test result only applies to the product described on page 2 placed at a distance of ≥ 40 mm to other or the same building materials with extensive surface.

In combination with other materials (e.g. provided with additional or surface coatings or arranged at a distance of < 40 mm to other or the same building materials with extensive surface), the fire behaviour can be adversely affected, so that the above classification is no longer valid. The fire behaviour of the product in combination with other materials must be verified separately according to DIN 4102-1.

The product must not be exposed to the weather outdoors.

The validity of this test certificate ends on 05.09.2027.

The labeling of the product with regard to the reaction to fire must be as follows:

DIN 4102-B1

This test certificate does not replace any necessary proof of usability required by building authorities.

Erwitte, 16.09.2022

On behalf

Dipl.-Ing. Rademacher
Head of the testing body



Date of issue of this English version: 17 October 2022

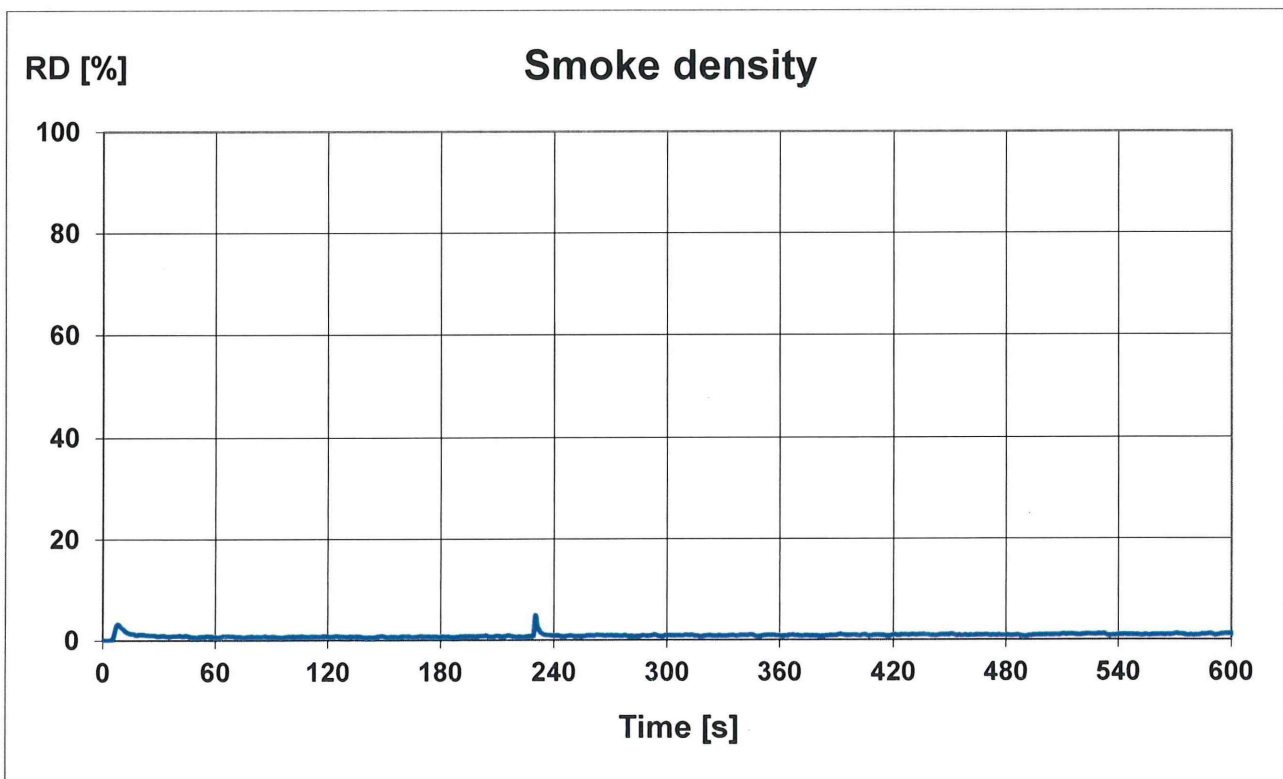
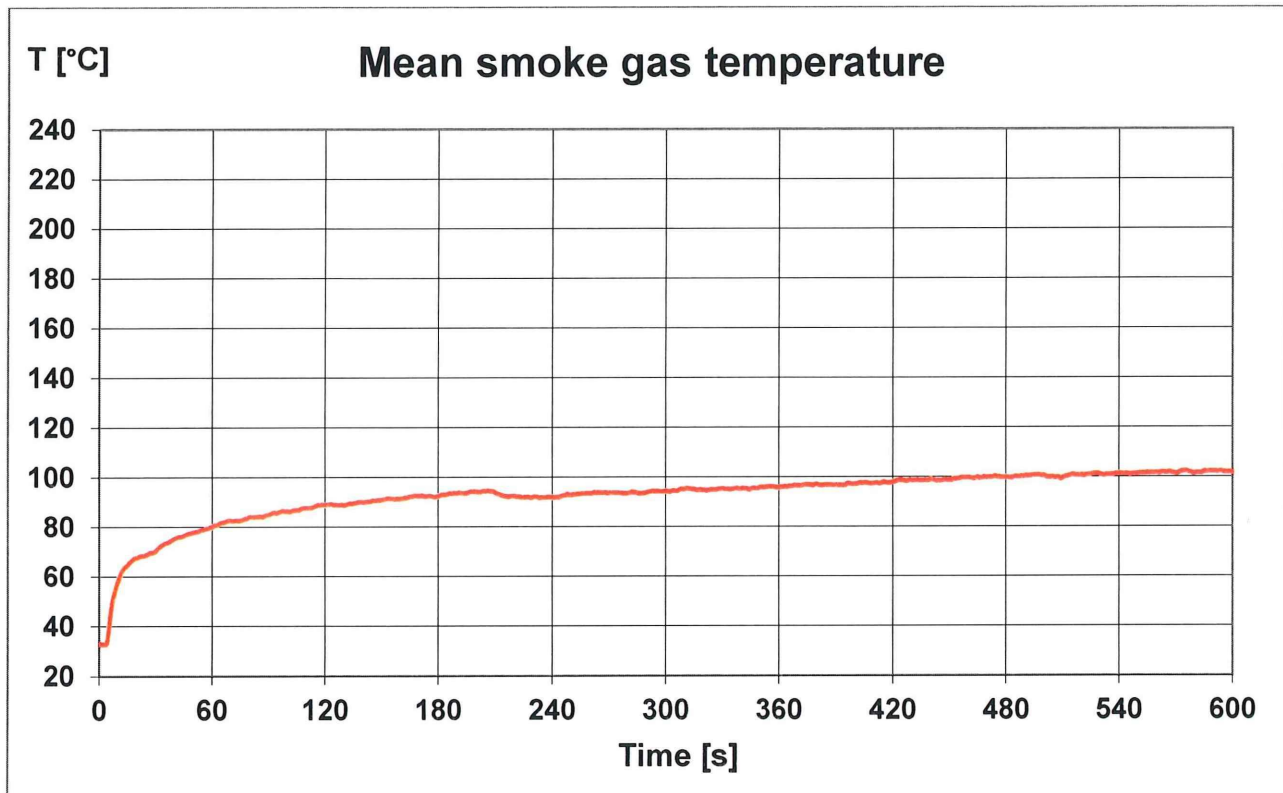


Diagram showing the smoke density and the mean smoke gas temperature of specimen A over time