MPA NRW.
Materialprüfungsamt Nordrhein-Westfalen
PRÜFEN · ÜBERWACHEN · ZERTIFIZIEREN

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TEST CERTIFICATE

No. 231002070-1 dated 06.02.2024

as basis for the proof of usability

Sponsor

FIDIVI
Tessitura Vergnano S.p.A.
Regione Masio 19/bis

10043 Poirino
ITALY

Date of order:	21.09.2023
Date of sampling:	The test material was sent in for the test by the sponsor
Receipt of the samples:	25.09.2023
Dates of the tests:	30.11.2023, 07.12.2023 and 07.02.2024

Order

Test according to DIN 4102-1 (May 1998) "Schwerentflammbarkeit" (reaction to fire classification B1)

Description / designation of the test specimen

Textile fabric type „Radio"

Description of the applied test procedure

DIN 4102-1 (May 1998)

The validity of this test certificate ends on 05.02.2029.

The test results solely relate to the above-mentioned test specimen, described on page 2. Publishing and copying of test reports without permission of MPA NRW is only allowed without any changes of the content and the form of the report. A shortened reproduction of test reports needs the permission of MPA NRW.

This test report has 7 pages and 1 annex.

DAkkS Deutsche Akkreditierungsstelle D-PL-11142-01-00

egolf

Testing material

Designation by the sponsor: Textile fabric type „Radio"

Description:

Textile fabric type „Radio" in various colours;

Weight per unit area: 400 g/m²

Thickness: 1.2 mm

(Information provided by the client)

Colour of the tested fabric: A) black
B) red
C) beige

Table 1: Thickness, Weight per unit area, density of the tested material

		Smallest measured value	Arithmetic average value	Largest measured value
Thickness	mm	--	0.7	--
Weight per unit area with stretched honeycomb (rectangular structure)	kg/m²	--	406	--
Density	kg/m³	--	--	--

Special information: none

Results of the "Brandschachtprüfung" (part 3)

Line No.	Colour of the side exposed to the flames		Measured values specimen black A1	black A2	red B1	red B2	beige C1	beige C2
1	No. of the specimen arrangement acc. to DIN 4102, part 15, table 1		1	1	1	1	1	1
2	Max. flame height above bottom edge	cm	40	40	40	40	40	40
	Time [1]	min : s	0:30	0:30	0:30	0:30	0:30	0:30
4	Melt through / burn through Time[1]	min : s	0:05	--[2]	--[2]	0:02	0:03	0:03
	Observations on the back of the specimen							
5	Flames / smouldering Time [1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
6	Discolouration Time [1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
	Flaming droplets / particles							
7	Start [1]	min : s	--[2]	--[2]	--[2]	--[2]	0:05	--[2]
	Extent							
8	sporadic dripping sample material		--[2]	--[2]	--[2]	--[2]	x	--[2]
9	Continually falling off sample material		--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
	Burning sample parts falling off							
10	Start [1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
11	sporadic		--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
12	Continually falling off sample parts		--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
13	Duration of continued burning on the sieve bottom (max.)	min : s	--[2]	--[2]	--[2]	--[2]	0:02	--[2]
14	Impairment of the burner flame due to dripping / falling material Time [1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
	Early termination of the test							
15	End of the fire at the sample [1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
16	Time of early cancellation of the test[1]	min : s	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]

Results of the "Brandschachtprüfung" (part 4)

Line No.	Colour of the side exposed to the flames		Measured values specimen											
			black		black		red		red		beige		beige	
			A1		A2		B1		B2		C1		C2	
	Continuous burning after termination of the test													
17	Duration	min : s	--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
18	Number of samples		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
19	Sample frontside		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
20	Sample back side		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
21	Flame length	cm	--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
	Smouldering after termination of the test													
22	Duration	min : s	--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
23	Number of samples		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
	Location													
24	Lower half of the sample		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
25	Upper half of the sample		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
26	Sample front side		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
27	Sample back side		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
	Smoke density													
28	> 100 % x min and ≤ 400 % x min		--[2]		--[2]		--[2]		--[2]		--[2]		--[2]	
29	≤ 100 % x min		9		10		14		8		9		9	
30	Diagram in annex no.		--		--		--		--		--		1	
	Residual length		57	60	62	58	57	57	55	54	52	57	54	53
31	Single values	cm	62	62	59	56	56	57	62	64	52	57	54	53
32	Average values of the single tests	cm	60		59		57		59		56		51[3]	
33	Photo of the test specimen on page		--[4]		--[4]		--[4]		--[4]		--[4]		--[4]	
	Smoke gas temperature													
34	Max. of the average values	°C	118		118		118		116		117		120	
35	Time [1]	min : s	9:44		8:44		9:30		9:55		9:54		10:00	
36	Diagram in annex no.		--		--		--		--		--		1	

37 Notes:

The tests were carried out on samples without substrate (free hanging).
Test A1, B1, C1: The samples were flamed in production direction.
Test A2, B2, C2: The samples were flamed across the production direction.

[1] time from start of the test
[2] did not occur
[3] due to the average residual length of ≥ 45 cm no further tests on these fabrics were required according to DIN 4102-16 clause 5.2 b).
[4] not available for technical reasons

Test results from „Normalentflammbarkeitsuntersuchungen" according to DIN 4102-1

(Test with flame exposure to the edge)

Edge protection: --

Point of flame attack: Bottom specimen front side **black variant (A),** without substrate

Specimens 1-2: Flame exposure in production direction

Specimens 3-8: Flame exposure transverse to the production direction

Specimen no.		1	2	3	4	5	6	7
Time stated from start of the test								
Ignition	(s)	1	1	1	1	1	1	1
Reaching the measuring mark	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Self-extinguishment of the flames	(s)	7	20	15	7	7	8	6
Max. flame height	(cm)	7	9	11	8	10	9	7
End of afterburning	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
End of after smouldering	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Flames extinguished after	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Smoke development					low			
Flaming droplets / particles (time)	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]

Note: [1)] did not occur

Point of flame attack: bottom specimen front side, **red variant (B),** without substrate

Specimens 1-2: Flame exposure in production direction

Specimens 3-8: Flame exposure transverse to the production direction

Specimen no.		1	2	3	4	5	6	7
Time stated from start of the test								
Ignition	(s)	1	1	1	1	1	1	1
Reaching the measuring mark	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Self-extinguishment of the flames	(s)	5	7	6	7	5	7	6
Max. flame height	(cm)	5	6	5	6	5	7	6
End of afterburning	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
End of after smouldering	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Flames extinguished after	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Smoke development					low			
Flaming droplets / particles (time)	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]

Note: [1)] did not occur

Point of flame attack: Bottom specimen front side, **beige variant (B),** without substrate
Specimens 1-2: Flame exposure in production direction
Specimens 3-8: Flame exposure transverse to the production direction

Specimen no.		1	2	3	4	5	6	7
Time stated from start of the test								
Ignition	(s)	1	1	1	1	1	1	1
Reaching the measuring mark	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Self-extinguishment of the flames	(s)	5	5	5	4	5	5	4
Max. flame height	(cm)	4	4	5	4	4	4	4
End of afterburning	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
End of after smouldering	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Flames extinguished after	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]
Smoke development					low			
Flaming droplets / particles (time)	(s)	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]	--[1)]

Note: [1)] did not occur

According to DIN 4102-1, clause 6.2.2 it was possible to dispense with surface flaming.

Results of the tests

The material described on page 2 fulfils the requirements for class B2 building materials. As the results show, the material also fulfils the requirements for class B1 building materials. The material can therefore be categorised in building material class B1 ("schwerentflammbare" building materials) in accordance with DIN 4102 Part 1 (May 1998).

The limit value for smoke development of 100 % x min. was not exceeded during the tests.
The following applies to the building material with regard to smoke development: low smoke development.

The building material **showed no** flaming droplets / debris.

Special information

The textile fabric is to be used as view protection and sun protection with horizontal honeycomb orientation indoors. The fabrics must be permanently installed in the building system. The surface of the textile fabric must not be provided with additional coatings or similar. The textile fabric may be coloured differently on the front side. The textile fabric must be used at a distance of > 40 mm from the same or other building materials with extensive surface.
The resistance of the fire behaviour to outdoor weathering has not been proven. Therefore, the material may only be used as "schwerentflammbares" product inside buildings or in other areas protected from the weather.

This test certificate serves as basis for the required proof of usability.

This test certificate does not replace an "allgemeines bauaufsichtliches Prüfzeugnis", if it is required.

This test certificate written in English language is issued additionally to the German test certificate with the same report number. In case of doubt, the German version is solely valid.

Erwitte, 06.02.2024

On behalf

Dipl.-Ing. Jung

Materialprüfungsamt MPA NRW 38 Nordrhein-Westfalen

Date of issue of this English version: 11.06.2024

Evaluation "Brandschachtversuch"

MPA NRW.
Materialprüfungsamt Nordrhein-Westfalen
PRÜFEN ÜBERWACHEN ZERTIFIZIEREN

Max. smoke gas temperature 120 °C at [min : s] 10 : 00 Smoke release [% x min]: 9	Annex 1 to Test Certificate 231002070 dated 06.02.2024