

Test Report

No. 4872827

Date: 17/07/2020

Zimmer + Rhode
Zimmersmühlenweg 14-18
DE-61440 Oberursel/Frankfurt
Germany

The following sample(s) was (were) submitted and identified by the client as:

Original Sample ID	Sample Description	Sample Receipt Date
200605565	Meterware Stoff Willow FR - Lieferschein No GED40087878 Auftrags No 5009734 Article No 10-10846-900, Stück Nr. 489442	23/06/2020
200605566	Meterware Stoff Willow FR - Lieferschein No GED40087878 Auftrags No 5009734 Article No 10-10846-485, Stück Nr. 491144	23/06/2020
200605567	Meterware Stoff Willow FR - Lieferschein No GED40087878 Auftrags No 5009734 Article No 10-10846-998, Stück Nr. 491196	23/06/2020



SGS Customer No : 10083859
SGS Order No : 5412320
Test Report Version : 1
Buyer : -
Order No. : GED4008787 dt. 22/06/2020
Country of Origin : -

Test Performing Period : 25/06/2020 – 17/07/2020
Test Performed : Selected test(s) as requested by applicant

Overall Assessment : The tested sample meets class B1 building materials requirements of DIN 4102-1 (May 1998).

Test Results : Please refer to the next pages

SGS INSTITUT FRESENIUS GmbH

This test report was electronically created and released:

	date	name	function	department
created	17.07.2020	i.A. Nicole Okabsa	Team Assistant	Consumer and Retail Non Food
released	21.07.2020	i.A. Christian Herzig	Project Manager	Consumer and Retail Non Food

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Photo documentation



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Test conducted

This test was conducted as per DIN 4102-15:1990 & DIN 4102-16:2015 and DIN 4102-1:1998 Clause 6.2, and Classification in according to DIN 4102-1 (May 1998) Clause 6.1-Class B1 materials.

I. Sample details

General description	Fabric
Color	White
Area Density	About 112 g/m ²
Size of sample	190mm×1000mm & 190mm×90mm

General description	Fabric
Color	Brown shades
Area Density	About 112 g/m ²
Size of sample	190mm×1000mm & 190mm×90mm

General description	Fabric
Color	Silver-grey shades
Area Density	About 112 g/m ²
Size of sample	190mm×1000mm & 190mm×90mm

Conditioning

Prior to testing, the sample was conditioned at least 14 days to constant mass at a temperature of 23 ± 2°C, and a relative humidity of 50 ± 5 %.

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II. Test results

1) "Brandschacht" Test according to DIN 4102-15 &16 / fabric white

Exposed surface: The front face

Results of "Brandschacht" Test (part 1)				
Line No.	Unit	Test assemblies No.		
		Lengthwise	Widthwise	
1	Specimen fixings according to DIN 4102 part 15, table	/	1	1
2	Max. flame height above lower sample edge;	cm	30	30
3	Time ¹⁾	min:s	00:12	00:10
4	<u>Melting/burning through</u> Time ¹⁾	min:s	00:01	00:01
5	<u>Back of specimen</u> Flaming/glowing, Time ¹⁾	min:s	00:01	00:01
6	Discolouring, Time ¹⁾	min:s	00:01	00:01
7	<u>Burning droplets</u> Begin 1)	min:s	No	No
8	<u>Amount</u> Specimen material falling off in separate droplets	/	/	/
9	Specimen material falling off continuously	/	/	/
10	<u>Burning parts</u> Begin 1)	min:s	No	No
11	Parts of sample falling off separately	/	/	/
12	Parts of sample falling off continuously	/	/	/
13	Duration of continued combustion on mesh base (max.)	min:s	No	No
14	<u>Burner flame impairment by dripping/falling material</u> Time ¹⁾	min:s	No	No
15	<u>Premature ending of test</u> End of burning at specimen ¹⁾	min:s	/	/
16	Time when test terminated (if applicable) ¹⁾	min:s	/	/
	<u>Burning after end of test</u>		No	No

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17	Duration	min:s	/	/
18	Number of specimens		/	/
19	Front of specimen		/	/
20	Back of specimen		/	/
21	Height of flame	cm	/	/
	<u>Glowing after end of test</u>		No	No
22	Duration	min:s	/	/
23	Number of specimens		/	/
24	Front of specimen		/	/
25	Back of specimen		/	/
26	Top half of specimen		/	/
27	Bottom half of specimen		/	/
28	Single results	cm	74 73	75 76
29	Average of the single results	cm	74.5	74.0
	<u>Smoke temperature</u>		/	/
30	Max. of average	°C	139.7	142.6
31	Time ¹⁾	min:s	05:29	06:17

Note: ¹⁾ time from start of testing

*Reduction in number of test (*DIN 4102 Part 16, clause 5.2*)

Class B1 materials:

If the residual length measured after the first test is 45cm or greater, further tests are not required.

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1.1) "Brandschacht" Test according to DIN 4102-15 &16 / brown shades

Exposed surface: The front face

Results of "Brandschacht" Test (part 1)				
Line No.	Unit	Test assemblies No.		
		Lengthwise	Widthwise	
1	Specimen fixings according to DIN 4102 part 15, table	/	1	1
2	Max. flame height above lower sample edge;	cm	30	30
3	Time ¹⁾	min:s	00:09	00:12
	<u>Melting/burning through</u>	Yes	Yes	
4	Time ¹⁾	min:s	00:01	00:01
	<u>Back of specimen</u>	Yes	Yes	
5	Flaming/glowing, Time ¹⁾	min:s	00:01	00:01
6	Discolouring, Time ¹⁾	min:s	00:01	00:01
	<u>Burning droplets</u>	No	No	
7	Begin ¹⁾	min:s	/	/
	<u>Amount</u>	/	/	
8	Specimen material falling off in separate droplets	/	/	
9	Specimen material falling off continuously	/	/	
	<u>Burning parts</u>	No	No	
10	Begin ¹⁾	min:s	/	/
11	Parts of sample falling off separately	/	/	
12	Parts of sample falling off continuously	/	/	
13	Duration of continued combustion on mesh base (max.)	min:s	No	No
	<u>Burner flame impairment by dripping/falling material</u>	No	No	
14	Time ¹⁾	min:s	/	/
	<u>Premature ending of test</u>	/	/	
15	End of burning at specimen ¹⁾	min:s	/	/
16	Time when test terminated (if applicable) ¹⁾	min:s	/	/
	<u>Burning after end of test</u>	No	No	
17	Duration	min:s	/	/

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18	Number of specimens		/	/
19	Front of specimen		/	/
20	Back of specimen		/	/
21	Height of flame	cm	/	/
	<u>Glowing after end of test</u>		No	No
22	Duration	min:s	/	/
23	Number of specimens		/	/
24	Front of specimen		/	/
25	Back of specimen		/	/
26	Top half of specimen		/	/
27	Bottom half of specimen		/	/
	<u>Residual length</u>		/	/
28	Single results	cm	72 76	75 74
			73 76	73 74
29	Average of the single results	cm	74.3	74.0
	<u>Smoke temperature</u>		/	/
30	Max. of average	°C	130.7	132.5
31	Time ¹⁾	min:s	05:09	05:40

Note: ¹⁾ time from start of testing

*Reduction in number of test (*DIN 4102 Part 16, clause 5.2*)

Class B1 materials:

If the residual length measured after the first test is 45cm or greater, further tests are not required.

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1.2) "Brandschacht" Test according to DIN 4102-15 &16 / silver-grey shades

Exposed surface: The front face

Results of "Brandschacht" Test (part 1)				
Line No.	Unit	Test assemblies No.		
		Lengthwise	Widthwise	
1	Specimen fixings according to DIN 4102 part 15, table	/	1	1
2	Max. flame height above lower sample edge;	cm	30	30
3	Time ¹⁾	min:s	00:09	00:10
4	<u>Melting/burning through</u> Time ¹⁾	min:s	00:01	00:01
5	<u>Back of specimen</u> Flaming/glowing, Time ¹⁾	min:s	00:01	00:01
6	Discolouring, Time ¹⁾	min:s	00:01	00:01
7	<u>Burning droplets</u> Begin 1)	min:s	00:17	00:12
8	<u>Amount</u> Specimen material falling off in separate droplets	/	/	/
9	Specimen material falling off continuously	/	/	/
10	<u>Burning parts</u> Begin 1)	min:s	No	No
11	Parts of sample falling off separately	/	/	/
12	Parts of sample falling off continuously	/	/	/
13	Duration of continued combustion on mesh base (max.)	min:s	No	No
14	<u>Burner flame impairment by dripping/falling material</u> Time ¹⁾	min:s	No	No
15	<u>Premature ending of test</u> End of burning at specimen ¹⁾	min:s	/	/
16	Time when test terminated (if applicable) ¹⁾	min:s	/	/
17	<u>Burning after end of test</u> Duration	min:s	No	No

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18	Number of specimens		/	/
19	Front of specimen		/	/
20	Back of specimen		/	/
21	Height of flame	cm	/	/
	<u>Glowing after end of test</u>		No	No
22	Duration	min:s	/	/
23	Number of specimens		/	/
24	Front of specimen		/	/
25	Back of specimen		/	/
26	Top half of specimen		/	/
27	Bottom half of specimen		/	/
	<u>Residual length</u>		/	/
28	Single results	cm	73 70	75 73
			74 72	71 74
29	Average of the single results	cm	72.3	73.3
	<u>Smoke temperature</u>		/	/
30	Max. of average	°C	133.4	130.7
31	Time ¹⁾	min:s	04:29	05:06

Note: ¹⁾ time from start of testing

*Reduction in number of test (*DIN 4102 Part 16, clause 5.2*)

Class B1 materials:

If the residual length measured after the first test is 45cm or greater, further tests are not required.

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2) Normal Flammability Test according to DIN 4102-1 Clause 6.2 / fabric white

Edge ignition

Fire application time: 15s

Parameter	Lengthwise					Crosswise				
	1	2	3	4	5	6	7	8	9	10
Whether or not flaming extinguished before reach the gauge mark (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether or not flaming reach the measuring mark within 20 seconds (Yes/No)	No	No	No	No	No	No	No	No	No	No
Time for the flame tip to reach the gauge mark (s)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Afterflame time (s)	0	0	0	2	1	0	1	1	0	0
Max. flame height (cm)	3	2	2	3	3	3	3	2	2	2
Molten dripping (Yes/No)	No	No	No	No	No	No	No	No	No	No
Smoke developments (visual impression)	Slight					Slight				

Note: NA---Not applicable

2.1) Normal Flammability Test according to DIN 4102-1 Clause 6.2 / brown shades

Edge ignition

Fire application time: 15s

Parameter	Lengthwise					Crosswise				
	1	2	3	4	5	6	7	8	9	10
Whether or not flaming extinguished before reach the gauge mark (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether or not flaming reach the measuring mark within 20 seconds (Yes/No)	No	No	No	No	No	No	No	No	No	No
Time for the flame tip to reach the gauge mark (s)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Afterflame time (s)	1	0	0	2	0	0	0	0	0	0
Max. flame height (cm)	3	3	4	3	2	3	3	4	2	3
Molten dripping (Yes/No)	No	No	No	No	No	No	No	No	No	No
Smoke developments (visual impression)	Slight					Slight				

Note: NA---Not applicable

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2.2) Normal Flammability Test according to DIN 4102-1 Clause 6.2 / silver-grey shades

Edge ignition

Fire application time: 15s

Parameter	Lengthwise					Crosswise				
	1	2	3	4	5	6	7	8	9	10
Whether or not flaming extinguished before reach the gauge mark (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether or not flaming reach the measuring mark within 20 seconds (Yes/No)	No	No	No	No	No	No	No	No	No	No
Time for the flame tip to reach the gauge mark (s)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Afterflame time (s)	0	1	1	0	0	0	0	0	2	0
Max. flame height (cm)	3	4	3	3	2	3	2	2	3	3
Molten dripping (Yes/No)	No	No	No	No	No	No	No	No	No	No
Smoke developments (visual impression)	Slight					Slight				

Note: NA---Not applicable

III. DIN 4102-1:1998 Criteria for classification

1) All materials, except flooring, may be classed as **B1** materials if they meet the following requirements a) and b):

a) The test using the 'Brandschacht' apparatus described in DIN 4102-15 (cf. subclause 6.1.3.1) shall be deemed passed if

- The mean value for the residual length (portion of specimen that has not burned or charred; cf. subclause 9.1 of DIN 4102-16) of each specimen is at least 15 cm and no individual values are lower than 0 cm,
- The mean effluent temperature does not exceed 200 °C in any test,
- The requirement for the residual length of each specimen is met even where there is afterflame, afterglow, or smouldering.

b) Pass DIN 4102-1: 1998 sub-clause 6.2.3 Ignitability Test if

For each specimen, flaming doesn't reach the gage mark within 20s after flame application.

2) Materials may be classed as **B2** materials if they pass the ignitability test specified in DIN 4102-1: 1998 subclause 6.2.5.

For each specimen, flaming doesn't reach the gage mark (150mm marks) within 20s after flame application.

3) Combustible materials which cannot be classed as B1 or B2 materials shall be classed as **B3** materials.

STATEMENTS:

This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.

This test report does not replace any mandatory certification of the product that may be required.

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire and smoke hazard of the product in use.

*** End of test report ***

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