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Test report No. 210680

for applying of a required "Verwendbarkeitsnachweis" issued 07.09.2021

Applicant: Camira Transport Fabrics Ltd

Meltham Mills

Meltham Mills Road

Meltham

West Yorkshire

HD9 4AY

Date of order: 19.08.2021

Date of sampling: no official sampling of the specimen by a representative

of Warringtonfire Frankfurt GmbH

Date of arrival: 19.08.2021

Date of test: 03.09.2021 and 06.09.2021

Order

Testing of the flammability (building class B1) according to DIN 4102-1 (May 1998)

Description / designation of the test object

Product name: Urban - Subway, Congestion, Living

Description of the relevant test procedure

DIN 4102 part 1 (Mai 1998)

DIN 4102-16 (January 2021)

This test report does not replace the required "Verwendbarkeitsnachweis". It is only used for issuing the "Verwendbarkeitsnachweis".





1. Description of the test material

1.1 Details of the customer:

Product name: Urban - Subway, Congestion, Living

Sample 1 Sample 2 Sample 3
Colour: Subway Colour: Congestion Colour: Living
Batch: 478710 Batch: 477435 Batch: 478230

Face to be tested: Label on Face

Product description:

Main components: 100% post-consumer recycled polyester

Thickness: 1 mm

Grossweight: 340 g/m² 476 g/lin.m

Color: as above

Intended end use of product Contract Seating

1.2 By Warringtonfire Frankfurt GmbH determined values:

Material: <u>fabric sample</u> <u>fabric sample</u> <u>fabric sample</u>

Colour: black beige red

thickness: approx. 0,8 mm approx. 0,8 mm approx. 0,8 mm

square weight: 308 g/m² 296 g/m² 312 g/m²

Testing after storing 14- days under climatic conditions (23°C / 50 % rel. humidity).



2. Test results

2.1.2 Brandschachtprüfung according to DIN 4102-1

Sample A: Material tested in production direction black Sample B: Material tested cross to the production direction black Sample C: Material tested in production direction beige Sample D: Material tested cross to the production direction beige

Test results of the Brandschacht tests part 1								
line		Measurements test sample						
no.			Α	В	С	D		
1	no. test arrangement according to DIN 4102 part 15, table 1		1	1	1	1		
2	flame height max. over lower sample edge	cm	40	40	40	40		
	time 1)	min : s	00:11	00:12	00:12	00:15		
3	ascertainments on the front side Flaming/glowing time 1)	min : s	00:04	00:03	00:03	00:03		
4	melting / burning through time 1)	min : s	00:07	00:07	00:07	00:07		
5	ascertainments on the back side Flaming/glowing time 1)	min : s	no	no	no	no		
6	discolouring time 1)	min : s	no	no	no	no		
7 8 9	burning droplets begin 1) extent occasional dropping of material constant dropping of material	min : s	no	no	no	no		
10 11 12	separating from burning sample parts begin 1) occasional separating parts constant separating parts	min : s	no	no	no	no		
13	duration of burning on the sieve tray (max.)	min : s	no	no	no	no		
14	influence on the burner flame by dropping of / separating material time 1)	min : s	no	no	no	no		
15 16	earlier end of test end of the fire scenario on the sample 1) time of a possible resulted test stop 1)	min : s	no	no	no	no		

¹⁾ time from start of test



	Test results of t	he Brandschach	t tests part	2					
line			Measurements test sample						
no.			Α	В	C	D			
	flaming after end of test		no	no	no	no			
17	duration		no	no	no	no			
18	number of sample	min : s	no	no	no	no			
19	front side of sample		no	no	no	no			
20 21	backside of sample flame length	cm	no	no	no	no			
	glowing after end of test	OIII	/	/	/	/			
22	duration	min . s	no	no	no	no			
23	number of sample		no	no	no	no			
24	place of occurrence lower sample part		no	no	no	no			
25	upper sample part		no	no	no	no			
26	front side of sample		no	no	no	no			
27	backside of sample		no	no	no	no			
	smoke density								
28	< 400 % x min		2	2	2	1			
28 29 30	> 440 % x min								
<u>30</u>	diagram in annex no.		1	2	3	4			
	residual length								
31	single results	cm	70 / 68	67 / 69	72 / 67	70 / 68			
			62 / 68	68 / 67	67 / 66	67 / 67			
32	average of the single results	cm	67	67	68	68			
33	photo of the sample on page		7	7	7	7			
	smoke temperature								
34	max. of the average results	°C	117	118	120	118			
35	time 1)	min : s	09:55	09:38	09:52	09:39			
36	diagram in annex no.		1	2	3	4			

¹⁾ time from start of test

Remarks:



2.1.2 Brandschachtprüfung according to DIN 4102-1

Sample E: Material tested in production direction red Sample F: Material tested cross to the production direction red

colour: light green

Test results of the Brandschacht tests part 1 line Measurements test sample								
line								
no.			Е	F				
1	no. test arrangement according to DIN 4102 part 15, table 1		1	1				
2	flame height max. over lower sample edge	cm	40	40				
	time 1)	min : s	00:13	00:13				
3	ascertainments on the front side Flaming/glowing time 1)	min : s	00:04	00:04				
4	melting / burning through time 1)	min : s	00:06	00:06				
5	ascertainments on the back side Flaming/glowing time 1)	min : s	no	no				
6	discolouring time 1)	min : s	no	no				
7 8 9	burning droplets begin 1) extent occasional dropping of material constant dropping of material	min:s	no	no				
10 11 12	separating from burning sample parts begin 1) occasional separating parts constant separating parts	min : s	no	no				
13	duration of burning on the sieve tray (max.)	min : s	no	no				
14	influence on the burner flame by dropping of / separating material time 1)	min : s	no	no				
15 16	earlier end of test end of the fire scenario on the sample 1) time of a possible resulted	min : s	no	no				
	test stop 1)	min : s						

¹⁾ time from start of test



Test results of the Brandschacht tests part 2								
line								
no.			Е	ments tes F				
	flaming after end of test		no	no				
17	duration		no	no				
18	number of sample	min : s	no	no				
19	front side of sample		no	no				
20 21	backside of sample flame length	cm	no	no				
21	glowing after end of test	CIII	/	/				
22	duration	min . s	no	no				
23	number of sample		no	no				
24	place of occurrence		no	no				
24 25	lower sample part upper sample part		no	no				
26	front side of sample		no	no				
27	backside of sample		no	no				
	smoke density							
28	< 400 % x min		3	2				
28 29 30	> 440 % x min							
<u>30</u>	diagram in annex no.		5	6				
	residual length			_				
31	single results	cm	71 / 67	67 / 69				
			69 / 68	67 / 65				
32	average of the single results	cm	68	67				
33	photo of the sample on page		7	7				
	smoke temperature							
34	max. of the average results	°C	120	119				
35	time 1)	min : s	09:46	07:15				
36	diagram in annex no.		5	6				

¹⁾ time from start of test

As the residual length was > 45 cm during the Brandschacht test, no further tests were necessary according to DIN 4102-16. Remarks:



2.1.3 Appearance of the specimen after the test:





Sample B



Sample C



Sample D



Sample E



Sample F





2.2.1 Normal flammability test according to DIN 4102-1

Test with edge ignition without deposit Flame application on: lower sample edge Edge ignition

length direction: colour: black

iorigari airootiorii			•••					
Sample-no.		1	2	3	4	5		
Time from start of test		ı		3	4	5		
Ignition point [s]		1	1	1	1	1		
Reaching the measuring ma	ırk	no	no	no	no	no		
within 20 seconds		110	110	110	110	110		
Self-extinguishing of the flar	ne [s]	-	-	-	-	-		
Max. flame height	[mm]	130	140	140	80	120		
Time	[s]	13	14	14	10	11		
End of afterflaming	[s]	>10	>10	>10	>10	>10		
End of afterglowing	[s]	-	-	-	-	-		
Flames extinguished after	[s]	25	25	25	25	25		
Smoke development		atrong amaka dayalanmant						
(visual impression)low / modera	strong smoke development							
Separating from burning ma	terial	no	no	no	no	no		
Time	[s]	-	-	-	-	-		

Remarks: none

cross direction: colour: blackw

Sample-no.		1	2	3	1	5		
Time from start of test		ı		3	4	5		
Ignition point [s]		1	1	1	1	1		
Reaching the measuring mark within 20 seconds		no	no	no	no	no		
Self-extinguishing of the fla	me [s]	12	20	17	14	-		
Max. flame height	[mm]	80	100	110	90	110		
Time	[s]	8	13	13	10	12		
End of afterflaming	[s]	-	5	2	ı	>10		
End of afterglowing	[s]	-	-	ı	ı	-		
Flames extinguished after	[s]	-	-	ı	ı	25		
Smoke development			strong smoke development					
, ,	isual impression)low / moderate / strong				-	T		
Separating from burning ma	aterial	no	no	no	no	no		
Time	[s]	-	-	-	-	-		

Remarks: none



2.2.2 Normal flammability test according to DIN 4102-1

Test with edge ignition without deposit Flame application on: lower sample edge Edge ignition

length direction: colour: beige

iengin dhecdon.	coloui.	Deige				
Sample-no.		1	2	3	4	5
Time from start of test		ı		3		3
Ignition point [s]		1	1	1	1	1
Reaching the measuring mark within 20 seconds		no	no	no	no	no
Self-extinguishing of the flar	ne [s]	-	-	20	-	13
Max. flame height	[mm]	130	130	120	110	100
Time	[s]	13	13	11	12	9
End of afterflaming	[s]	>1	>10	5	>10	-
End of afterglowing	[s]	-	-	-	ı	-
Flames extinguished after	[s]	25	25	-	25	-
Smoke development (visual impression)low/modera	strong smoke development					
Separating from burning ma	terial	no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none

cross direction: colour: beige

Sample-no.		1	2	3	1	5
Time from start of test		'	2	5	4	3
Ignition point [s]		1	1	1	1	1
Reaching the measuring ma	ark	20	20	20	no	no
within 20 seconds		no	no	no	no	no
Self-extinguishing of the flar	ne [s]	-	-	-	-	-
Max. flame height	[mm]	130	140	110	140	100
Time	[s]	12	14	13	15	13
End of afterflaming	[s]	>10	>10	>10	>10	>10
End of afterglowing	[s]	-	-	ı	ı	-
Flames extinguished after	[s]	25	25	25	25	25
Smoke development			otrona s	maka daya	lonmont	
(visual impression)low / modera	ate / strong	strong smoke development				
Separating from burning ma	terial	no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none



2.2.3 Normal flammability test according to DIN 4102-1

Test with edge ignition without deposit Flame application on: lower sample edge Edge ignition

length direction: colour: red

lengin direction.	coloui.	ica				
Sample-no.		4	2	3	4	5
Time from start of test		ı		3	4	5
Ignition point [s]		1	1	1	1	1
Reaching the measuring mark within 20 seconds		no	no	no	no	no
Self-extinguishing of the flan	ne [s]	-	-	-	-	-
Max. flame height	[mm]	140	90	80	110	130
Time	[s]	14	11	13	14	14
End of afterflaming	[s]	>10	>10	>10	>10	>10
End of afterglowing	[s]	-	-	ı	-	-
Flames extinguished after	[s]	25	25	25	25	25
Smoke development (visual impression)low / modera	strong smoke development					
Separating from burning ma	terial	no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none

cross direction: colour: red

Sample-no.		1	2	3	4	5		
Time from start of test		1		3		3		
Ignition point [s]		1	1	1	1	1		
Reaching the measuring ma	ark	no	no	no	no	no		
within 20 seconds		no	110	110	110	110		
Self-extinguishing of the flar	ne [s]	-	-	-	-	-		
Max. flame height	[mm]	120	110	130	120	110		
Time	[s]	14	13	14	14	13		
End of afterflaming	[s]	>10	>10	>10	>10	>10		
End of afterglowing	[s]	-	-	ı	ı	-		
Flames extinguished after	[s]	25	25	25	25	25		
Smoke development		atrang amaka dayalanmant						
(visual impression)low / modera	ate / strong	strong smoke development						
Separating from burning ma	terial	no	no	no	no	no		
Time	[s]	-	-	-	-	-		

Remarks: none



2.2.4 Appearance of the sample after the small burner test:









Assessment

The material described in chapter one fulfils the requirements of the building class B2 according to DIN 4102-1 (Mai 1998).

The determined test results show that the material also fulfils the requirements

of the building class B1

according to DIN 4102-1 (Mai 1998).

Special note

The fire test result is only valid for the material described in chapter one in the tested colours, square weights and thicknesses.

The test was carried out in free hanging configuration.

The distance to another plane material must be more or equal then 40 mm.

According to DIN 4102-16 Section 5.2, the test result includes all colour settings.

The material wasn't tested after an outside storage.

In combination with other materials (for example coatings, deposits) the burning behaviour could be influenced unfavourable so that the classification above is not valid any longer. According to DIN 4102-1 the burning behaviour in combination with other materials has to be tested separately.

This test report does not replace the required "Verwendbarkeitsnachweis". It is only used for issuing the "Verwendbarkeitsnachweis".

Frankfurt, the 07th September 2021

H. Anders

Tester in Charge

P. Scheinkönig Prüfstellenleiter Bau-PVO





This Test report is valid until 02.09.2026

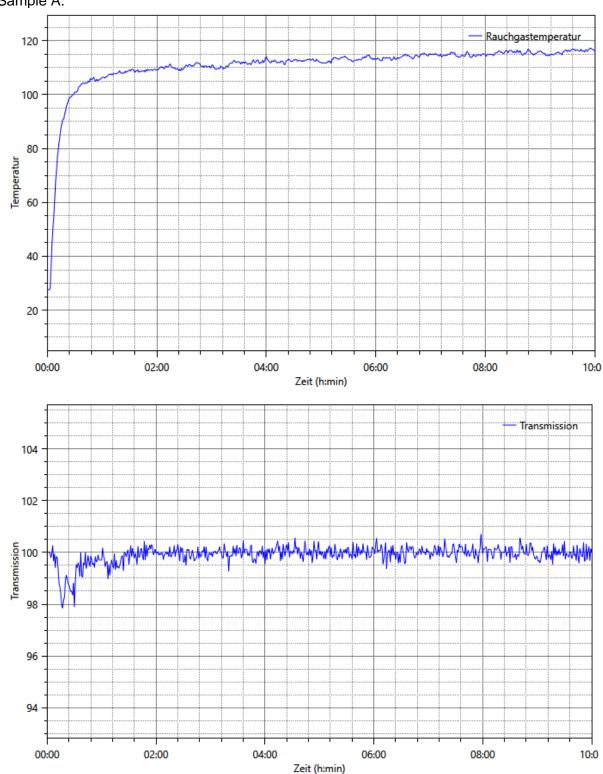
The results of the tests relate only to the behaviour of the test specimen which is designated on the top.

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Annex 1 to the Test report No. 210680 issued 07.09.2021

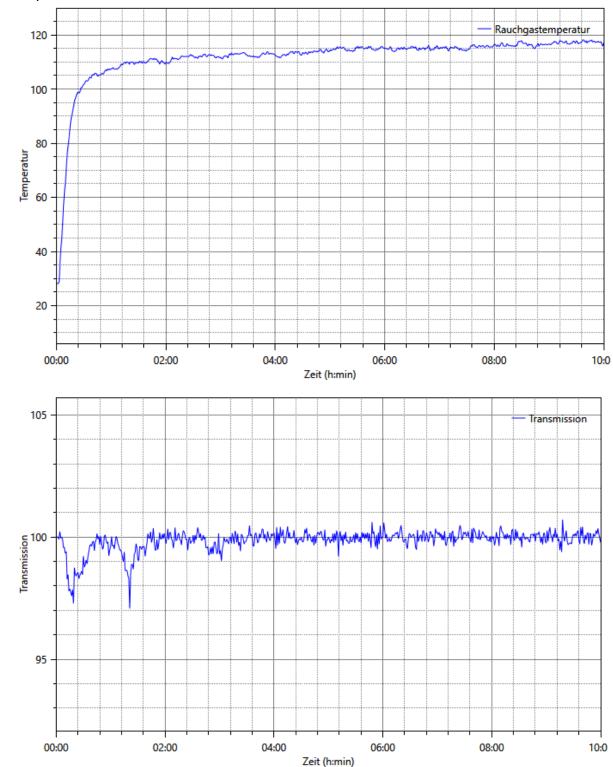
Sample A:





Annex 2 to the Test report No. 210680 issued 07.09.2021

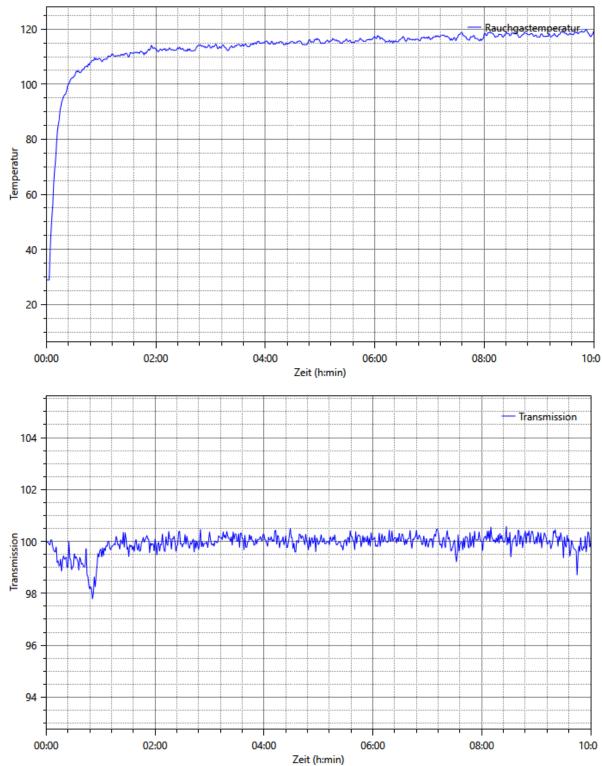
Sample B:





Annex 3 to the Test report No. 210680 issued 07.09.2021

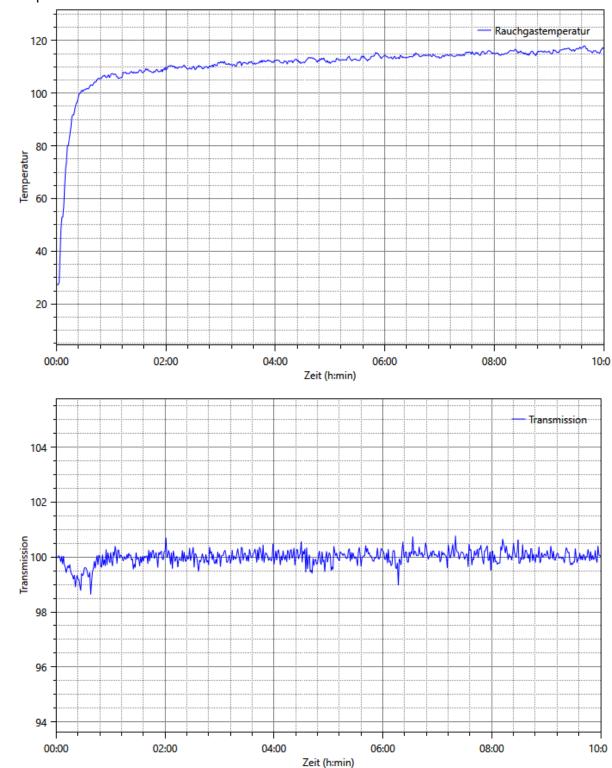
Sample C:





Annex 4 to the Test report No. 210680 issued 07.09.2021

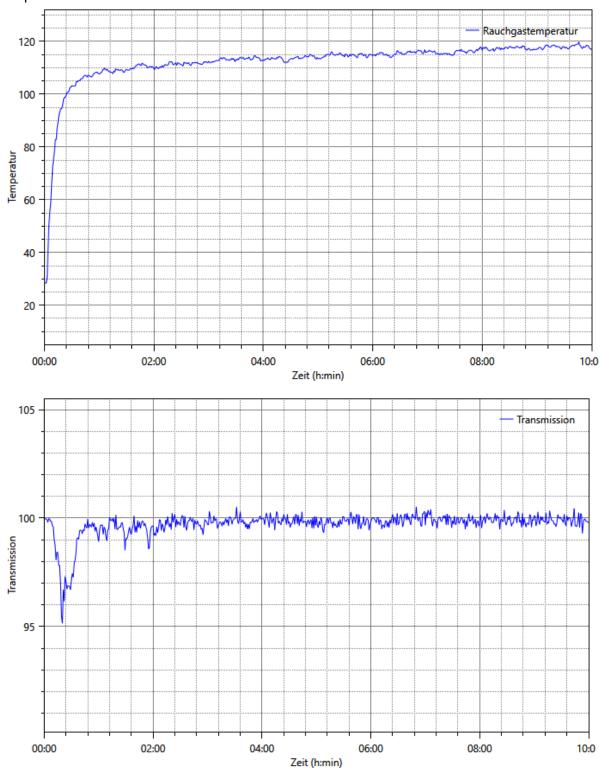
Sample D:





Annex 5 to the Test report No. 210680 issued 07.09.2021

Sample E:





Annex 6 to the Test report No. 210680 issued 07.09.2021

Sample F:

