Warringtonfire Frankfurt GmbH Industriepark Höchst, C369 D-65926 Frankfurt am Main Germany



Test report No. 191144

for applying of a required "Verwendbarkeitsnachweis" issued 13.01.2020

Applicant:

Camira Transport Fabrics Ltd, Meltham Mills Meltham Mills Road Meltham West Yorkshire HD9 4AY

Date of order: Date of sampling: 12.12.2019 no official sampling of the specimen by a representative of Warringtonfire Frankfurt GmbH 17.12.2019 07.01.2020

Date of arrival: Date of test:

Order

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

Description / designation of the test object

Product name: Chateau

Description of the relevant test procedure

DIN 4102 part 1 (Mai 1998)

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:	Chateau
Face to be tested:	marked on samples / side with stickers
Product description:	
width:	140 cm
colours:	Light – Pomeral (Batch 405768) Medium – Noizay (Batch 426099) Dark – Beauvois (Batch 434326)
weight:	225 g/m ²
composition:	100% Flame Retardant Polypropylene
Intended end use of product	Upholstery

1.2 By Warringtonfire Frankfurt GmbH determined values:

Fabric samples

Colour:	beige	orange	black
thickness:	0,83 mm	0,84 mm	0,83 mm
square weight:	228 g/m²	229 g/m²	228 g/m²

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



2. Test results

2.1.1 Brandschachtprüfung according to DIN 4102-1

Sample A: Material tested in production direction. Sample B: Material tested cross to the production direction.

colour: beige

Measurements test sample						
		А	В	-		
no. test arrangement according to		1	1			
<u>DIN 4102 part 15, table 1</u>						
lower sample edge	cm	40	40			
time ¹⁾	min : s	00:07	00:08			
ascertainments on the front side						
Flaming/glowing						
time ¹⁾	min : s	00:04	00:03			
melting / burning through						
time ¹⁾	min : s	00:05	00:05			
ascertainments on the back side						
Flaming/glowing		no	no			
	min : s					
discolouring		no	no			
time	min : s	110	110			
burning droplets						
begin ¹⁾	min : s					
extent		no	no			
occasional dropping of material						
constant dropping of material						
begin 1)	min·s					
occasional separating parts	11111.3	no	no			
constant separating parts						
duration of burning						
on the sieve tray (max.)	min : s	no	no			
influence on the burner flame by dropping						
of / separating material		no	no			
time ¹⁾	min : s					
earlier end of test						
end of the fire scenario on the						
	min : s	no	no			
time of a possible resulted	minto					
	mm : s					
	no. test arrangement according to DIN 4102 part 15, table 1 flame height max. over lower sample edge time 1) ascertainments on the front side Flaming/glowing time 1) melting / burning through time 1) ascertainments on the back side Flaming/glowing time 1) ascertainments on the back side Flaming/glowing time 1) ascertainments on the back side Flaming/glowing time 1) discolouring time 1) discolouring time 1) burning droplets begin 1) extent occasional dropping of material constant dropping of material separating from burning sample parts begin 1) occasional separating parts constant separating parts duration of burning on the sieve tray (max.) influence on the burner flame by dropping of / separating material time 1) earlier end of test <td>no. test arrangement according to DIN 4102 part 15, table 1flame height max. over lower sample edge time 1)cmlower sample edge time 1)min : sascertainments on the front side Flaming/glowing time 1)min : smelting / burning through time 1)min : sascertainments on the back side Flaming/glowing time 1)min : ssascertainments on the back side Flaming/glowing time 1)min : sburning droplets begin 1)min : sburning droplets begin 1)min : ssextent occasional dropping of material constant dropping of materialmin : sseparating from burning sample parts begin 1)min : sduration of burning on the sieve tray (max.)min : sinfluence on the burner flame by dropping of / separating material time 1)min : searlier end of test end of the fire scenario on the sample 1) time of a possible resulted test stop 1)min : s</td> <td>no. test arrangement according to DIN 4102 part 15, table 11flame height max. over lower sample edge time 1)cm40lower sample edge time 1)min : s00:07ascertainments on the front side Flaming/glowing time 1)min : s00:04melting / burning through time 1)min : s00:05ascertainments on the back side Flaming/glowing time 1)min : s00:05ascertainments on the back side Flaming/glowing time 1)min : snodiscolouring time 1)min : snodiscolouring time 1)min : snobegin 1) coasional dropping of material constant dropping of material constant separating partsmin : snoduration of burning on the sieve tray (max.)min : snoinfluence on the burner flame by dropping of / separating material time 1)min : snoearlier end of test end of the fire scenario on the sample 1) time of a possible resulted test stop 1)min : sno</td> <td>no. test arrangement according to DIN 4102 part 15, table 1AB$\frac{1}{1}$111$\frac{1}{1}$11$\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}1\frac{1}{1}$$\frac{1}{1}$<</td> <td>no. test arrangement according to DIN 4102 part 15, table 1ABflame height max. over lower sample edge time 10111flame height 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¹⁾ time from start of test



page 4 of 16

	Test results of the Bra	ndschach	t tests nart	2		
			r tosts part	2		
line			Measure	ements tes	t sample	
no.			А	В		
	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	flame length	cm	no	no		
	glowing after end of test		/	/		
22	duration	min . s	no	no		
23	number of sample		no	no		
24	place of occurrence		no	no		
24	upper sample part front side of sample		no	no		
26			no	no		
27	backside of sample		no	no		
	smoke density					
28	< 400 % x min		0	1		
29	<u>> 440 % x min</u>		/	/		
<u>30</u>	diagram in annex no.		1	2		
	residual length					
31	single results	cm	58 / 56	50 / 54		
			58 / 52	64 / 62		
32	average of the single results	cm	56	57		
33	photo of the sample on page		5	5		
	smoke temperature					
34	max. of the average results	°C	112	111		
35	time ¹⁾	min : s	09:33	09:44		
36	diagram in annex no.		1	2		

¹⁾ time from start of test

Remarks: melting of the samples



2.1.2 Appearance of the specimen after the test:

colour: beige

Sample A







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Test report No. 191144 issued 13.01.2020

page 6 of 16

2.1.3 Brandschachtprüfung according to DIN 4102-1

Sample C: Material tested in production direction. Sample D: Material tested cross to the production direction.

colour: orange

	Test results of the Brandschacht tests part 1							
line			Measur	ements tes	st sample			
no.			С	D				
1	no. test arrangement according to DIN 4102 part 15, table 1		1	1				
2	<u>flame height max. over</u> <u>lower sample edge</u> time ¹⁾	cm min : s	40 00:08	40 00:08				
3	ascertainments on the front side Flaming/glowing time ¹⁾	min : s	00:03	00:03				
4	melting / burning through time ¹⁾	min : s	00:05	00:05				
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 test stop ¹⁾	min : s min : s	no	no				

¹⁾ time from start of test



page 7 of 16

	Test results of the Brandschacht tests part 2								
line		Measurements test sample							
no.			С	D					
	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	flame length	cm	no	no					
	glowing after end of test		/	/					
22	duration	min . s	no	no					
23	number of sample		no	no					
24	place of occurrence		no	no					
24	upper sample part front side of sample		no	no					
26			no	no					
27	backside of sample		no	no					
	smoke density								
28	< 400 % x min		1	1					
29	<u>> 440 % x min</u>		/	/					
<u>30</u>	<u>diagram in annex no.</u>		3	4					
	residual length								
31	single results	cm	54 / 50	50 / 50					
			54 / 50	52 / 53					
32	average of the single results	cm	52	51					
33	photo of the sample on page		8	8					
	smoke temperature								
34	max. of the average results	°C	112	112					
35	35 time ¹⁾		09:50	09:13					
36	diagram in annex no.		3	4					

¹⁾ time from start of test

Remarks: melting of the samples



2.1.4 Appearance of the specimen after the test:

colour: orange

Sample C







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Test report No. 191144 issued 13.01.2020

page 9 of 16

2.1.5 Brandschachtprüfung according to DIN 4102-1

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

colour: black

	Test results of the Brandschacht tests part 1							
line		Measurements test sample						
no.			E	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	00:07	80:00				
3	Ascertainments on the front side Flaming/glowing time ¹⁾	min : s	00:03	00:03				
4	melting / burning through time ¹⁾	min : s	00:05	00:05				
5	ascertainments on the back side Flaming/glowing time ¹⁾	min : s	no	no				
6	discolouring time ¹⁾	min : s	no	no				
7 8	burning droplets begin ¹⁾ extent occasional dropping of material	min : s	no	no				
9 10 11 12	constant dropping of material 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 test stop ¹⁾	min : s min : s	no	no				

¹⁾ time from start of test



page 10 of 16

	Test results of the Brandschacht tests part 2								
line		Measurements test sample							
no.			E	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	flame length	cm	no	no					
21	alowing after end of test		/	/					
22	duration	min . s	no	no					
23	number of sample		no	no					
	place of occurrence		no	no					
24	lower sample part upper sample part front side of sample		no	no					
25			no	no					
27	backside of sample		no	no					
	smoke density								
28	$\leq 400 \% x min$		1	1					
29	> 440 % x min		/	/					
30	diagram in annex no.		5	6					
	residual length								
31	single results	cm	55 / 54	52 / 56					
			52 / 53	54 / 52					
32	average of the single results	cm	53	53					
33	photo of the sample on page		11	11					
	smoke temperature								
34	max. of the average results	°C	112	112					
35	time ¹⁾	min : s	08:41	09:38					
36	diagram in annex no.		5	6					

¹⁾ time from start of test

Remarks: melting of the samples



2.1.6 Appearance of the specimen after the test:

colour: black

Sample E

Sample F







Test report No. 191144 issued 13.01.2020

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: beig	e				
Sample-no.		1	2	3	4	5	
Time from start of test		I	2	5	7	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 flam	5	5	4	5	4		
Max. flame height	[mm]	40	40	40	40	40	
Time	[s]	5	5	4	5	4	
End of afterflaming	[s]	-	-	-	-	-	
End of afterglowing	[s]	-	-	-	-	-	
Flames extinguished after	[s]	-	-	-	-	-	
Smoke development							
(visual impression)low / modera			IOKE GEVEIO	pment			
Separating from burning ma	terial	no	no	no	no	no	
Time	[s]	-	-	-	-	-	

Remarks:

Cross direction:						
Sample-no.		1	2	2	4	F
Time from start of test		l I	2	3	4	5
Ignition point [s]		1	1	1	1	1
Reaching the measuring ma	ırk	20	20	20	20	20
within 20 seconds		no	no	no	no	no
Self-extinguishing of the flar	3	3	3	3	3	
Max. flame height	[mm]	30	30	30	30	30
Time	[s]	3	3	3	3	3
End of afterflaming	[S]	-	-	-	-	-
End of afterglowing	[S]	-	-	-	-	-
Flames extinguished after	[S]	-	-	-	-	-
Smoke development				aka davala	nmont	
(visual impression)low / modera	ite / strong	strong				
Separating from burning material no no no no no					no	
Time	[S]	-	-	-	-	-

Remarks: none

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Test report No. 191144 issued 13.01.2020

page 13 of 16

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

ength direction: colour: orange						
Sample-no.		1	2	3	1	5
Time from start of test		1	2	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 flame [s]		4	4	4	4	4
Max. flame height	[mm]	40	40	40	40	40
Time	[s]	4	4	4	4	4
End of afterflaming	[S]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[S]	-	-	-	-	-
Smoke development (visual impression)low / moderat		low sn	noke develo	pment		
Separating from burning mat	erial	no	no	no	no	no
Time	[S]	-	-	-	-	-

Remarks:

Cross direction:

Sample-no.		1	2	2	Λ	Б
Time from start of test	I	2	5	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 flar	3	3	3	3	3	
Max. flame height	[mm]	30	30	30	30	30
Time	[S]	3	3	3	3	3
End of afterflaming	[S]	-	-	-	-	-
End of afterglowing	[S]	-	-	-	-	-
Flames extinguished after	[S]	-	-	-	-	-
Smoke development				aaka dayala	nmont	
(visual impression)low / modera		10 10 511		pment		
Separating from burning ma	terial	no no no no no				no
Time	[s]	-	-	-	-	-

Remarks:

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Test report No. 191144 issued 13.01.2020

page 14 of 16

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: black								
Sample-no.		1	2	3	1	5		
Time from start of test		I	2	5	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 flame [s]		4	4	4	4	4		
Max. flame height	[mm]	40	40	40	40	40		
Time	[s]	4	4	4	4	4		
End of afterflaming	[S]	-	-	-	-	-		
End of afterglowing	[s]	-	-	-	-	-		
Flames extinguished after	[S]	-	-	-	-	-		
Smoke development (visual impression)low / moderate / strong		low smoke development						
Separating from burning material		no	no	no	no	no		
Time	[s]	-	-	-	-	-		

Remarks:

Cross direction:

Sample-no.		1	2	3	4	5			
Time from start of test									
Ignition point [s]		1	1	1	1	1			
Reaching the measuring mark within 20 seconds		no	no	no	no	no			
Self-extinguishing of the flame [s]		3	3	3	3	3			
Max. flame height	[mm]	30	30	30	30	30			
Time	[s]	3	3	3	3	3			
End of afterflaming	[s]	-	-	-	-	-			
End of afterglowing	[s]	-	-	-	-	-			
Flames extinguished after	[s]	-	-	-	-	-			
Smoke development									
(visual impression)low / moderate / strong									
Separating from burning material		no	no	no	no	no			
Time	[s]	-	-	-	-	-			

Remarks: none



Test report No. 191144 issued 13.01.2020

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 with burning droplets 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, surface weight and thickness.

The test was carried out in free hanging configuration.

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

According to A4, 4102-16 Section 4.2, 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 13th January 2020

H. Anders Tester in Charge

P. Scheinkönig Prüfstellenleiter Bau-PVO



This Test report is valid until 06.01.2025.

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. 191144 issued 13.01.2020

Sample A:





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Annex 2 to the Test report No. 191144 issued 13.01.2020



Sample B:





Annex 3 to the Test report No. 191144 issued 13.01.2020



Sample C:





Annex 4 to the Test report No. 191144 issued 13.01.2020



Sample D:





Annex 5 to the Test report No. 191144 issued 13.01.2020



Sample E:





Annex 6 to the Test report No. 191144 issued 13.01.2020



Sample F:

