



Testing. Advising. Assuring.

Test report No. 2013-2072

for applying of a required "Verwendbarkeitsnachweis"
issued 08.10.2013

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

Date of order: 29.08.2013
Date of sampling: official sampling of the specimen by a representative
of Exova Warringtonfire, Frankfurt
Date of arrival: 05.09.2013
Date of test: 25.09. + 26.09.2013

Order

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

Description / designation of the test object

Fabric for satting referred to as: "Aspen"

Description of the relevant test procedure

DIN 4102 part 1 (Mai 1998)

This test report did 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:

Tradename: "Aspen"

Composition: 100% Polyester with FR backcoating

Colour: Almond

Intended end use of product: Seating fabric

1.2 At the specimen preparation by Exova Warringtonfire, Frankfurt determined values:

Sample material: Fabric with coating

Colour: brown

Thickness: app. 0,76 mm

Total weight per unit area: 498,83 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 crosswise to the production direction

Sample C: Material tested in production direction

Sample D: Material tested in production direction

Test results of the Brandschacht tests part 1						
line no.		Measurements test sample				
			A	B	C	D
1	<u>no. test arrangement according to DIN 4102 part 15, table 1</u>		1	2	3	4
2	<u>flame height max. over lower sample edge</u> time ¹⁾	cm	90	80	80	80
		min : s	0:31	0:24	0:13	0:18
3	<u>ascertainties on the front side</u> Flaming/glowing time ¹⁾	min : s	0:07	0:06	0:05	0:06
4	<u>melting / burning through</u> time ¹⁾	min : s	0:08	0:09	0:07	0:07
5	<u>ascertainties on the back side</u> Flaming/glowing time ¹⁾	min : s	no	no	no	no
6		discolouring time ¹⁾	min : s	no	no	no
7	<u>burning droplets</u> begin ¹⁾ extent	min : s	not occured	not occured	not occured	not occured
8		occasional dropping of material				
9		constant dropping of material				
10	<u>separating from burning sample parts</u> begin ¹⁾	min : s	yes	yes	yes	yes
11		occasional separating parts				
12		constant separating parts				
13	duration of burning on the sieve tray (max.)	min : s	not occured	not occured	not occured	not occured
14	influence on the burner flame by dropping of / separating material time ¹⁾	min : s	no	no	no	no
15	<u>earlier end of test</u> end of the fire scenario on the sample ¹⁾	min : s	no	no	no	no
16		time of a possible resulted test stop ¹⁾	min : s			

¹⁾ time from start of test

Test results of the Brandschacht tests part 2						
line no.		Measurements test sample				
		A	B	C	D	
17	<u>flaming after end of test</u> duration	0:00	0:00	0:00	0:00	
18	number of sample	--/--	--/--	--/--	--/--	
19	front side of sample	--/--	--/--	--/--	--/--	
20	backside of sample	--/--	--/--	--/--	--/--	
21	flame length	--/--	--/--	--/--	--/--	
22	<u>glowing after end of test</u> duration	0:00	0:00	0:00	0:00	
23	number of sample	--/--	--/--	--/--	--/--	
24	place of occurrence	--/--	--/--	--/--	--/--	
25	lower sample part	--/--	--/--	--/--	--/--	
26	upper sample part	--/--	--/--	--/--	--/--	
27	front side of sample	--/--	--/--	--/--	--/--	
28	<u>smoke density</u> < 400 % x min	25	20			
29	> 440 % x min	--/--	--/--			
30	diagram in annex no.	-	-			
31	<u>residual length</u> single results	25 / 26 32 / 22	37 / 34 36 / 32	33 / 25 26 / 31	34 / 26 42 / 32	
32	average of the single results	26	34	28	33	
33	foto of the sample on page	5	5	5	5	
34	<u>smoke temperature</u> max. of the average results	133	131	142	128	
35	time ¹⁾	0:30	0:28	0:38	0:37	
36	diagram in annex no.	1	2	3	4	

¹⁾ time from start of test

Remarks:

2.1.2 Appearance of the specimen after the tests:

sample A



sample B



sample C



sample D



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:

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]	16	21	15	18	25
Max. flame height [mm]	80	80	80	80	80
Time [s]	10	11	10	11	11
End of afterflaming [s]	1	6	-	3	10
End of afterglowing [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression)	strong smoke production				
Separating from burning material	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

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]	15	16	15	19	19
Max. flame height [mm]	70	80	80	80	80
Time [s]	10	11	10	11	11
End of afterflaming [s]	-	1	-	4	4
End of afterglowing [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression)	strong smoke production				
Separating from burning material	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

2.2.2 Appearance of the sample after the small burner test:



3. 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 comment

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

The test was carried out in free hanging configuration.

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

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 did not replace the required „Verwendbarkeitsnachweis“. It is only used for issuing the “Verwendbarkeitsnachweis”.

Frankfurt, the 08.10.2013



H. Anders
Tester in charge



Dipl.-Ing. T. Zachäus
Laboratory supervisor

This Test report is valid until 24.09.2018

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

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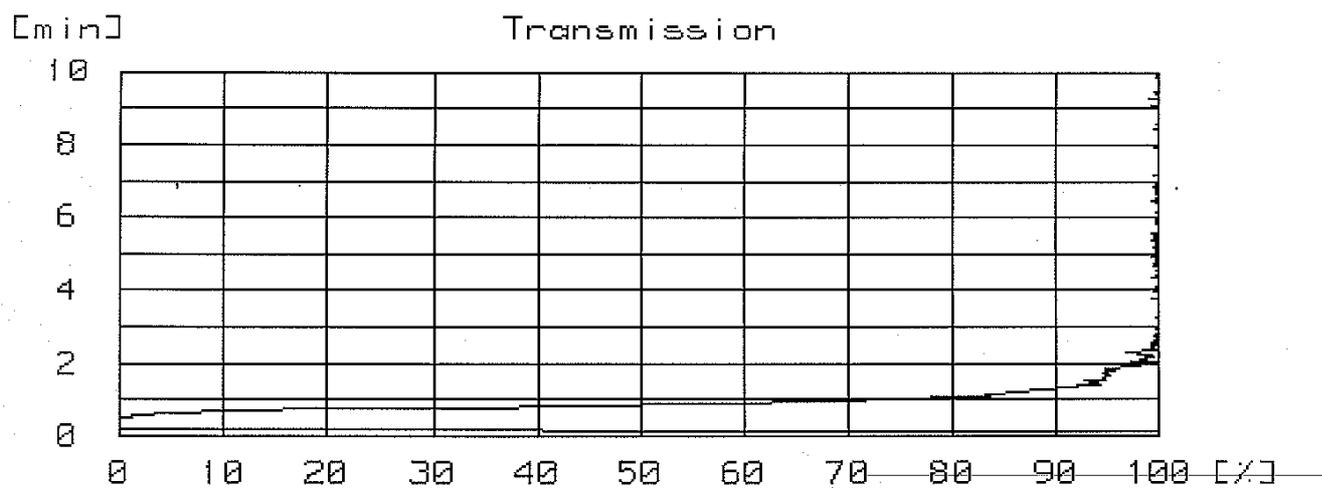
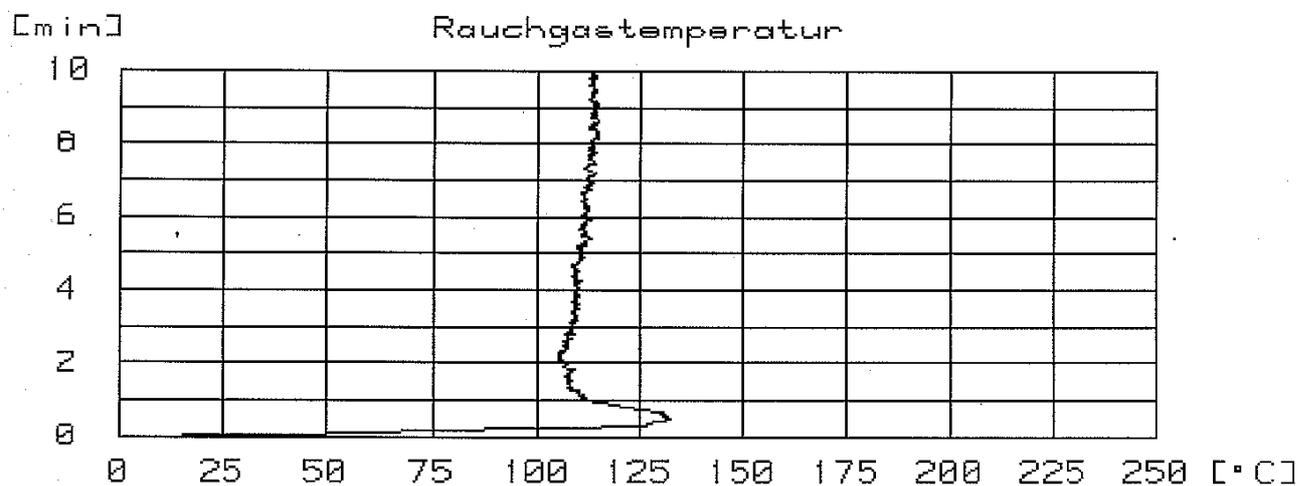
This test report is a translation of the German version 2013-2072 (issued 08.10.2013). In case of doubt only the German version is valid

This test report contains 8 pages and 4 annexes.

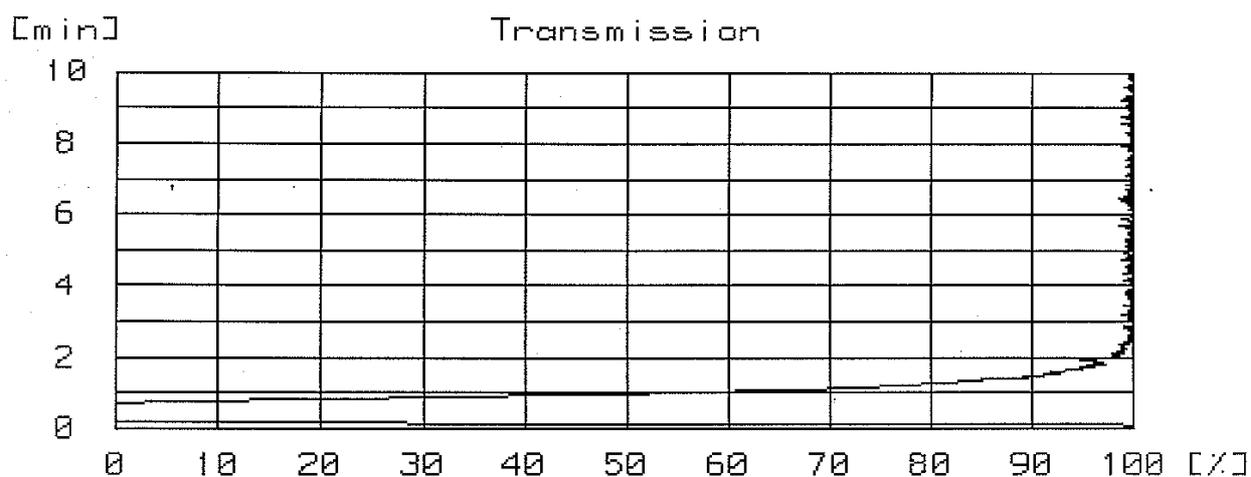
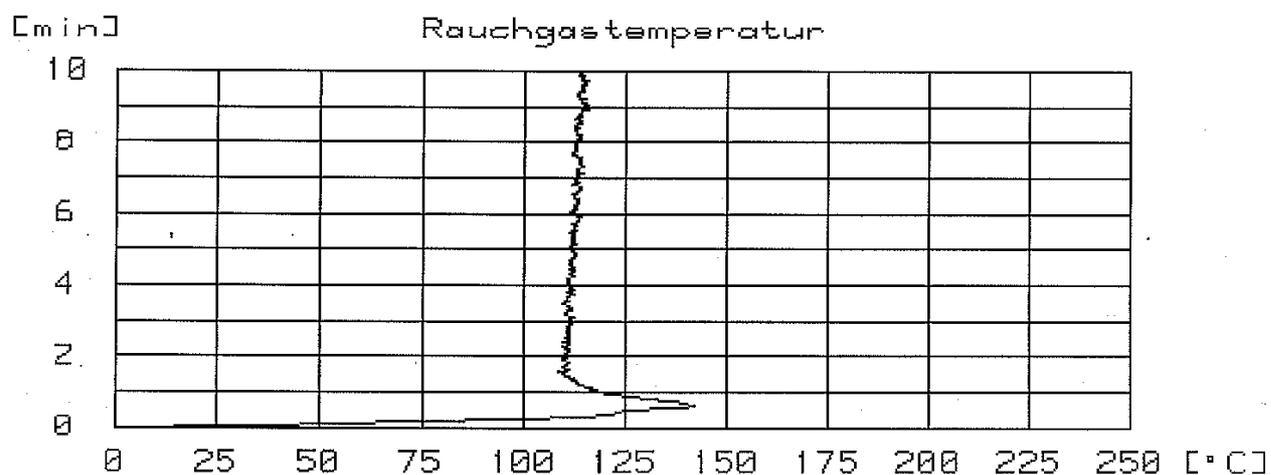
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Annex 1 to the Test report No. 2013-2072 issued 08.10.2013

Sample A:



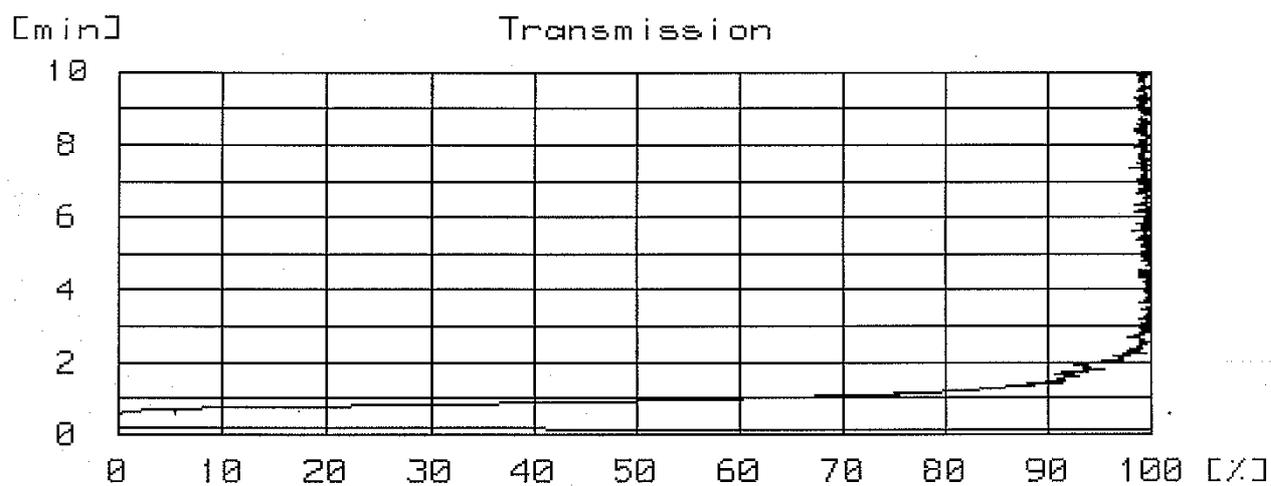
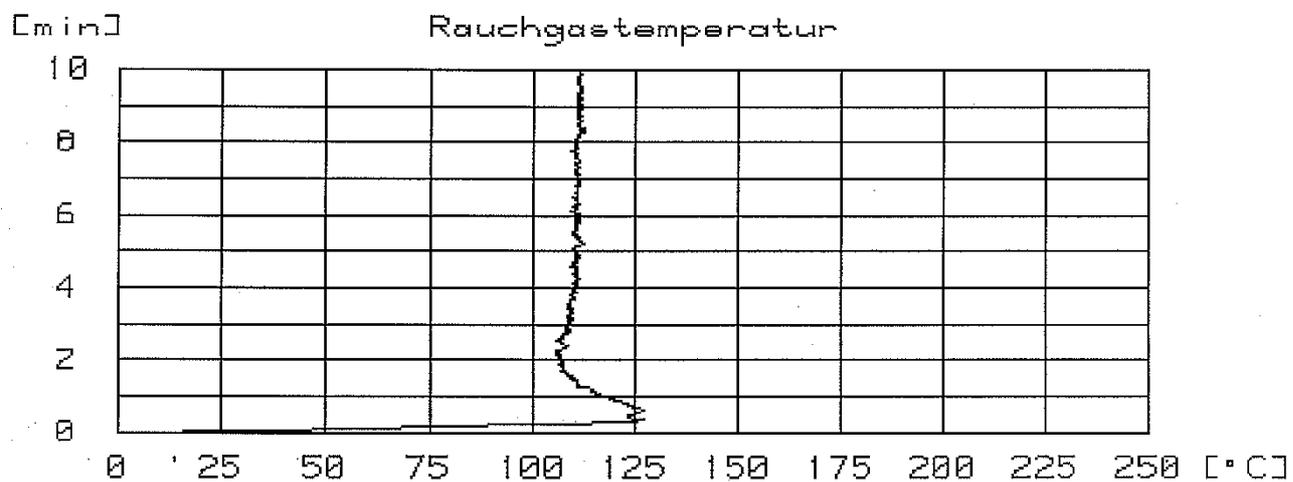
Sample B:



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Annex 2 to the Test report No. 2013-2072 issued 08.10.2013

Sample C:



Sample D:

