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Testing. Advising. Assuring.

Test report No. 2017-1364

for applying of a required "Verwendbarkeitsnachweis"
issued 02.05.2017

Applicant: ALKOR DRAKA
75; rue Pasteur

60140 LIANCOURT
FRANCE

Date of order: **29.03.2017**
Date of sampling: ***no official sampling of the specimen by a representative of Exova Warringtonfire, Frankfurt***
Date of arrival: **05.04.2017**
21.04.2017 + 27.04.2017

Order

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

Description / designation of the test object

Fabric samples designated as „1108"

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:

Fabric samples designated as „1108“

Probenbeschreibung:

Product name: 1108

Product description:

PVC souple ignifugé dans la masse
- 1108, Gris 20014, épaisseur 0,39 mm, masse surfacique 555 g/m²
- 1108, Blanc 1295 épaisseur 0,41 mm, masse surfacique 555 g/m²

Intended end use of product: SCREEN

1.2 By Exova Warringtonfire, Frankfurt determined values:

Fabric samples

Colour:	white	grey
Thickness:	0,41 mm	0,42 mm
Square weight:	556 g/m²	547 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. Colour: white
Sample B: Material tested crosswise to the production direction. Colour: white
Sample C: Material tested in production direction. Colour: grey
Sample D: Material tested crosswise to the production direction. Colour: grey

Test results of the Brandschacht tests part 1						
line no.			Measurements test sample			
			A	B	C	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	60	60	70	70
	time [1]	min : s	0:17	0:14	0:17	0:17
3	ascertainments on the front side Flaming/glowing time [1]	min : s	0:03	0:04	0:06	0:03
4	melting / burning through time [1]	min : s	0:11	0:09	0:10	0:11
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	burning droplets begin [1]	min : s	not occured	not occured	not occured	not occured
8	extent occasional dropping of material					
9	constant dropping of material					
10	separating from burning sample parts begin [1]	min : s	no	no	no	no
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	yes	yes	yes	yes
15	earlier end of test 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
	flaming after end of test		--/--	--/--	--/--	--/--
17	duration		--/--	--/--	--/--	--/--
18	number of sample	min : s	--/--	--/--	--/--	--/--
19	front side of sample		--/--	--/--	--/--	--/--
20	backside of sample		--/--	--/--	--/--	--/--
21	flame length	cm	--/--	--/--	--/--	--/--
	glowing after end of test					
22	duration	min . s	not occured	not occured	not occured	not occured
23	number of sample		--/--	--/--	--/--	--/--
	place of occurrence		--/--	--/--	--/--	--/--
24	lower sample part		--/--	--/--	--/--	--/--
25	upper sample part		--/--	--/--	--/--	--/--
26	front side of sample		--/--	--/--	--/--	--/--
27	backside of sample		--/--	--/--	--/--	--/--
			--/--	--/--	--/--	--/--
	smoke density					
28	< 400 % x min		145	155	175	179
29	> 440 % x min		--/--	--/--	--/--	--/--
30	diagram in annex no.		1	2	3	4
	residual length					
31	single results	cm	50 / 64 52 / 57	56 / 50 70 / 68	48 / 50 54 / 49	46 / 55 50 / 49
32	average of the single results	cm	55	61	50	50
33	photo of the sample on page		5	5	5	5
	smoke temperature					
34	max. of the average results	°C	114	115	116	136
35	time [1)]	min : s	8:23	0:24	0:22	0:23
36	diagram in annex no.		1	2	3	4

[1)] time from start of test

Remarks: Because of the residual length of > 45 cm in two tests, the quantity of tests could be reduced, according to DIN 4102-16.
Melting the sample.

2.1.2 Appearance of the specimen after the test:

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 Colour: white

Sample-no. / 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]	15	15	15	15	15
Max. flame height	[mm]	50	50	50	50	50
Time	[s]	10	10	9	9	10
End of afterflaming	[s]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development (visual impression) low / moderate / strong		strong smoke development				
Separating from burning material		no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none

Cross direction Colour: white

Sample-no. / 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]	15	15	15	15	15
Max. flame height	[mm]	50	50	50	50	50
Time	[s]	10	9	10	10	9
End of afterflaming	[s]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development (visual impression)		strong smoke development				
Separating from burning material		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: grey

Sample-no. / 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]	15	15	15	15	15
Max. flame height	[mm]	70	60	60	60	60
Time	[s]	13	11	10	10	11
End of afterflaming	[s]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development (visual impression) low / moderate / strong		strong smoke development				
Separating from burning material		no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none

Cross direction Colour: grey

Sample-no. / 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]	15	15	15	15	15
Max. flame height	[mm]	60	60	60	50	50
Time	[s]	10	10	11	9	9
End of afterflaming	[s]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development (visual impression)		strong smoke development				
Separating from burning material		no	no	no	no	no
Time	[s]	-	-	-	-	-

Remarks: none

2.2.3 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 colour and square weight.
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 does not replace the required „Verwendbarkeitsnachweis“. It is only used for issuing the “Verwendbarkeitsnachweis”.

Frankfurt, the 02.05.2017

H. Anders
Tester in Charge

Dipl.-Ing. T. Zachäus
Laboratory supervisor

This Test report is valid until 20.04.2022.
The results of the tests relate only to the behaviour of the test specimen which is designated on the top.

This test report is a translation of the German version 2017-1364 (issued 02.05.2017). In case of doubt only the German version is valid
This test report contains 9 pages and 4 annexes.
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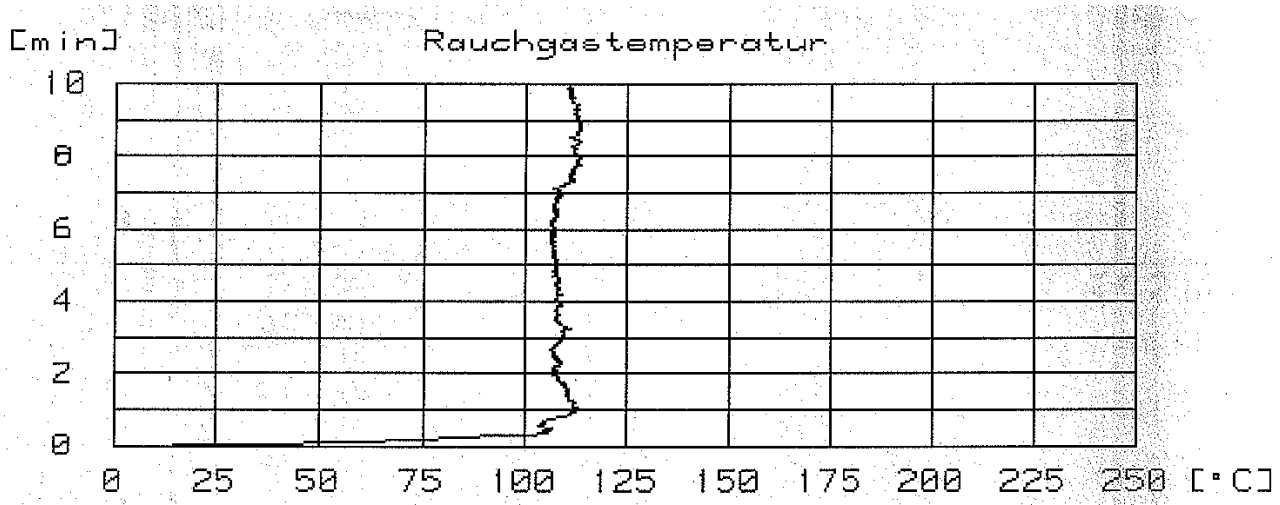
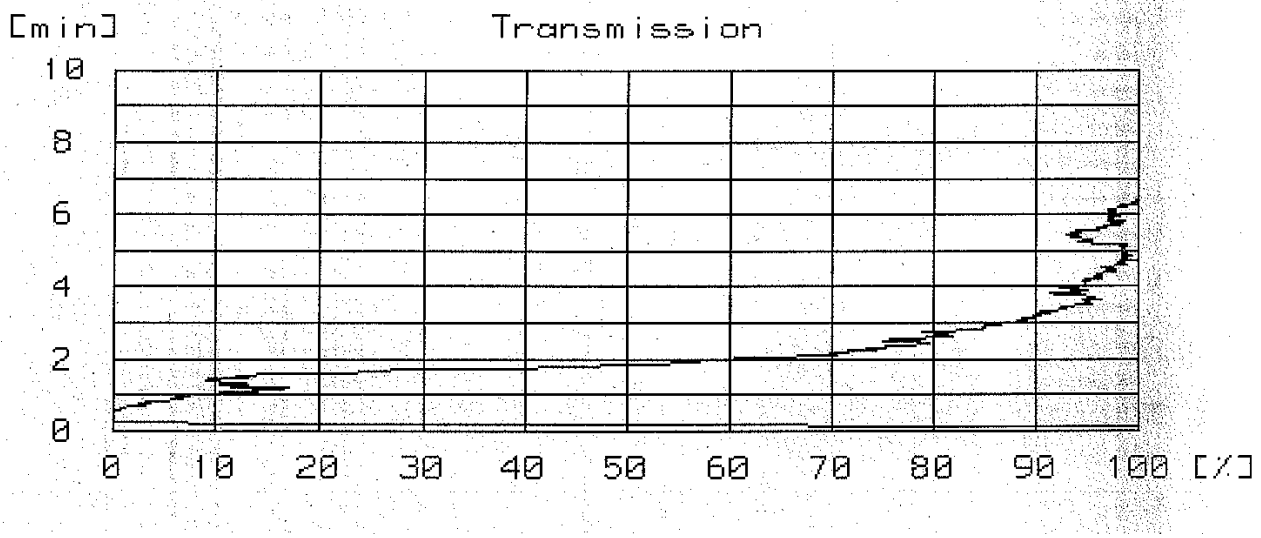
Annex 1 to the Test report No. 2017-1364 issued 02.05.2017

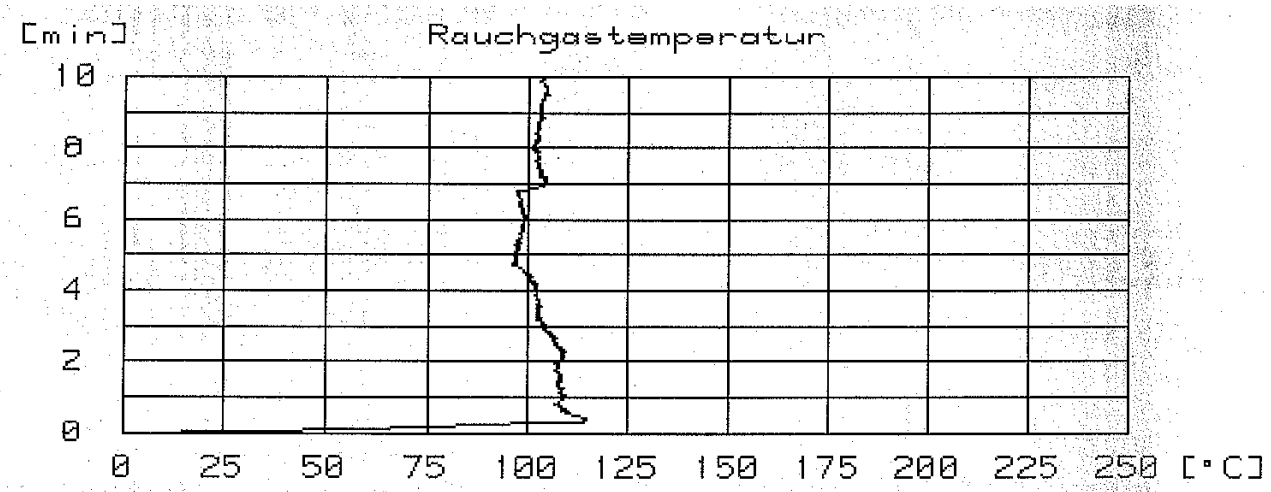
Sample A:

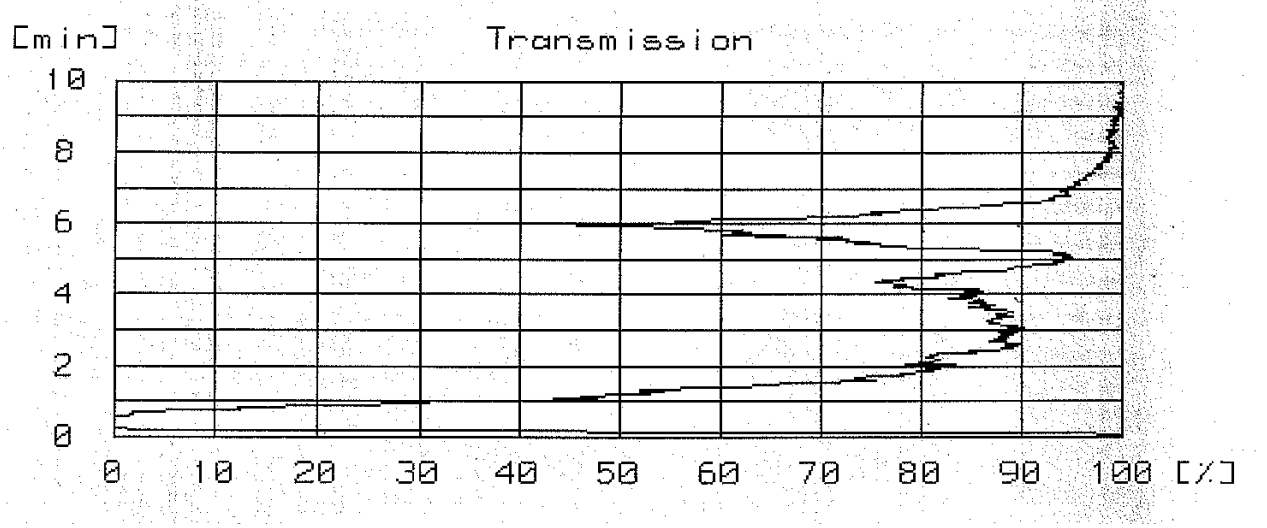




Annex 2 to the Test report No. 2017-1364 issued 02.05.2017

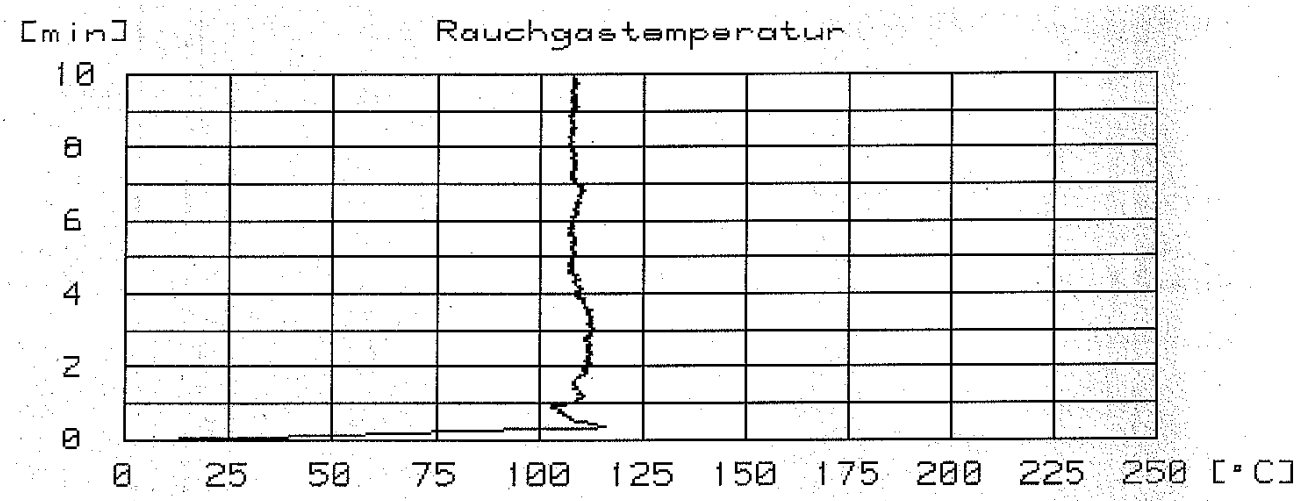
Sample B:

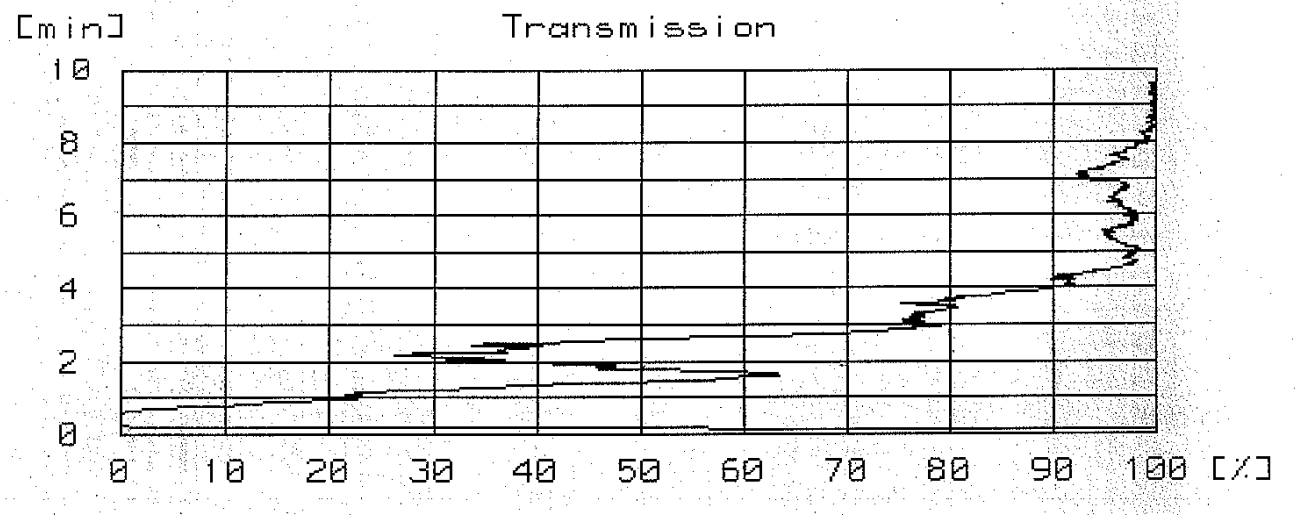




Annex 3 to the Test report No. 2017-1364 issued 02.05.2017

Sample C:





Annex 4 to the Test report No. 2017-1364 issued 02.05.2017

Sample D: