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Testing. Advising. Assuring.

# Test report No. 2018-1765-1

issued 25.09.2018

Applicant: AB Ludvig Svennsson

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Date of order: 13.09.2018

Date of sampling: no official taking out of the specimen from a

representative of the Exova Warringtonfire, Frankfurt

Date of delivery: 14.09.2018

Date of test: 21.09.2018 and 11.10.2018

#### Order:

Determination of the ignition time according to EN 1101 (ISO 6940) and of the vertical flame spread according to DIN EN 13772 with classification to DIN EN 13773.

## Description / designation of the test object

Product name: Marble

## Description of the relevant test procedure

DIN EN 1101 (09-2005) I. g. EN ISO 6940 (Version 1995)

DIN EN 13772 (04-2011)

DIN EN 13773 (05-2003)



## Test report No. 2018-1765-1 issued 25.09.2018

page 2 of 7

# 1. Description of the test material

# 1.1 Details of the customer:

Product name: Marble

Face tob e tested: Face side (marked on the article)

Description:

Name: Marble Product: Curtain

Colour: Blue Weight: 230 g/m²

Composition: 100% Flame retardant polyester

Intended end use of product: Curtain

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

Fabric sample

Colour: grey/green

Thickness: 0,4 mm

Square weight: 234 g/m<sup>2</sup>

Pretreatment: Material tested as delivered

Testing after clima storing 23°C and 50% humidity

page 3 of 7

# 2.1.1 Test sheet according to DIN EN 1101 (09-2005) or EN ISO 6940 (version 1995) (Determination of the ignition time)

**Test room:** 21°C / 40% r. L.F.

Ignition times: 1 - 4 s

Specimen no.		1	2	3	4	5	6	7	8
Test direction	L/C	L	L	L	L	С	С	С	С
Kind of ignition	E/S	Е	Е	Е	Е	Е	E	Е	Е
Ignition time	[s]	1	2	3	4	1	2	3	4
Total burn time	[s]	1	2	2	2	1	2	4	6
After flame time	[s]	0	0	0	0	0	0	1	2
After glow time	[s]	0	0	0	0	0	0	0	0
After flaming ≥ 5 [s]	yes/no	no							
Reaching of the upper edge of the specimen	yes/no	no							
Reaching the side edges	yes/no	no							
Drop of from sample parts*	yes/no	no							
Ignition of the filter paper*	yes/no	no							
Ignition	yes/no	no							

If not the case, - L = length C = crosswise S = surface E = edge

Remarks: none

EN ISO 6940 (1995) paragraph 8.6

...The ignition has taken place, if either the flame on the sample further on at least 5 seconds after the flame is removed, or remove the sample after the flame blows up to the top edge or edges to the vertical.

page 4 of 7

# 2.1.2 Test sheet according to DIN EN 1101 (09-2005) or EN ISO 6940 (version 1995) (Determination of the ignition time)

Test room: 21°C / 40% r. L.F.

Ignition times: 5 - 20 s

Specimen no.		9	10	11	12	13	14	15	16
Test direction	L/C	L	L	L	L	С	С	С	С
Kind of ignition	E/S	Е	Е	Е	Е	Е	Е	Е	Е
Ignition time	[s]	5	10	15	20	5	10	15	20
Total burn time	[s]	3	3	3	3	2	4	3	4
After flame time	[s]	0	0	0	0	0	0	0	0
After glow time	[s]	0	0	0	0	0	0	0	0
After flaming ≥ 5 [s]	yes/no	no							
Reaching of the upper edge of the specimen	yes/no	no							
Reaching the side edges	yes/no	no							
Drop of from sample parts*	yes/no	no							
Ignition of the filter paper*	yes/no	no							
Ignition	yes/no	no							

If not the case, - L = length C = crosswise S = surface E =edge

Remarks: none

Determined ignition time: none

EN ISO 6940 (1995) paragraph 8.6

...The ignition has taken place, if either the flame on the sample further on at least 5 seconds after the flame is removed, or remove the sample after the flame blows up to the top edge or edges to the vertical.

# Test report No. 2018-1765-1 issued 25.09.2018

page 5 of 7

# 2.2.1 Test results according to DIN EN 13772:

(Determination of the vertical flame spread)

Impact time of the radiator: 30s Ignition time: 10 s

	Sp	ecimen no.	1	2	3	4	5	6
Test direction		L/C	L	L	L	С	С	С
Kind of ignition		S/E	E	Е	Е	Е	Е	Е
Ignition time		[s]	10	10	10	10	10	10
Total burn time		[s]	0	0	0	0	0	0
After flame time		[s]	0	0	0	0	0	0
After glow time		[s]	0	0	0	0	0	0
Reaching the 1. mark in		[s]	-	-	-	-	-	-
Reaching the 2. mark in		[s]	-	-	-	-	-	-
Reaching the 3. mark in		[s]	-	-	-	-	-	-
Flame spread v1		[mm/min]	0	0	0	0	0	0
Flame spread v2		[mm/min]	0	0	0	0	0	0
Flame spread v3		[mm/min]	0	0	0	0	0	0
Separating of sample parts*		yes/no	yes	yes	yes	yes	yes	yes
Ignition of the filter paper*		yes/no	no	no	no	no	no	no
Destroyed area lei	ngth	[mm]	120	120	130	130	140	120
Destroyed area w	/idth	[mm]	60	70	70	70	70	60

If not the case, - L = length C = crosswise S = surface E = edge

Remarks: no ignition only melting.



# 2.2.2 Appearance of the specimen after the tests

Specimen after the test according to EN 13772 length and cross to direction of production





#### 3. Classification:

The material described in chapter 1 fulfills the requirements of the class 1 according to DIN EN 13773.

Classification DIN EN 13773							
Determination of ignition time according to EN 1101 (ISO 6940)							
ign	ition	No ignition					
	flame spread according to N 1102	Determination of vertical flame spread according to DIN EN 13772					
class 5 3. markingt thread broken or burning falling sample parts	class 4 3 marking thread didn't break any falling burning sample	class 3 3. marking thread broken or burning falling sample parts	class 2 3. marking thread didn't break any falling burning sample parts	class 1 1. marking thread didn't break, no falling burning sample parts			

## **Special comment**

The fire test result is only valid for the material described in chapter 1, in the tested colour and surface weight.

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

This test report replaces the report 2018-1765 issued 25.09.2018 (date of signature) which is invalid from now on.

Frankfurt, 11th October 2018

H. Anders

Tester in Charge

P. Scheinkönig Senior Test Officer



The results of the tests relate only to the behaviour of the test specimen which is designated in chapter one.

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This test report is a translation of the German version 2018-1765-1 (issued 25.09.2018). In case of doubt only the German version is valid. The report contains 7 pages.