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Exova Warringtonfire, Frankfurt is an IMO-listed fire testing laboratory and acknowledged as such by the Federal Republic of Germany

Test report

No. 2015-1788

issued 05.08.2015

Applicant Frescolori.de GmbH
Ferdinand-Braun-Str. 2
D-46399 Bocholt

Date of order 30.07.2015
Date of sampling No official sampling by a representative of the Exova Warringtonfire, Frankfurt
Date of arrival 30.07.2015
Date of test 05.08.2015

Order

Testing the burning behavior according to IMO Resolution MSC.307(88), FTP Code 2010, Annex 1, Part 5.

Description / designation of the test object

Limestone marble filler called FRESCOLORI ®-Caramor 3W
with Kobau microlith spatula fleece

Description of the relevant test procedure

IMO FTPC Teil 5 of flame resistance

1. Description of the specimen material

1.1 Details of the customer:

Underground:	Calcium silicate Board
Trade name:	FRESCOLORI ®-Caramor 3W with Kobau microlith spatula fleece
Material type:	Mineral lime marble filler with at least 95% natural substances and organic share according to DIN 18363 paragraph 2.4.1
Coating design:	FRESCOLORI ®-Caramor 3W filling on, in the fresh putty embed Kobau microlith spatula fleece and filling after. After drying a further layer FRESCOLORI ®-Caramor 3W filling on.
Colour:	white
Coating thickness:	2 mm
Surface weight:	2,45 kg/m ²
Intended end use of product:	For the design of ceiling and wall surfaces in the shipbuilding industry.

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

Coating on standard - calcium silicate plates, thickness 25±2 mm, density: 950±100 kg/m³

Colour:	white
Total weight:	ia. 1411
Total surface weight:	i.a. 11,8 kg/m ²
Total thickness:	i.a. 25mm
Coating thickness:	approx. 1,5 mm
Test arrangement:	Coated surface to the radiator

Testing after clima storing (23°C / 50 % relative humidity) up to a constant humidity level.

Specimen fixing/-backing: The sample was wrapped with aluminum foil, according to the requirements of standard

Ignition source: Pilot flame on specimen (impinging mode)

2.1 Test results

test arrangement: vertical

Speciem No.		1	2	3	4	5
Measuring results:						
Ignition after	[s]	12	12	12		
Reaching the 50 mm station after	[s]	25	25	25		
Reaching the 100 mm station after	[s]	-	-	-		
Reaching the 150 mm station after	[s]	-	-	-		
Reaching the 200 mm station after	[s]	-	-	-		
Reaching the 250 mm station after	[s]	-	-	-		
Reaching the 300 mm station after	[s]	-	-	-		
Reaching the 350 mm station after	[s]	-	-	-		
Reaching the 400 mm station after	[s]	-	-	-		
Reaching the 450 mm station after	[s]	-	-	-		
Reaching the 500 mm station after	[s]	-	-	-		
Reaching the 550 mm station after	[s]	-	-	-		
Flames extinguish after	[s]	-*	-*	-*		
Final spread of flame up to	[mm]	50	50	50		
Total duration of the test	[s]	600	600	600		
Specimen drips off / pieces fall off	No burning after	[s]	-	-	-	
	Burning after	[s]	-	-	-	
Smoke generation after	[s]	12	12	12		
Charring / discolouring / cracking after	[s]	12	12	12		
Charring / discolouring / cracking up to	[mm]	450	450	450		
Further remarks	* = samples extinguished; only burning in the area of the ignition flame.					

2.2 Test results

Specimen No.	Q_i MJ/m ²	Q_{sb} MJ/m ²	CFE kW/m ²	Q_t MJ	q_p kW
1	n.d.	n.d.	50,5	0,066	0,2
2	n.d.	n.d.	50,5	0,06	0,2
3	n.d.	n.d.	50,5	0,09	0,3
4					
5					
Average 2-4	n.d.	n.d.	50,5	0,072	0,23

n.d. = according MSC.61(67), FTP Code, Annex 1, Part 5 not determinable, because 150 mm – mark and 175 mm position not reached; also no sustained burning detected!

3.1 Surface flammability criteria:

A material is flame retardant be classified or meets the requirements for a low flame spread when the mean of the test results the following limit values, see table below does not exceed:

Typ of material	Q_{sb} MJ/m ²	CFE kW/m ²	Q_t MJ	q_p kW
Limits for bulkhead, wall and ceiling linings	≥ 1,5	≥ 20,0	≤ 0,7	≤ 4,0
Limits for floor coverings	≥ 0,25	≥ 7,0	≤ 2,0	≤ 10,0

for bulkhead, wall and ceiling linings no burning droplets and parts allowed
for floor coverings max. 10 burning droplets and parts allowed

Q_{sb} = Heat for sustained burning

CFE = Critical flux at extinguishment

Q_t = Total heat release

q_p = Peak heat release rate

Q_i = Ignition Heat

3.2 Classification:

The in chapter 1 described material fulfils the requirements according to IMO Resolution MSC.307(88), FTP Code 2010, Annex 1, Part 5, for the flammability

for use as a material for wall and ceiling filling in shipbuilding

In accordance with IMO FTPC, Annex 2, 2.2 in general surface materials and primary deck coverings with both the total heat release $Q_t < 0,2$ MJ and the peak heat release rate $q_p < 1,0$ kW (in accordance with part 5, annex 1) are considered to comply with the requirements of part 2, annex 1 without further testing.

On the basis of the test results a test according to FTP code 2010, annex 1, part 2 is not required.

4. Remark:

The fire test result is valid only for in chapter 1 described material, in tested colour as well as for colours with same or a lower organic content, on all non- combustible substrates.

The test results relate only the behaviour of the test specimen of a product under the particular conditions of the test. They are not intended to be the only criterion that can cause potential fire hazards of the product in use.

Frankfurt, 05th August 2015

A handwritten signature in black ink, appearing to be "P. Scheinkönig".

P. Scheinkönig
Tester in Charge

A handwritten signature in black ink, appearing to be "T. Zachäus".

Dipl.-Ing. T. Zachäus
Laboratory supervisor

The results of the tests relate only to the behaviour of the test sample which is designated on the top.
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This test report is a translation of the German version 2015-1788 (issued 05.08.2015). In case of doubt only the German version is valid

This test report contains 5 pages and 1 annex.

Appearance of the specimen during and after the test

