DANAK
TEST Reg. No. 12

Test report

SikaForce® - 7710 L100

Sika Services AG
Tueffenwies 16
CH-8048 Zurich
Switzerland

File: PFB10014b
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1 SPONSOR

Sika Services AG
Tueffenwies 16
CH-8048 Zurich
Switzerland

2 PRODUCT

Two component adhesive designated SikaForce®-7710 L100.

3 NAME OF MANUFACTURER

The sponsor is the manufacturer.

4 TEST METHOD

The test specimens have been subjected to the standard fire test complying with the International Code for Application of Fire Test Procedures, 2010 Resolution MSC.307(88), 2010 FTP Code, Annex 1 Part 5: "Test for surface flammability" in effect on 1 July 2012.

5 SAMPLE

Sampling

The sampling was done by the sponsor.

On 2011-11-01 DBI-Danish Institute of Fire and Security Technology received the following samples:

One can of SikaForce®-7710 L100 (approx. 1.3 kg) and one can of SikaForce®-7010 (approx. 1.1 kg).

DBI mixed the two components in a 100/19 ratio (weight) and applied 250 g/m^2 of (wet) adhesive in one layer onto the surface of 5 pieces of non-combustible calcium silicate board each with dimensions 795 x 153 x 10 mm and density 800 ± 100 kg/m^3, cf. paragraph 4.11 of appendix 4 to part 5.

Material specification (stated by the sponsor)

General purpose sandwich panel adhesive.
Component A: SikaForce®-7710 L100. Component B: SikaForce®-7010 (hardener)
Recommended amount for use: approx. 250 g/m^2 (wet adhesive).

Further material specification was given by the sponsor and has been filed at DBI under the file number below.

6 CONDITIONING

The specimens were conditioned in accordance with paragraph 7.7 of appendix 1 to part 5.

7 TEST RESULTS

Date of test: 2011-11-28.

Pilot flame: Impinging.

The test results are shown in full detail in enclosure 1.

Derived fire characteristics

Test No.	1	2	3	**Average**
Duration of test (s)	240	250	245	-
CFE (kW/m^2)	50.5	46.9	47.4	**48.2**
$Q_{sb}(MJ/m^2)$	-	-	-	-
Q_t (MJ)	0	0	0	**0**
q_p (kW)	0.6	0.5	0.1	**0.4**

Observations: None

CFE: Critical flux at extinguishment
Q_{sb}: Heat for sustained burning
Q_t: Total heat release
q_p: Peak heat release rate
- : Not achieved due to the short flame propagation

8 CONCLUSION

The investigated sample of SikaForce® - 7710 L100 (250 g/m^2 wet), applied onto calcium silicate board, fulfils the surface flammability criteria for linings and ceilings as listed in IMO FTPC Part 5 and is therefore considered to meet the requirement for low flame-spread in compliance with the relevant regulations in chapter II - 2 of the Convention.

9 VALIDITY OF THE TEST RESULT IN RELATION TO THE PREVIOUS FTP CODE*

Reference is made to the *International Code for Application of Fire Test Procedures, Resolution MSC.61(67), FTP Code, Annex 1 Part 5 "Test for surface flammability", together with the unified interpretations of SOLAS chapter II-2, the FSS Code, the FTP Code and related fire test procedures (IMO MSC/Circ. 1120).

Whilst the test was conducted to the International Code for Application of Fire Test Procedures, 2010 Resolution MSC.307(88), 2010 FTP Code, Annex 1 Part 5 "Test for surface flammability", it is our opinion when the test results described in this report are assessed in compliance of Resolution MSC.61(67) Annex 1 Part 5 "Test for surface flammability", the product may be regarded as having low flame-spread characteristics.

Furthermore, it is our opinion that the test is in compliance with the requirements of:

- Russian Maritime Register of Shipping, St. Petersburg, cf. Recognition Certificate of Testing Laboratory No. 10-02059.009 valid until September 18, 2015.

Note

The test results relate only to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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FIRE TEST PROCEDURES FOR SURFACE FLAMMABILITY OF BULKHEAD, CEILING, DECK FINISH MATERIALS AND PRIMARY DECK COVERINGS

Sponsor: Sika Services AG Date of test: 2011-11-28

Product: SikaForce®-7010 L100 with hardener SikaForce®-7010

Applied amount: 250 g/m² Pilot flame: Impinging

Test results

Test 1:	Time to ignition :	21 s
	Time to flameout :	60 s
	Extent of burn (mm) :	50
	Critical flux at extinguishment (kW/m²) :	50.49
	Heat for ignition (MJ/m²) :	Not calculated (extent of burn < 150 mm)
	Average heat for sust. burning (MJ/m²) :	Not calculated (extent of burn < 180 mm)
	Peak heat release rate (kW) :	0.61
	Time to peak heat release rate :	62 s
	Total heat release (MJ) :	0.012
	Burning droplets :	None
Test 2:	Time to ignition :	15 s
	Time to flameout :	70 s
	Extent of burn (mm) :	150
	Critical flux at extinguishment (kW/m²) :	46.85
	Heat for ignition (MJ/m²) :	2.577
	Average heat for sust. burning (MJ/m²) :	Not calculated (extent of burn < 180 mm)
	Peak heat release rate (kW) :	0.52
	Time to peak heat release rate :	62 s
	Total heat release (MJ) :	0.006
	Burning droplets :	None
Test 3:	Time to ignition :	11 s
	Time to flameout :	61 s
	Extent of burn (mm) :	140
	Critical flux at extinguishment (kW/m²) :	47.35
	Heat for ignition (MJ/m²) :	Not calculated (extent of burn < 150 mm)
	Average heat for sust. burning (MJ/m²) :	Not calculated (extent of burn < 180 mm)
	Peak heat release rate (kW) :	0.13
	Time to peak heat release rate :	56 s
	Total heat release (MJ) :	0.001
	Burning droplets :	None

Surface flammability criteria, 2010 FTP Code, Annex 1 Part 5

Bulkhead, wall and ceiling linings				Floor coverings / Prim. deck coverings			
CFE (kW/m^2)	Q_{sb} (MJ/m^2)	Q_t (MJ)	Q_p (kW)	CFE (kW/m^2)	Q_{sb} (MJ/m^2)	Q_t (MJ)	Q_p (kW)
≥ 20.0	≥ 1.5	≤ 0.7	≤ 4.0	≥ 7.0	≥ 0.25	≤ 2.0	≤ 10.0
Burning droplets:		None		≤ 10		None	