

# Test report

## VentGuard Special Coating



Name of client: E-AT ApS  
File no.: PFB10331B  
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Ref: BP / LSK



**DBI**

## Client information

Client: E-AT ApS

Address: Strandlodsvej 7

2300 København S

Denmark

The results relate only to the items tested. The test report should only be reproduced in extenso - in extracts only with a written agreement with this institute.

## **1. Product**

VentGuard Special Coating (SC50).

## **2. Manufacturer**

Not stated.

## **3. 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), IMO 2010 FTP Code, Annex 1 Part 5: "Test for surface flammability".

Furthermore the test was carried out in accordance with the requirements of the Russian Maritime Register of Shipping, St. Petersburg, cf. Recognition Certificate of Testing Laboratory No. 15.02250.313 valid until 19th September 2020.

## **4. Sample**

2019-02-28 DBI-Danish Institute of Fire and Security Technology received five test specimens of dimensions (length x width) 795 x 153 mm; thickness 0.83 mm. The specimens consisted of 0.8 mm thick galvanized steel sheets with light grey paint in 30  $\mu\text{m}$  thickness applied on one side. Weight per unit area: 5.82  $\text{kg}/\text{m}^2$  as determined by weight and measurements of the test specimens.

Material specification (stated by the client):

VentGuard Special Coating (SC50) applied in two layers onto galvanized 0.8 mm steel sheets in a total of approx. 640  $\mu\text{m}$  (wet) paint thickness. No primer used.

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

## **5. Test specimens**

DBI tested the prepared specimens exactly as received; described in section 4 of this report, without modifications.

## 6. Conditioning

The specimens were conditioned in accordance with IMO 2010 FTP Code paragraph 7.7 of appendix 1 to part 5.

## 7. Test results

Date of test: 2019-03-07.

Pilot flame: Impinging propane/air.

No. of test runs: 3

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

Derived fire characteristics:

Test No.	1	2	3	Average
Duration of test (s)	600	600	600	Not applicable
CFE (kW/m <sup>2</sup> )	≥ 50.5	≥ 50.5	≥ 50.5	≥ 50.5
Q <sub>sb</sub> (MJ/m <sup>2</sup> )	-	-	-	-
Q <sub>t</sub> (MJ)	< 0.1	< 0.1	< 0.1	< 0.1
q <sub>p</sub> (kW)	0.48	0.49	0.55	0.51
Burning droplets No.	0	0	0	0

Observations: No ignition at stage

CFE: Critical flux at extinguishment

Q<sub>sb</sub>: Heat for sustained burning

Q<sub>t</sub>: Total heat release

q<sub>p</sub>: Peak heat release rate

- : Not derived due to none or too short flame progress



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## 8. Conclusion

The investigated sample of paint designated VentGuard Special Coating (SC50) applied in two layers; total 30  $\mu\text{m}$  (paint thickness) onto galvanized steel sheet of 0.8 mm thickness, fulfils the surface flammability criteria for bulkhead, wall and ceiling linings as listed in IMO 2010 FTP Code 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. Statement

As the VentGuard Special Coating (SC50) as applied, has a total heat release ( $Q_t$ ) of not more than 0.2 MJ and a peak heat rate ( $q_p$ ) of not more than 1.0 kW, it is considered to comply with the requirements of part 2 without further testing, cf. paragraph 2.7 of appendix 4 to part 5.

Furthermore it is expected to satisfy a requirement of maximum gross calorific value (e.g., 45  $\text{Mj/m}^2$  according to ISO 1716) without further testing, cf. IMO 2010 FTP Code paragraph 2.3 of Annex 2.

## 10. 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.

Lene Savstrup Kristensen  
M.Sc.Mech.Eng

Bjørn Petersen  
Senior Fire Lab. Tech.

E-AT ApS  
Strandlodsvej 7  
2300 København S  
Denmark

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

Sponsor: European Airvent. Technology (E-AT)

Date of test: 2019-03-07

Product: VentGuard Special Coating (SC50)

Substrate: 0.8 mm galvanized steel sheet

Applied amount of product: 30 µm (dry)

**Test results**

Test 1: Time to ignition : 0 s  
 Time to flameout : 0 s  
 Extent of burn (mm) : 0  
 Critical flux at extinguishment (kW/m<sup>2</sup>) : ≥ 50.5  
 Heat for ignition (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 150 mm)  
 Average heat for sustained burning (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 175 mm)  
 Peak heat release rate (kW) : 0.48  
 Time to peak heat release rate : 484 s  
 Total heat release (MJ) : 0.077

Test 2: Time to ignition : 0 s  
 Time to flameout : 0 s  
 Extent of burn (mm) : 0  
 Critical flux at extinguishment (kW/m<sup>2</sup>) : ≥ 50.5  
 Heat for ignition (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 150 mm)  
 Average heat for sustained burning (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 175 mm)  
 Peak heat release rate (kW) : 0.49  
 Time to peak heat release rate : 562 s  
 Total heat release (MJ) : 0.065

Test 3: Time to ignition : 0 s  
 Time to flameout : 0 s  
 Extent of burn (mm) : 0  
 Critical flux at extinguishment (kW/m<sup>2</sup>) : ≥ 50.5  
 Heat for ignition (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 150 mm)  
 Average heat for sustained burning (MJ/m<sup>2</sup>) : Not calculated (extent of burn < 175 mm)  
 Peak heat release rate (kW) : 0.55  
 Time to peak heat release rate : 534 s  
 Total heat release (MJ) : 0.012

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

Bulkhead, wall and ceiling linings				Floor coverings / Prim. deck coverings			
CFE (kW/m <sup>2</sup> )	Q <sub>sb</sub> (MJ/m <sup>2</sup> )	Q <sub>t</sub> (MJ)	Q <sub>p</sub> (kW)	CFE (kW/m <sup>2</sup> )	Q <sub>sb</sub> (MJ/m <sup>2</sup> )	Q <sub>t</sub> (MJ)	Q <sub>p</sub> (kW)
≥ 20.0	≥ 1.5	≤ 0.7	≤ 4.0	≥ 7.0	≥ 0.25	≤ 2.0	≤ 10.0
Burning droplets:		None	≤ 10		None		