

Test report

# Fire testing of WEF Fibersoft

According to IMO 2010 FTP Code Part 8

Author:

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VERSION	DATE	
1	2018-04-09	
AUTHOR		
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CLIENT	CLIENT'S REF.	
Recticel AS	Steinar Dahle	
PROJECT NO.	NO. PAGES / APPENDICES:	
130005-20	6 + 1 appendix	
TEST OBJECT	TEST OBJECT RECEIVED	
Filling material WEF Fibersoft	2018-03-19	
TEST PROGRAMME	TEST LOCATION	DATE OF TEST
IMO 2010 FTP Code Part 8	RISE Fire Research	2018-04-06

**SUMMARY:**

The product WEF Fibersoft was tested according to IMO FTPC Part 8 (2010 FTP Code). The product was tested as an independent test for the filling material, as described in Appendix 3, section 2 of IMO FTPC Part 8 (2010 FTP Code).

The product WEF Fibersoft satisfies the criteria for ignitability of material combinations used in upholstered seating when subjected to either a smouldering cigarette or a propane flame, according to IMO FTPC Part 8 (2010 FTP Code).

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F18 130005-20:1	Restricted	Restricted

## History

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VERSION	DATE	VERSION DESCRIPTION
1	2018-04-09	First version.

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## 1 Product description

### 1.1 Type of product

Filling material for upholstery furniture.

### 1.2 Manufacturer, place of production

Recticel, Åndalsnes

### 1.3 Sampling

The tested material was selected by the client. The material subjected for testing arrived RISE Fire Research 2018-03-19. It is not known to RISE Fire Research if the fire characteristics of the product received are representative of the fire characteristics of the average product.

### 1.4 Materials description

Information from the client:

<b>Filling material:</b>	
Material	Polyether HR
Density	27 kg/m <sup>3</sup>
Fire retardant treatment:	None

### 1.5 Test specimens

1 test specimen consisting of seat and back – having dimensions 450 mm × 300 mm × 76 mm and 450 mm × 150 mm × 76 mm respectively.

Upholstery filling, measured density 27 kg/m<sup>3</sup>.

Colour: Light blue.

## 2 Testing

*Operator:*

Morten Daffinrud, senior technician

*Conditioning of the test material:* The test material was stored first in indoor ambient conditions for 72 hours and then in an atmosphere with relative humidity of  $(50 \pm 20)$  % and a temperature of  $(23 \pm 2)$  °C for at least 16 hours immediately before the test.

*Number of single tests:*

2 with ignition source smouldering cigarette.

2 with ignition source match-flame equivalent.

*Duration of the tests:*

1 hour

## 3 Remarks / deviations

According to IMO FTPC Part 8 (FTP Code 2010), the following statement shall be given in the test report:

“The test results relate 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.”

## 4 Test results

The tests were performed in a room under indoor ambient conditions, having a temperature of  $20 \pm 5$  °C and a relative humidity of 20-70 %.

Test results for the cigarettes batch used:

Length:	70 mm
Diameter:	8 mm
Mass:	0.94 g
Smouldering rate:	10.27 min/50 mm

Positioning of ignition sources:

- The cigarettes were placed in the junction between the horizontal and vertical parts of the test pieces, at least 50 mm from the nearest side edge or from any marks left by any previous cigarette test.
- The flame was held along the junction between the horizontal and vertical parts of the test specimen for 20 s, at least 50 mm from the nearest side edge or from any marks left by any previous test.

**Table 4-1 Results from testing of the upholstery combination of WEF Fibersoft according to IMO FTPC Part 8 (IMO FTP Code 2010)**

Ignition source:	Cigarette 1
Damaged area (burning and/or char) [mm]	Seat: 72 × 12 Back: 70 × 15
Smouldering after 60 min	No
Afterflame [s]	No
Observations	-
Final examination	Pass
Ignition source:	Cigarette 2
Damaged area (burning and/or char) [mm]	Seat: 70 × 12 Back: 70 × 15
Smouldering after 60 min	No
Afterflame [s]	No
Observations	-
Final examination	Pass
Ignition source:	Propane flame 1
Damaged area (burning and/or char) [mm]	Seat: 30 × 30 Back: 50 × 190
Smouldering after 60 min	No
Afterflame [s]	No
Observations	Flaming for 8 seconds after removal of ignition source
Final examination	Pass
Ignition source:	Propane flame 2
Damaged area (burning and/or char) [mm]	Seat: 65 × 50 Back: 73 × 245
Smouldering after 60 min	No
Afterflame [s]	No
Observations	Flaming for 28 seconds after removal of ignition source
Final examination	Pass

## Appendix A - Test procedure and criteria for classification

### A.1 Test procedure

IMO 2010 FTP Code Part 8 describes a method for assessment of ignitability of material combinations in upholstered furniture. Ignition sources applied are a smouldering cigarette and a small flame.

The test is performed on a test rig described in IMO FTPC Part 8:

- Dimensions of seat: 450 mm x 150 mm.
- Dimensions of back: 450 mm x 300 mm.

All tests are performed in a room under indoor ambient conditions having a temperature of  $20\pm 5$  °C and a relative humidity of 20-70%.

Two parallel tests are conducted with smouldering cigarette and small flame exposure respectively. The cigarettes and small flames are positioned/held along the junction between the horizontal and vertical parts of the test specimen.

During testing with smouldering cigarette, the cigarette is allowed to smoulder completely, while the small flame is removed after 20 seconds of exposure. Development of fire in the test object is observed.

### A.2 Criteria for classification

The tested object shall not show any sign of development of smouldering fire or flames within one hour after the smouldering cigarette has been placed in position.

The tested object shall show no sign of development of smouldering fire or flames more than 120 seconds after the ignition flame has been removed from the object.

If both of these criteria are fulfilled, the tested material combination satisfies the criteria to ignitability of upholstered furniture according to IMO 2010 FTP Code Part 8.





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