



quality in construction

Building Research Institute

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EXTERNAL EXPOSURE TO FIRE CLASSIFICATION REPORT

*of the roofing system consists of the roofing membrane
FATRAFOL 810/V*

according to PN-EN 13501-5+A1:2010

1085.1/15/Z00NPE (English version of 1085.1/15/Z00NP)

on behalf of

OWNER OF CLASSIFICATION REPORT

Fatra a.s.

Třída. T. Bati 1541

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Czech Republic

Contract No: 1085/15/Z00NP

1. Introduction

This classification report defines the classification assigned to **the roofing system consists of the roofing membrane FATRAFOL 810/V** in accordance with the procedures given in PN-EN 13501-5+A1:2010, test 1 (Polish version of EN 13501-5:2005+A1:2009, method 1).

2. Description of the roof/roof covering

The roofing system consists of the roofing membrane FATRAFOL 810/V.

Layer's arrangement from the underside of the roof:

- wooden particle board (without flame retardants) – thickness of 20 mm, density of 680 kg/m³
- vapour control barrier – PE foil (thickness of 0,2 mm)
- thermal insulation in the arrangement of layers MW/EPS/MW:
 - mineral wool boards according to PN-EN 13162, minimum thickness of 50 – 60 mm, minimum density of 100 kg/m³, reaction to fire class at least A2-s3,d0 according to PN-EN 13501-1

- expanded polystyrene boards according to PN-EN 13163: EPS 70, EPS80, EPS 100 or EPS 200, maximum thickness of 600 mm, reaction to fire class at least E according to PN-EN 13501-1
- mineral wool boards according to PN-EN 13162, minimum thickness of 50 – 60 mm, minimum density of 100 kg/m³, reaction to fire class at least A2-s3,d0 according to PN-EN 13501-1
- PVC-P roofing membrane FATRAFOL 810/V, thickness form 1,2 mm to 2,0 mm

3. Test reports and test results in support of this classification

3.1 Test reports

Name of laboratory	Name of sponsor	Test report ref. nr	Test method
Fire Testing Laboratory of ITB	Fatra a.s.	LP01-1085/15/Z00NP LP02-1085/15/Z00NP	PN-ENV 1187:2004+A1:2007 (test 1)

3.2 Tests results for the roofing system consists of the roofing membrane FATRAFOL 810/V, thickness of 1,2 mm

Test report № LP01-1085/15/Z00NP

Parameter	Criteria	Test results				Compliance
		1	2	3	4	
Internal fire spread upwards	< 0.700 m	0.000	0.000	0.000	0.000	Yes
External fire spread upwards	< 0.700 m	0.270	0.350	0.345	0.350	Yes
Internal fire spread downwards	< 0.600 m	0.000	0.000	0.000	0.000	Yes
External fire spread downwards	< 0.600 m	0.035	0.070	0.045	0.070	Yes
Maximum burned length internal	< 0.800 m	0.000	0.000	0.000	0.000	Yes
Maximum burned length external	< 0.800 m	0.305	0.420	0.390	0.420	Yes
Burning, droplets/debris falling from exposed side	No	No	No	No	No	Yes
Burning, glowing particles penetrating the roof	No	No	No	No	No	Yes
Single through opening	< 25 mm ²	0	0	0	0	Yes
Sum of all through openings	< 4500 mm ²	0	0	0	0	Yes
Lateral fire spread	< edge*	No	No	No	No	Yes
Internal glowing combustion	No	No	No	No	No	Yes
Radius of fire spread (horizontal roof)	< 0.200 m	N/A	N/A	N/A	N/A	N/A

"0" – no damages

* - Edges of the measuring zone

Test conditions: ambient temperature: 21,0°C, roof pitch 15°

3.3 Tests results for the roofing system consists of the roofing membrane FATRAFOL 810/V, thickness of 2,0 mm

Test report № LP02-1085/15/Z00NP

Parameter	Criteria	Test results				Compliance
		1	2	3	4	
Internal fire spread upwards	< 0.700 m	0.000	0.000	0.000	0.000	Yes
External fire spread upwards	< 0.700 m	0.460	0.450	0.470	0.470	Yes
Internal fire spread downwards	< 0.600 m	0.000	0.000	0.000	0.000	Yes
External fire spread downwards	< 0.600 m	0,062	0.070	0.050	0.065	Yes
Maximum burned length internal	< 0.800 m	0.000	0.000	0.000	0.000	Yes
Maximum burned length external	< 0.800 m	0,522	0.520	0.520	0.535	Yes
Burning, droplets/debris falling from exposed side	No	No	No	No	No	Yes
Burning, glowing particles penetrating the roof	No	No	No	No	No	Yes
Single through opening	< 25 mm ²	0	0	0	0	Yes
Sum of all through openings	< 4500 mm ²	0	0	0	0	Yes
Lateral fire spread	< edge*	No	No	No	No	Yes
Internal glowing combustion	No	No	No	No	No	Yes
Radius of fire spread (horizontal roof)	< 0.200 m	N/A	N/A	N/A	N/A	N/A

"0" – no damages

* - Edges of the measuring zone

Test conditions: ambient temperature: 20,3°C, roof pitch 15°

4 Classification and the field of application

4.1 Reference of the classification

This classification has been carried out in accordance with PN-EN 13501-5+A1:2010.

4.2 Classification

The roofing system consists of the roofing membrane FATRAFOL 810/V described in the section 2 in relations to its external fire performance is classified:

$$B_{\text{roof}} (t_1)$$

4.3 Field of application

This classification is valid for the following conditions:

1. The supporting decks based on wood or wood particleboards with a thickness of 20 mm with gaps between planks not exceeding 5.0 mm, or made from any incombustible continuous deck with a minimum thickness of 10 mm and with gaps

- between planks not exceeding 5.0 mm, or any profiled and non-perforated steel deck with thickness of 10 mm
2. Vapour control barrier – PE foil (thickness of 0,2 mm)
 3. Thermal insulation in the arrangement of layers MW/EPS/MW:
 - Density of the mineral wool boards minimum 100 kg/m³, minimum thickness of 60 mm, reaction to fire class at least A2-s3,d0 according to PN-EN 13501-1
 - Density of the expanded polystyrene boards ≥ 15 kg/m³, maximum thickness of 600 mm, reaction to fire class at least E according to PN-EN 13501-1
 - Density of the mineral wool boards minimum 100 kg/m³, minimum thickness of 60 mm, reaction to fire class at least A2-s3,d0 according to PN-EN 13501-1
 4. PVC-P roofing membrane FATRAFOL 810/V, thickness form 1,2 mm to 2,0 mm
 5. Maximum roof pitch of 20°.

5 Limitations

5.1 Validity

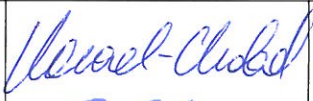
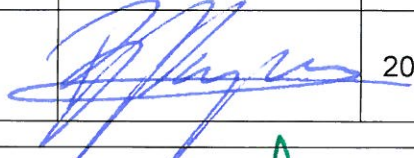
This classification is valid for 3 years until 2018-05-29 and as long as the construction and technology will not be changed.

5.2 Restrictions


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5.3 Warning

This classification document does not represent the type approval or certification of the product.

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