



BUILDING RESEARCH INSTITUTE FIRE RESEARCH INSTITUTE

ZESPÓŁ LABORATORIÓW BADAWCZYCH
akredytowany przez Polskie Centrum Akredytacji
certyfikat akredytacji nr AB 023
LABORATORIUM BADAŃ OGNIOWYCH (LP)



AB 023



EXTERNAL EXPOSURE TO FIRE CLASSIFICATION REPORT № 818.1/11/Z00NP

of product:

**The roofing system with roofing membrane covering
"FATRAFOL 810/V 1,50 mm"**

On behalf of
OWNERS OF CLASSIFICATION REPORT

Fatra a.s.
Tř. T. Bati 1541
763 61 Napajedla,
Czech Republic

Contract №: 0818/11/Z00NP

1 Introduction

This classification report defines the classification assigned to the roofing system with roofing membrane covering "FATRAFOL 810/V 1,50 mm" in accordance with the procedures given in **PN-EN 13501-5+A1:2010, metoda 2** (polish version of EN-13501-5:2005+A1:2009, method 2) and *FprCEN/TS 1187:2010 (E)*.

2 Description of the roof

The roofing system with roofing membrane "FATRAFOL 810/V 1,50 mm" covering.

Layer's arrangement from the underside of the roof:

- vapour control barrier foil (thickness 0,2 mm),
- mineral wool board (minimum thickness 50 mm),
- expanded polystyrene boards (at least reaction to fire class E according to PN-EN 13501-1),
- glass fleece (surface weight 120g/m²),
- PVC-P roofing membrane "**FATRAFOL 810/V 1,50 mm**"; membrane can contain fire retardants, but the type and amount is not monitored.

3 Test reports and test results in support of this classification

3.1 Test reports

Name of laboratory	Name of sponsor	Test report ref. №	Test Method
Laboratorium Badań Ogniowych ITB	Fatra a.s. Tr. T. Bati 1541 763 61 Napajedla, Czech Republic	LP01-0818/11/Z00NP	PN-ENV 1187:2004 (badanie 2) (polish version of ENV 1187: 2002, test 2)

3.2 Test results

Parameter	Criteria		Test results					Compliance
	Average	Max	Specimen № 1	Specimen № 2	Specimen № 3	Average	Max	
The length of damaged material 2m/s – roof covering	≤ 550 mm	≤ 800 mm	382	345	387	371	387	Y
The length of damaged material 2m/s – substrate	≤ 550 mm	≤ 800 mm	0	0	0	0	0	Y
The length of damaged material 4m/s – roof covering	≤ 550 mm	≤ 800 mm	205	195	215	205	215	Y
The length of damaged material 4m/s – substrate	≤ 550 mm	≤ 800 mm	0	0	0	0	0	Y

Test conditions: Temperature of air: 13,2°C

Test pitch: 30°

Substrate: expanded polystyrene boards;

Y - yes

4 Classification and field of application

4.1 Reference

This classification has been carried out in accordance with **PN-EN 13501-5+A1:2010** (Polish version of EN-13501-5:2005+A1:2009 – “Fire classification of construction products and building elements - Part 5: Classification using data from external fire exposure to roof test.”) and *FprCEN/TS 1187:2010 (E)*.

4.2 Classification

The roofing system with roofing membrane “FATRAFOL 810/V 1,50 mm” covering, described in the section 2, in relation to its fire performance is classified:

B_{roof} (t2)

4.3 Field of application

This classification is valid for the following conditions:

- 1) Density of the polystyrene boards $\geq 21 \text{ kg/m}^3$,
- 2) Reaction to fire class of the polystyrene boards: E according to PN-EN 13501-1,
- 3) PVC-P roofing membrane “FATRAFOL 810/V 1,50 mm” can contain fire retardants, but the type and amount is not monitored,
- 4) Thickness of PVC-P roofing membrane “FATRAFOL 810/V 1,50 mm” membrane: 1,50 mm,
- 5) Any pitch of the roof.

5 Limitations

5.1 Validity

This classification given remains valid **3 years** till **13.03.2014**, as long as the composition, structure and/or the production's technology remains unchanged.

5.2 Restrictions

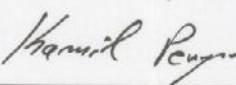
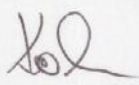
This classification may be reproduced only by sponsor/owner in its entirety, with annexes, without comments, shortenings and changes.

Additional witnessed copies can be issued by Fire Research Department of ITB under the request of the report's owner only.

5.3 Warning

This European Standard does not represent type approval or certification report.

6 Statement:

Report	Name	Signature*	Date
Prepared by	Kamil Perzyna		13-04-2011
Reviewed by	Andrzej Kolbrecki		15.04.2011

* - For and on behalf of "Name of the organisation".

Head of Fire Research Department



Andrzej Borowy Ph.D.

	<p>BUILDING RESEARCH INSTITUTE</p>
  <p>AB 023</p>	<p>GROUP OF TESTING LABORATORIES</p> <p>accredited by Polish Center for Accreditation</p> <p>accreditation certificate № AB 023</p>

LP

FIRE TESTING LABORATORY

TEST REPORT № LP01-0818/11/Z00NP

Page 1/2

SPONSOR and MANUFACTURER

Fatra, a.s.

Tř. T. Bati 1541

Napajedla, 763 61 Napajedla,
Czech Republic

TEST OBJECT

The roofing system with roofing membrane "**FATRAFOL 810/V 1,50 mm**" covering:

Product parameters declared by the Sponsor:

Layer's arrangement from the underside of the roof:

- wooden particle board;
- vapour control barrier foil (thickness 0,2 mm);
- mineral wool board (thickness 50 mm);
- expanded polystyrene boards (thickness 150 mm);
- glass fleece (surface weight 120g/m²);
- PVC-P roofing membrane "**FATRAFOL 810/V 1,50 mm**" (membrane can contain fire retardants, but the type and amount is not monitored);

Object parameters assessed by laboratory:

- vapour control barrier foil (thickness: 0,15 mm; surface weight: 123 g/m²; colour: yellow);
- mineral wool board (thickness 55 mm; density: 181 kg/m³; colour: gray-green);
- expanded polystyrene boards (thickness 138 mm; density: 28,43 kg/m³; colour: white; at least reaction to fire class E according to PN-EN 13501-1);
- glass fleece (surface weight 116,8 g/m²; colour: white);
- PVC-P roofing membrane "**FATRAFOL 810/V 1,50 mm**" (surface weight 1,89 kg/m²; colour: gray (external side is slightly brighter); thickness: 1,50 mm);

Product accepted for testing: 24-03-2011 Acceptance protocol № 0818.1/11

Tested: since: 25-03-2011 to: 12-04-2011

SAMPLING METHOD: do not concern

TEST METHOD: PN-ENV 1187:2004 "Metody badania oddziaływania ognia zewnętrznego na dachy. BADANIE 2." (Polish version of ENV 1187:2001 "Test methods for external fire exposure to roofs. TEST 2: Method with burning brands and wind")

Test report includes: Pages 3 Attachments: -

PURPOSE OF THE TEST: Technical approval

EQUIPEMENT: LP-071 stopwatch, LP-144 and LP-167 anemometers, LP-109 ruler

TEST RESULTS:

Parameter	Test Results [mm]				
	Specimen № 1	Specimen № 2	Specimen № 3	Avarage	Max.
The length of damaged material 2m/s – roof covering	382	345	387	371	387
The length of damaged material 2m/s – substrate	0	0	0	0	0
The length of damaged material 4m/s – roof covering	205	195	215	205	215
The length of damaged material 4m/s – substrate	0	0	0	0	0
Other information (2m/s)	1'27" – specimen ignites 4'23" – flames dies out there is no glowing	1' – specimen ignites 3'36" – flames dies out there is no glowing	1'36" – specimen ignites 3'51" – flames dies out there is no glowing	-	-
Other information (4 m/s)	1' – specimen ignites 3'22" – flames dies out there is no glowing	1'56" – specimen ignites 3'53" – flames dies out there is no glowing	1'54" – specimen ignites 3'34" – flames dies out there is no glowing	-	-
Roof pitch (both 2 and 4 m/s)	30°	30°	30°	-	-

DEVIATIONS FROM PN-ENV 1187:2004 – did not appear
TEST CONDITIONS:

Ambient temperature at the beginning of the test: 13,2°C;

DETAILS OF CONDITIONING:

Conditioned: since 24-03-2011 to 12-04-2011

Temperature: 23 ± 2°C, relative humidity 50 ± 5%

INFORMATION CONCERNING THE TEST: -
SUBSTRATE:

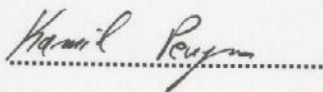
– expanded polystyrene boards (thickness 150 mm);

VISUAL OBSERVATIONS: –
ATTACHEMENTS: –
STATEMENT:

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

Responsible for the test:

Kamil Perzyna M. Sc. Eng.


Person authorized report:

Bartłomiej Papis M. Sc. Eng.



Warsaw, 13-04-2011

Testing Laboratory declares that test results relate only to the object under test. Test Report should not be reproduced without a written permission of Testing Laboratory in any other form than as a whole. Test Report is not the document admitting object to trade and general application in building industry.