# EXTERNAL EXPOSURE TO FIRE

# CLASSIFICATION REPORT

of product:

## The roofs with bitumous roofing felts JSC MIDA LT, GEORG BÖRNER

## 01948.1/23/Z00NZP-ENG (enlargement 02417.3/22/Z00NZP-ENG)

(english version of raport no. 02417.3/22/Z00NZP (enlargement 01463/21/Z00NZP))

on behalf of

OWNER OF CLASSIFICATION REPORT

**JSC MIDA LT**
**Gamyklos 19**
**LT-96155 Gargždai**

Contract №: 01948/23/Z00NZP

## 1 Introduction

This classification report defines the classification assigned to bitumous roofing felts JSC MIDA LT, GEORG BÖRNER in accordance with the procedures given in EN 13501-5:2016-07 method 1.

## 2 Description of the roof

The roof covering with waterproofing

Layer's arrangement from the underside of the roof (layout 1):

- substrate from profiled steel,
- mineral wool 50 mm,
- vapour barriers from polyethylene foils,
- EPS boards 50 mm,
- mineral wool 50 mm,
- bituminous roofing underfelt Unifleks EPP 4,0 with thickness 3,2 mm on the basis of polyester non-woven,
- bituminous roofing felts Unifleks 5,0kg grey slates EKP with thickness 4,0 mm on the basis of polyester non-woven.

Layer's arrangement from the underside of the roof (layout 2):

- substrate from plasterboard,
- bituminous shingle,
- bituminous roofing underfelt Unifleks EPP 4,0 with thickness 3,2 mm on the basis of polyester non-woven,
- bituminous roofing felts Unifleks 5,0kg grey slates EKP with thickness 4,0 mm on the basis of polyester non-woven.



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## 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 |
|---|---|---|---|
| Fire Research Laboratory of ITB | JSC MIDA LT<br>Gamyklos 19<br>LT-96155 Gargždai | LZP01-02656/17/Z00NZP<br>LZP02-02656/17/Z00NZP | CEN/TS 1187:2014, (method 1) |

### 3.2 Test results for roof with bitumous roofing felt Unifleks 5,0kg grey slates EKP with thermal insulation from EPS boards and mineral wool

**Test report: LZP01-02656/17/Z00NZP**

| Parameter | Criteria | Test results | | | | Compilance |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| Internal fire spread upwards | < 0,700 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| External fire spread upwards | < 0,700 m | 0,055 | 0,043 | 0,090 | 0,0 | Yes |
| Internal fire spread downwards | < 0,600 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| External fire spread downwards | < 0,600 m | 0,095 | 0,168 | 0,340 | 0,520 | Yes |
| Maximum burned length internal | < 0,800 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Maximum burned length external | < 0,800 m | 0,095 | 0,168 | 0,340 | 0,520 | Yes |
| Burning, droplets/debris falling from expose side | No | N | N | N | N | Yes |
| Burning, glowing particles penetrating the roof | No | N | N | N | N | Yes |
| Single through opening | < 25 $mm^2$ | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Sum of all through openings | < 4500 $mm^2$ | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Lateral fire spread | < edge* | N | N | N | N | Yes |
| Internal glowing combustion | No | N | N | N | N | Yes |
| Radius of fire spread (horizontal roof) | < 0,200 m | - | - | - | - | *not applicable* |

N – no
Y – yes
Test conditions: Temperature of air: 18,3°C (Test pitch: 15°)
substrate from profiled steel

### 3.3 Test results for roof with bitumous roofing felt Unifleks 5,0kg grey slates EKP without thermal insulation.

**Test report: LZP02-02656/17/Z00NZP**

| Parameter | Criteria | Test results | | | | Compilance |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| Internal fire spread upwards | < 0,700 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| External fire spread upwards | < 0,700 m | 0,0 | 0,020 | 0,0 | 0,0 | Yes |
| Internal fire spread downwards | < 0,600 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| External fire spread downwards | < 0,600 m | 0,040 | 0,160 | 0,056 | 0,280 | Yes |
| Maximum burned length internal | < 0,800 m | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Maximum burned length external | < 0,800 m | 0,040 | 0,160 | 0,056 | 0,280 | Yes |
| Burning, droplets/debris falling from expose side | No | N | N | N | N | Yes |
| Burning, glowing particles penetrating the roof | No | N | N | N | N | Yes |
| Single through opening | < 25 $mm^2$ | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Sum of all through openings | < 4500 $mm^2$ | 0,0 | 0,0 | 0,0 | 0,0 | Yes |
| Lateral fire spread | < edge* | N | N | N | N | Yes |
| Internal glowing combustion | No | N | N | N | N | Yes |
| Radius of fire spread (horizontal roof) | < 0,200 m | - | - | - | - | *not applicable* |

N – no
Y – yes
Test conditions: Temperature of air: 18,3°C (Test pitch: 15°)
substrate from plasterboard

## 4 Classification and field of application

### 4.1 Reference

This classification has been carried out in accordance with **EN 13501-5:2016-07** method 1.

### 4.2 Classification

Roof system described in the section 2, in relation to its fire performance is classified:

**$B_{ROOF}$ (t1)**

### 4.3 Field of application

This classification is valid for the following conditions:

1) any substrates from profiled or none profiled, not perforated steel and any non-combustible deck with minimum thickness 10 mm, or old refurbished roofing felt.
2) vapour barriers from polyethylene foils or vapour barrier felts acc. to PN-EN 13707 or 13970 with minimum reaction to fire class E acc. to PN-EN 13501-1.
3) thermal insulation from EPS 200, EPS 150, EPS 100, EPS 80, EPS 70, NEOPOR boards with thickness minimum 50 mm with minimum reaction to fire class E acc. to PN-EN 13501-1
4) thermal insulation from mineral wool boards with thickness minimum 20 mm with minimum reaction to fire class A2-s3,d0 acc. to PN-EN 13501-1
5) Waterproofing:

I.

Bituminous roofing underfelts produced by JSC MIDA LT or GEORG BÖRNER with the identical composition and the same or lower basis weight matrix and the same or lower basis weight of coating material: MIDA TECHNOELAST PV S5s, MIDA TECHNOELAST PV S4s, MIDA MOST PV S4s, MIDA BALT PV S3s, MIDA UNIFLEKS PV S3s, MIDA UNIFLEKS V S3s, MIDA SELF PV S2,0s, MIDA BIPOL PV S3s, MIDA BIPOL EPP 3,0, MIDA BIKROELAST PV S3p, MIDA BIT V 13s, TECHNOELAST EMP, TECHNOELAST STANDART EPP, UNIFLEKS EPP, UNIFLEKS EPP 4,0, UNIFLEKS EPV, UNIFLEKS EMP, UNIFLEKS HPP, BIPOL EPP, BIPOL STANDART EPP, BIPOL STANDART EMP 160, BIPOL HPP, BIPOL STANDART HPP, BICROELAST EPP, BICROELAST EPP 4,0, BICROELAST EMM, BICROELAST EMP, BICROELAST STANDART EPP 3,5, BICROELAST HPP, BICROELAST HMP, BICROST HPP, TECHNOELAST K-MS 170/4000, TECHNOELAST K-MS 170/3000, ECOFLEKS PV 3,0 kg ECOFLEKS V 4,0 kg, ECOFLEKS V 3,0 kg, ECOFLEKS V 2,6 kg, ECOFLEKS V 2,0 kg, TECHNOELAST BASE R, Prima Flex P 3,0, SBS -10C BITUPOL PV 3, Mida Balt PV S3s.

Bituminous roofing felts produced by JSC MIDA LT or GEORG BÖRNER with the identical composition and the same or lower basis weight matrix and the same or lower basis weight of coating material: MIDA FIX TOP PV S5, MIDA TECHNOELAST PV S5b, MIDA TECHNOELAST PV S4b, MIDA MOST PV S5b, MIDA BALT PV S4b, MIDA UNIFLEKS PV S4b, MIDA UNIFLEKS V S4b, MIDA BIKROELAST PV S4b, MIDA BIPOL PV S3,5b, MIDA BIT V13b, TECHNOELAST EKP 5,5, TECHNOELAST STANDART EKP, UNIFLEKS EKP, UNIFLEKS EKP 4,3mm, UNIFLEKS EKP 5,0, UNIFLEKS EKP EXTRA, UNIFLEKS HKP, BIPOL EKP, BIPOL STANDART EKP, BIPOL XL EKP, BIPOL XL EKP 180, BIPOL XL HKP, BIPOL HKP, BIPOL STANDART HKP, BICROELAST EKP, BICROELAST STANDART EKP 4.5, BICROELAST HKP, TECHNOELAST K-PS 170/5000, TECHNOELAST K-YS 5500, TECHNONICOL ENVIRO FOREST K-PS 170/5000, TECHNONICOL ENVIRO AIR K-PS 170/5000, ECOFLEKS PV 4,5 kg Mineral, ECOFLEKS PV 4,0 kg Mineral, ECOFLEKS V 4,5 kg Mineral, ECOFLEKS V 4,0 kg Mineral, ECOFLEKS V 3,5 kg Mineral, Technobit Flex 4,0 Mineral, Primaflex P 4,0 Mineral, SBS -10C BITUPOL PV 4 kg Mineral, Mida Balt PV S4b.

II.

Bituminous roofing felts for single-layer coatings produced by JSC MIDA LT or GEORG BÖRNER with the identical composition and the same or lower basis weight matrix and the same or lower basis weight of coating material: MIDA FIX TOP PV S5, TECHNOELAST K-YS 5500, TECHNOELAST EKP 5,5.

6) The producer of felts is: JSC MIDA LT, Gamyklos str. 19, LT-96155 Gargzdai, Lithuania or GEORG BÖRNER Chemisches Werk für Dach- und Bautenschutz GmbH & Co.KG; Heinrich-Börner-Straße 31; D-36251 Bad Hersfeld, Germany.

7) The classification applies to the following systems (layer's arrangement from the top of the roof):

1. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- bituminous shingle Technonicol 01,
- concrete

2. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- EPS (class E), thickness from 50 mm
- vapour barriers
- mineral wool, thickness 20-50 mm
- trapezoidal metal sheet

3. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- mineral wool, thickness from 50 mm
- vapour barriers
- mineral wool, thickness 20-50 mm
- trapezoidal metal sheet

4. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- EPS (class E), thickness from 50 mm
- vapour barriers
- concrete

5. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- mineral wool, thickness from 50 mm
- vapour barriers
- concrete

6. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- EPS (class E), thickness from 50 mm
- vapour barriers from polyethylene foils or vapour barrier felts acc. to PN-EN 13707, or 13970 with minimum reaction to fire class E acc. to PN-EN 13501-1.
- trapezoidal metal sheet

7. Layout
- bituminous roofing felts
- bituminous roofing underfelts
- mineral wool, thickness 20-50 mm
- mineral wool, thickness from 50 mm
- vapour barriers from polyethylene foils or vapour barrier felts acc. to PN-EN 13707, or 13970 with minimum reaction to fire class E acc. to PN-EN 13501-1.
- trapezoidal metal sheet

8) Roofs with pitch no more than 20°.

# 5 Limitations

## 5.1 Validity

This classification given remains valid till **15.03.2025 (extension)**, as long as the composition, structure and/or the production's technology remains unchanged.

## 5.2 Restrictions

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## 5.3 Warning

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

| Report | Name | Signature* |
|---|---|---|
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* - For and on behalf of "Name of the organisation"

HEAD of Fire Testing Department Bartłomiej Papis, PhD Eng.

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