

# Classification Report



## Fire Resistance Laboratory

### APPLICANT:

**METALLEMPORIKI**  
**TH.MAKRIS S.A.**

METALLEMPORIKI TH.MAKRIS S.A.

### CLASSIFICATION OF THE FIRE RESISTANCE ACCORDING TO STANDARD EN 13501-2:2016

- Specimen: .....metal sandwich panels roof
  - Manufacturer: .....METALLEMPORIKI TH.MAKRIS S.A.
  - Reference: .....“MINERAL WOOL ROOF COVERING PANEL 60MM”

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**FIRE RESISTANCE CLASSIFICATION ACCORDING TO  
EN 13501-2:2016**

**Applicant:** METALLEMPORIKI TH.MAKRIS S.A.  
6<sup>th</sup> km Larissa-Sikourio road  
41500  
Larissa – GREECE

**Issuing laboratory:** AFITI-LICOF  
Notified body nr.: 1168

**Building element:** **Roof**  
Manufacturer: ⊙METALLEMPORIKI TH.MAKRIS S.A.  
Reference: ⊙“MINERAL WOOL ROOF COVERING PANEL 60MM”

**Classification Report Nr.:** 9625/18-2  
Date of Issue: 22<sup>nd</sup>-Nov-2018

Note: The information marked with this symbol (⊙) has been provided by the applicant.



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**1. AIM OF THE REPORT**

This Classification Report defines the Fire Resistance Classification assigned to roof designated by the applicant as “MINERAL WOOL ROOF COVERING PANEL 60MM” according to the procedures established in the Standard EN 13501-2:2016 *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services.*”

**2. DETAILS OF ELEMENT AS CLASSIFICATION OBJECT**

**2.1. TYPE OF FUNCTION**

The element “MINERAL WOOL ROOF COVERING PANEL 60MM” is defined as “roof”.

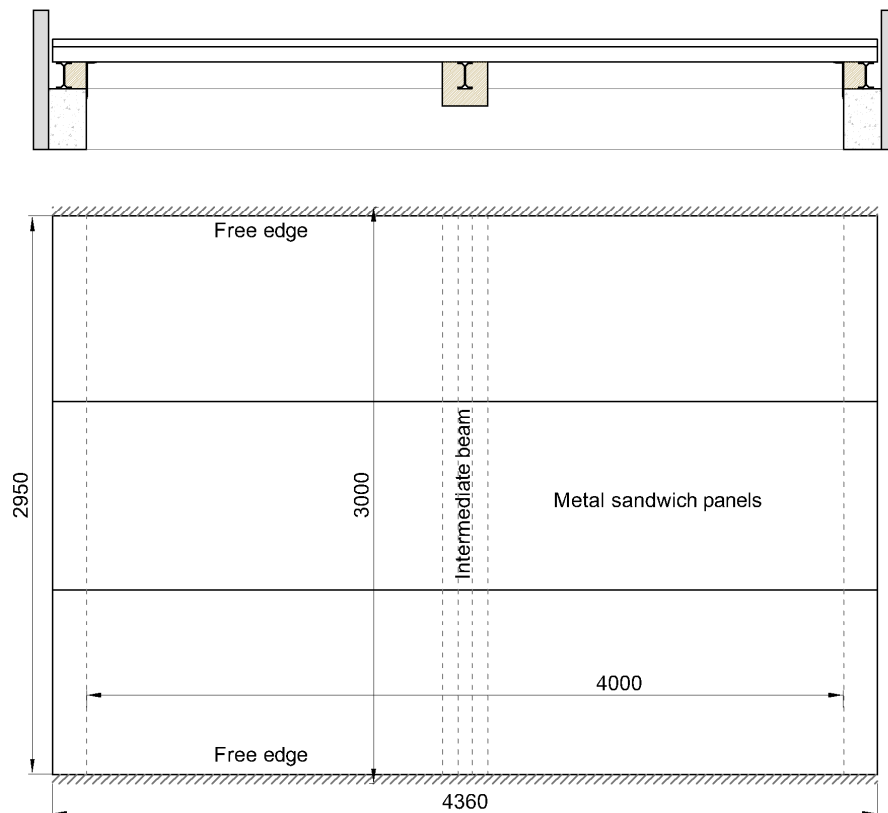
**2.2. DESCRIPTION**

The main descriptive characteristics of the specimen, as well as the reference of the specimen, have been supplied by the applicant (see annex 6). The data of the specimen checked by the Laboratory have been the following:

**Note:** Information marked with this symbol (⊙) has been provided by the applicant and it is not possible to contrast it.

- Nominal dimensions of the assembly (mm): .. 4.360 (length) × 3.000 (width) × 60/100 (thickness)
- Basic description of the assembly:..... roof compound by three metal sandwich panels over protected steel beams

**Figure 1 – Test setup - unexposed side**  
(dimensions in mm)



• Metal sandwich panels:

- Dimensions (mm): ..... 4.360 (length) × 1.000 (width) × 60/100 (thickness)
- Approximate weight per panel(kg): ..... 73

- Composition:

☑ Steel sheet

- Location:..... on both faces of the panel

- Thickness (mm): ..... 0,5 on both faces

☑ Rock wool (\*)

- Reference: ..... © FIBRANgeo B-001 Stonewool insulation board

- Location:..... between the two metal sheets

- Nominal density (kg/m<sup>3</sup>):..... 100

- Moisture content (% weight):..... 0,65

- Binder content (% weight):..... 7,24

(\*) The properties of the rock wool have been evaluated from specimens of material provided by the applicant for the test.

☑ Glue specifications are included in the technical report supplied by the applicant (annex 6)

- Distribution: ..... see figure 1

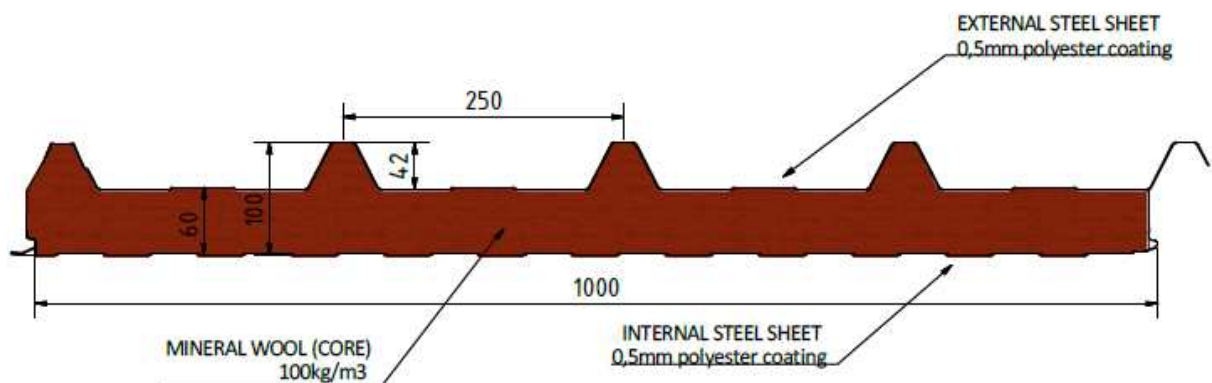
- Fixation to the beams:.....by Ø 6,3 mm x 130 mm screws with steel caps

- Joints between panels: ..... groove and tongue joint with intumescent sealant and self-drilling screws Ø 4,3 mm x 19 mm on the exposed side 300 mm apart each other

**Figure 2 – Metal sandwich panels**

(dimensions in mm)

Sketch supplied by the applicant and checked by the laboratory



• Intumescent sealant

- Brand:..... © SIKA (marked on the product)
- Reference:..... © SIKACRYL-620 fire (marked on the product)
- Location: ..... along both longitudinal joints between panels

• Intermediate beam

- Type..... steel profile - IPE 120
- Protection..... by rock wool 100 kg/m<sup>3</sup> nominal density and ceramic blanket



### 3. TEST REPORTS AND RESULTS IN SUPPORT OF THIS CLASSIFICATION

#### 3.1.- TESTS PERFORMED

##### Test reports

Issuing laboratory	Applicant	Report	Test method
<b>AFITI-LICOF</b> Camino del Estrechillo, 8 <u>28500 – ARGANDA DEL REY</u> (Madrid)	<b>METALLEMPORIKI</b> <b>TH.MAKRIS S.A.</b> 6 <sup>th</sup> km Larissa-Sikourio road 41500 Larissa – GREECE	Nr.: <b>9625/18</b>  Test date: 7 <sup>th</sup> -Nov-18	EN 1365-2:2014 EN 1363-1:2012
Notified Body nr.: <b>1168</b>			

##### Conditions of exposure

Temperature curve / time:	Standard
Nr. of exposed sides:	One (exposure on the bottom side)

##### Test results

	Specimen nr.
	<b>9625A</b>
<b>Loadbearing capacity (R)</b> .....	<b>121 minutes<sup>(E)</sup></b>
Deflection .....	121 minutes <sup>(E)</sup>
Rate of deflection .....	121 minutes <sup>(E)</sup>
<b>Integrity (E)</b> .....	<b>121 minutes<sup>(E)</sup></b>
Cotton pad .....	121 minutes <sup>(E)</sup>
Gap gauges Ø 6 mm .....	121 minutes <sup>(E)</sup>
Gap gauges Ø 25 mm .....	121 minutes <sup>(E)</sup>
Sustained flames > 10 s .....	121 minutes <sup>(E)</sup>
<b>Thermal Insulation (I)</b> .....	<b>121 minutes<sup>(E)</sup></b>
Average temperature .....	121 minutes <sup>(E)</sup>
Maximum temperature .....	121 minutes <sup>(E)</sup>

(E): End of the test.



#### 4. CLASSIFICATION AND FIELD OF APPLICATION

##### 4.1. CLASSIFICATION STANDARD

This classification has been carried out in accordance with the clause 7.3.3 of the standard EN 13501-2:2016.

##### 4.2. CLASSIFICATION

The product “MINERAL WOOL ROOF COVERING PANEL 60MM” is classified according the following combination of performance parameters and classes.

<b>Fire Resistance Classification</b>	<b>REI 120</b>
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The following classifications are allowed:

<b>RE</b>	-	20	30	-	60	90	120
<b>REI</b>	15	20	30	45	60	90	120

##### 4.3. FIELD OF APPLICATION

According to the chapter 13 of the Standard EN 1365-2:2014, the tested element has the following field of application:

The classification obtained is also valid for the following modifications of the specimen characteristics without the need for further testing.

<u>Characteristics</u>	<u>Permitted modification</u>	<u>Reference value <sup>(1)</sup></u>
Structural building member	The maximum moment and shear forces, which when calculated on the same basis as the test load, shall not be greater than those tested.	Without additional load Approximate weight panels: 17 kg/m length
Inclination of roof constructions without glazing	In the 0 - 15° Range	Inclination angle 0°

(1) Reference values of the tested specimen on the basis of which the permitted modifications could be carried out.



## 5.- LIMITATIONS

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

Arganda del Rey, 22<sup>nd</sup> of November of 2018

The Developer:

The Supervisor:

  
  
  
Digitally Signed Document

Signed: Carlos Burón Alonso  
Technician  
Fire Resistance Laboratory

Signed: Tomás de la Rosa  
Technical Director  
Fire Resistance Laboratory

