



## CLASSIFICATION REPORT

### № CR-418-01/22.05.2024

In accordance with BDS EN 13501-2:2016

Sponsor:	<b>Metallemporiki – Th. Makris S.A.,</b> 6th km Larissa - Sikourio, 41004 Larissa, Greece
Prepared by:	F plus Ltd., 16 Konstantin Kostenechki str., 2042 Kostenets, Bulgaria
Notified body No.	NB 2548
Product name:	<b>A non-loadbearing wall</b> made of horizontally mounted asymmetrical <b>sandwich panels type MW WALL</b> <b>COVERING PANEL 80 mm - HF</b> with a core of mineral wool
Contents of the report:	5 pages

## CONTENTS

1. Introduction .....	3
2. Details of classified product .....	3
2.1. General .....	3
2.2 . Description .....	3
3. Extended application reports and test results to support classification .....	4
3.1. Test and extended application reports .....	4
3.2. Results .....	4
4. Classification and field of application .....	4
4.1. Reference of classification .....	4
4.2. Classification .....	5
4.3. Field of direct application.....	5
5. Limitations.....	5

## 1. Introduction

This classification report defines classification for non-loadbearing wall made of horizontally mounted asymmetric sandwich panels type MW WALL COVERING PANEL 80 mm - HF with a core of mineral wool a thickness 80 mm in accordance with the procedures described in BDS EN 13501-2:2023.

## 2. Details of classified product

### 2.1. General

The element, non-loadbearing wall made of horizontally mounted asymmetric sandwich panels type MW WALL COVERING PANEL 80 mm - HF with a core of mineral wool a thickness 80 mm is defined as fire resistant.

### 2.2. Description

A non-load-bearing wall made of MW WALL COVERING PANEL 80 mm - HF type wall sandwich panels with a mineral wool core was tested. It has overall dimensions (WxH) of 3000 mm x 3000 mm and a thickness 80 mm.

Sandwich panels type MW WALL COVERING PANEL 80 mm - HF are asymmetrical. They are manufactured from two layers of sheet steel and a mineral wool core. The steel sheet is galvanized type DX51D + Z100, with a thickness of 0.60 mm on the unexposed sheet metal and a thickness of 0.50 mm on the exposed sheet metal, production of the company TOSYALI TOYO. The outer surfaces of the galvanized sheet are coated with a polyester coating with a thickness of 25 µm. The sheet metal is profiled with a profile depth of 1.0 mm.

The distance between the two metal sheets is 80 mm and is filled with mineral wool named Fibrangeo BL-50c and a density 100 kg/m<sup>3</sup>, produced by Fibran S.A The wool is cut into 80 mm high lamellas, which are arranged so that the panel has maximum mechanical strength and low compressive deformation. The orientation of the threads of the wool - they are located perpendicular to the steel sheets. The lamellae are closely spaced to each other and are glued to the steel sheet using a two-component adhesive (polyol "VORAMER AA 3042" and isocyanate "VORACOR CE 620"), production by the company "DOW EUROPE GMBH" at an amount of 340 g/m. The panels are produced with a width of 1000 mm and a length depending on the request.

The wall is made of 4 pcs. horizontally mounted panels. Two panels are 1000mm x 3000mm, one is 500mm x 3000mm mounted at the lower end of the wall and one is 470mm x 3000mm mounted at the upper free end of the wall. The two vertical sides and the lower horizontal side of the furnace frame are framed with a frame of L-shaped profiles with dimensions (80 x 80 x 8) mm, which provide points for fixing the structure. The panels are mounted, along the periphery, to the supporting structure using self-tapping screws with dimensions Ø6.3x120 mm. They are located at a distance of 600 mm from each other.

The joints between panels are asymmetrical. On the metal parts of the joints, "Promastop CC Liquid" water-based silicone, produced by the company "Promat", has been applied.

Additionally, the joints are reinforced on both sides with self-tapping screws, with dimensions: Ø4.8x35 mm on the unheated side at a distance of 300 mm from each other, Ø4.3x19 mm on the heated side at a distance of 150 mm from each other.

The joint at the upper free end is additionally reinforced with two L-shaped profiles with dimensions (40 x 40 x 2) mm, attached to the panel with self-tapping screws Ø6.3x35 mm at a distance of 300 mm from each other.

Metal boxes with dimensions (150x200x150x0.60) mm, filled with mineral wool named Fibrangeo B-051, and density 150 kg/m<sup>3</sup>, produced by Fibran S.A., are mounted on the two vertical and lower horizontal ends of the inner side of the wall.

One end of the boxes is attached to the supporting structure, and the other to the panel, with self-tapping screws dimensions Ø6.3x175 mm and Ø6.3x35 mm, located 300 mm apart.

The wall was tested with an upper horizontal free edge filled with mineral wool.

Manufacturer of MW WALL COVERING PANEL 80 mm – HF type panels and the tested structure is the company Metallemporiki, Th. Makris S.A., Larissa, Greece.

The test report was provided for the preparation of this classification.

### 3. Extended application reports and test results to support classification

#### 3.1. Test and extended application reports

This classification report includes details from test reports.

Name of laboratory	Name of sponsor	Report ref. no.	Test method and date
Laboratory for testing and research F plus	„Metallemporiki“ – Th. Makris S.A., Greece	Test report № TR-418-01/13.05.2024	BDS EN 1364-1:2015

#### 3.2. Results

Test method, number and date	Parameter	Results	
<b>Test method according to the requirements of BDS EN 1364-1:2015</b> <b>Test report № TR-418-01/13.05.2024</b>	<b>Installation</b>	According to description in p. 2.2	
	<b>Loadbearing capacity R</b>	-	
	<b>Integrity E</b>	Cotton pad	63 min
		Gap gauge	63 min
		Sustained flaming	63 min
<b>Thermal Insulation I</b>		62 min	
<b>Radiation W</b>		-	

### 4. Classification and field of application

#### 4.1. Reference of classification

This classification has been carried out in accordance with Clause 7 of BDS EN 13501-2:2023.

#### 4.2. Classification

A non-loadbearing wall made of horizontally mounted asymmetric sandwich panels type MW WALL COVERING PANEL 80 mm - HF with a core of mineral wool a thickness 80 mm wool core, is classified according to the following combination of presented parameters and classes by fire impact from the short overlapping edge:

R	E	I	W		t	t	M	S	C	IncSlow	sn	ef	r
-	X	-	-		6	3	-	-	-	-	-	-	-
-	X	X	-		6	2	-	-	-	-	-	-	-
-	X	-	X		6	3	-	-	-	-	-	-	-

Classification according to the requirements of item 7.5.2 of BDS EN 13501-2:2023 - partitions.

### Fire resistance classification E 60, EI 60, EW 60

#### 4.3. Field of direct application

The test results are directly applicable to similar constructions when one or more of the following acceptable modifications are made:

- Reducing the height and/or width of the wall;
- Increasing the number of horizontal joints of the tested type;
- Reducing the distances between the centers of attachment;
- Increase in wall thickness;
- Reducing the linear dimensions of the panels, but not the thickness;
- Increased the height of the structure up to 4 m;
- Increasing the width of the structure up to 4 m ;
- Mounting in solid supporting structures high-density with a fire resistance equal to or greater than that intended for the wall.

#### 5. Limitations

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

Classification undertaken by:

Director of BTR:

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/dipl.eng. Elisaveta Hlebarova-Zarkova/

.....  
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This report was issued in Bulgarian and English languages.  
By established distinction between both reports the Bulgarian one is valid.