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CLASSIFICATION REPORT FOR FIRE RESISTANCE

№ CR-454-01/03.09.2025

In accordance with BDS EN 13501-2:2023

Sponsor:	**MAKRIS SA,** 6th km. Larissa- Sykourio, Larissa 41500, Greece
Prepared by:	F plus Ltd., 16 Konstantin Kostenechki str., 2042 Kostenets, Bulgaria
Notified body No.	NB 2548
Product name:	**A wall** made of **vertically** mounted **sandwich panels** type MW WALL COVERING PANEL 80mm-HF with a mineral wool core and a thickness 80 mm.
Contents of the report:	4 pages

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1-st Edition

CONTENTS

1. Introduction

This classification report defines classification for a non-load-bearing wall made of vertically mounted sandwich panels type MW WALL COVERING PANEL 80mm-HF with a mineral wool core with a thickness 80 mm, in accordance with the procedures described in БДС EN 13501.

2. Details of classified product

2.1. General

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

2.2. Description

The element, a non-load-bearing wall made of sandwich panels type MW WALL COVERING PANEL 80mm-HF with a core of mineral wool, is fully described below in support of the classification in section 3.1. It has overall dimensions (WxH) 3000 mm x 3000 mm and a thickness of 80 mm.

The ***sandwich panels*** type MW WALL COVERING PANEL 80 mm-HF are asymmetrical. They are made of two layers of steel sheet and a core of mineral wool. The steel sheet is galvanized type DX51D with a thickness 0.6 mm, manufactured by the company ARCELOR MITTAL. The outer surfaces of the galvanized sheet are coated with a polyester coating with a thickness 25 μm. The sheet is profiled with a profile depth of 0.6 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^3, manufactured by Fibran S.A., with an isocyanate-based binder. The wool is cut into lamellas 80 mm high, and they are arranged so that the wool threads are perpendicular to the steel sheets. The lamellae are tightly placed to each other and are glued to the steel sheet using a two-component PU glue (polyol and isocyanate) produced by the company DOW EUROPE GMBH at an average consumption of 170 g/m^2. The panels are produced with a width of 1000 mm and a length depending on the request.

The wall is made of 3 vertically mounted panels. They are mounted to an L-shaped steel profile with dimensions (80x80x8) mm using self-tapping screws ø6.3x120 mm, manufactured by the company Ejot, spaced at a distance of 500 mm. Along the length of the two vertical joints, self-drilling screws ø4.3x19 mm, manufactured by the company Ejot, are installed at a distance of 150 mm. The L-shaped profiles are located along the two horizontal and one vertical edge of the wall. The profiles are welded to the inside of the furnace frame, which provides the possibility of fastening the tested structure. The wall is pre-framed with a U-shaped profile, with dimensions (150x200x150) mm, using self-tapping screws ø4.3x19 mm, manufactured by the company Ejot, located at a distance of 500 mm from each other.

The joints between the panels are asymmetrical. Along the length of the two vertical joints, self-drilling screws ø4.3x19 mm, manufactured by the company Ejot, are installed at a distance of 150 mm. Silicone type Promastop CC manufactured by the company Promat is applied along the joints and the inner side of the L-shaped profiles.

The wall is tested with one free edge of 25 mm, which is filled with ceramic wool with a bulk density of 128 kg/m^3, manufactured by the company LUYANG UNIFRAX. The fire impact is from the side of the covering feather.

The manufacturer of panels type MW WALL COVERING PANEL 80mm-HF is the company MAKRIS SA, 6th km, Larissa- Sykourio, Larissa 41500.

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

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

3.1. Test reports

This classification report Includes testing details and extended application.

Name of laboratory	Name of sponsor	Report ref. no.	Test method and date
Laboratory for testing and research F plus	**MAKRIS SA**, Greece	Test report №TR-454-01/ 25.08.2025	BDS EN 1364-1:2015

3.2. Results

Test method, number and date	Parameter	Results
Test method according to the requirements of BDS EN 1364-1:2015 **Test report TR-454-01/25.08.2025**	**Installation**	According to description in p. 2.2
	Loadbearing capacity R	-
	Integrity E	
	Cotton pad	75 min
	Gap gauge	75 min
	Sustained flaming	75 min
	Thermal Insulation I	60 min

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

According to clause 7.5.2 of BDS EN 13501-2:2023, a non-load-bearing wall made of vertically mounted sandwiched panels type MW WALL COVERING PANEL 80mm-HF with a mineral wool core and thickness of 80 mm, can be classified as a partition in accordance with the following combination of presented parameters and defined classes:

R	E	I	W				t	t	M	S	C	IncSlow	sn	ef	r
-	X	-	-				7	5	-	-	-	-	-	-	-
-	X	X	-				6	0	-	-	-	-	-	-	-

Fire resistance classification
E 60, EI 60, EW 60

4.3. Field of direct application

The test results are directly applicable for similar constructions where one or more of the following permissible modifications have been made:

- Reducing the height;
- Increasing the wall thickness;
- Increasing the thickness of the composite materials (sheet metal, wool);
- Reducing the lengths of the panels, but not the thickness;
- Reducing the distances between the fastening elements;
- Increasing the number of vertical joints of the tested type;
- Increasing the width of the structure;
- Increasing the height of the structure up to 4 m;
- Mounting in massive support structures with high density, with fire resistance equal to or greater than the classification of the wall.

5. Limitations

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

Classification undertaken by:

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/dipl. eng. Elisaveta Hlebarova-Zarkova/

Director of BTR:

.....

/Assoc. Proff. Eng. Detelin Spassov, PhD/

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