

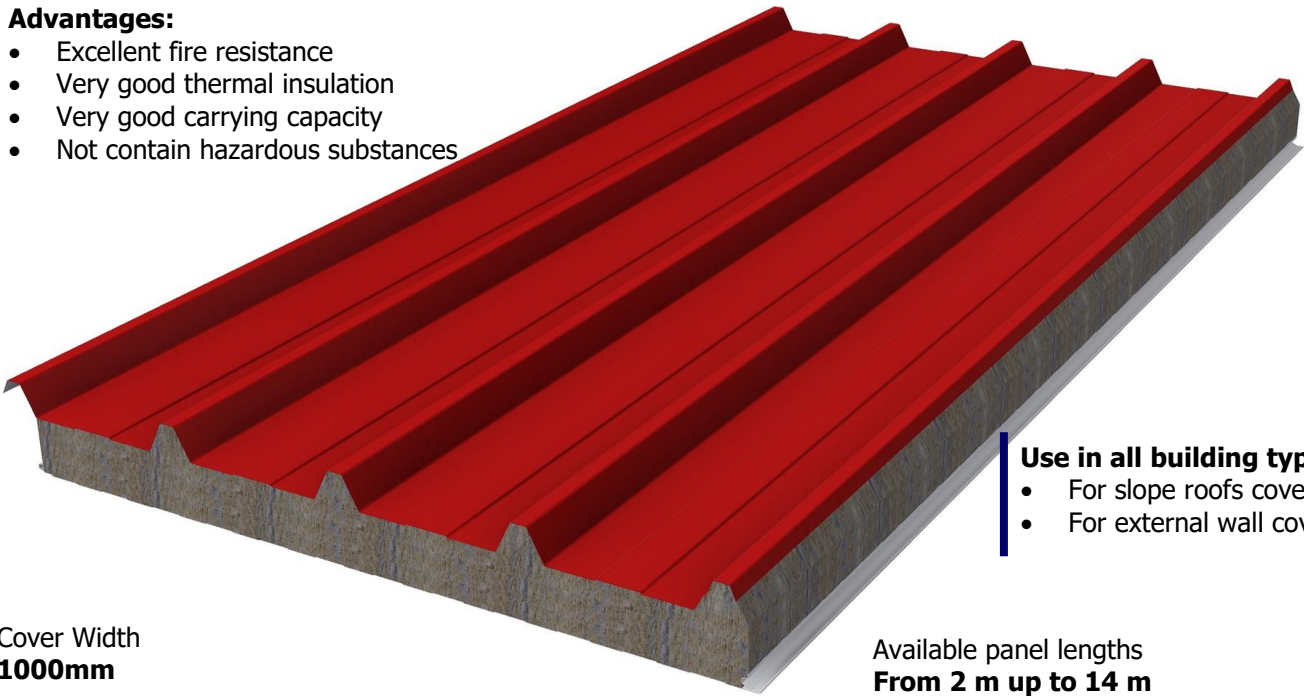
## Product Data Sheet

# Mineral Wool Roof Cover Panel R . MW 5.15

Factory made Self-supporting double skin metal faced insulating mineral wool core panels

### Advantages:

- Excellent fire resistance
- Very good thermal insulation
- Very good carrying capacity
- Not contain hazardous substances



### Use in all building types:

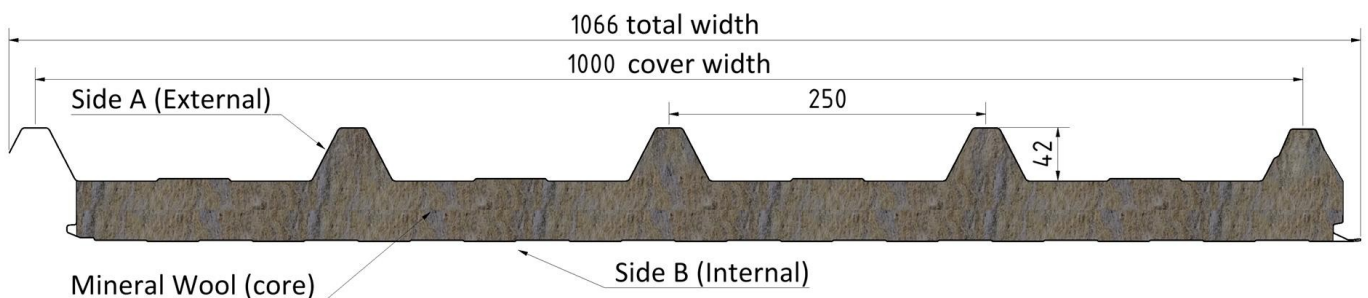
- For slope roofs cover
- For external wall cover

Cover Width  
**1000mm**

Available panel lengths  
**From 2 m up to 14 m**

Panel Thickness : **50, 60, 80, 100, 120 & 150 [mm]**

- Panels are available with right overlap or left overlap depending on project specifications. The overlap length ranges from 50mm to 300mm.
- The roof panels are fastened to the structure by the standard method of visible anchorage



- 5-rib trapezoidal profile with a height of 42 mm and a pitch of 250 mm.
- It can be easily combined with 42/250 profile metal sheets and polycarbonate sunlight sheets.

**Mineral Wool Roof Cover Panel / R . MW 5.15 / Data sheet****Dimensional Tolerances** (according to EN 14509)

Panel thickness	$\pm 2$ mm	$D \leq 100$ mm
	$\pm 2$ %	$D > 100$ mm
Deviation from flatness	$\leq 0,6$ mm	$Li = 200$ mm
	$\leq 1,0$ mm	$Li = 400$ mm
	$\leq 1,5$ mm	$Li = 700$ mm
Depth of the profile (rib height)	$\pm 1$ mm	$5 < h \leq 50$ mm
	$\pm 2,5$ mm	$50 < h \leq 100$ mm
Depth of light profile	$\pm 30$ %	$ds \leq 1$ mm
	$\pm 0,3$ mm	$1 \leq ds < 3$ mm
	$\pm 10$ %	$3 \leq ds < 5$ mm
Panel length	$\pm 5$ mm	$L \leq 3000$ mm
	$\pm 10$ mm	$L > 3000$ mm
Panel cover width	$\pm 2$ mm	$W = 1000$ mm
Deviation from squareness	$\leq 6$ mm	$W = 1000$ mm
Deviation from straightness	$\leq 1$ mm/m	$\leq 5$ mm
Bowing (Length)	$\leq 2$ mm/m	max 20 mm
Bowing (Width)	$\leq 8,5$ mm/m	$h \leq 10$ mm
	$\leq 10$ mm/m	$h > 10$ mm
Pitch of profile	$\pm 2$ mm	$h \leq 50$ mm
	$\pm 3$ mm	$h > 50$ mm
Ribs width	$\pm 1$ mm	For b1 value
Valleys width	$\pm 2$ mm	For b2 value

Metal Sheet Thickness  $>0,50$ mm**Metal sheet options**

Steel pre-painted, galvanized, produced according to EN 10204-2.2

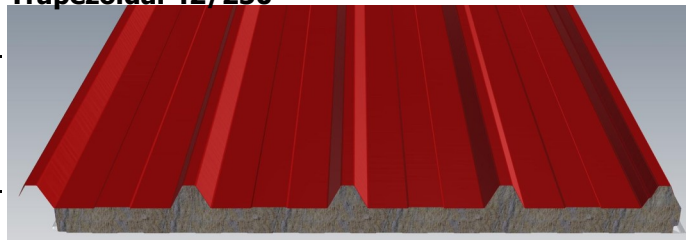
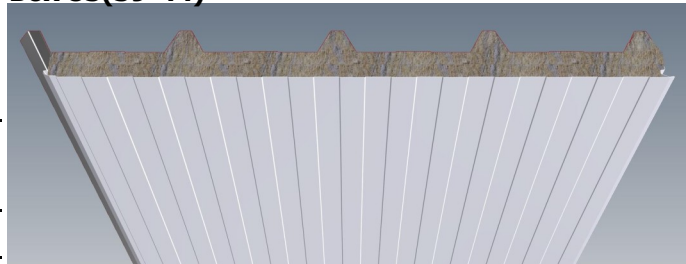
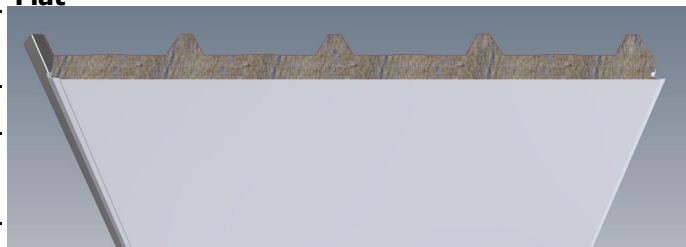
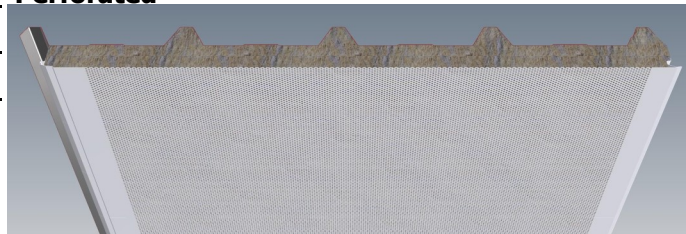
- Metal grade DX51D, S220, S250, S280, according to EN 10346 and EN 10143
- Hot-dip zinc coating, Z70 to Z275 gr/m<sup>2</sup>
- AluZinc protection, az70 to az265 gr/m<sup>2</sup>
- Nominal thickness from 0,35 mm **up to 1,0mm**
- Polyester, Plastisol or PVDF color coating

Aluminum uncoated with aluzinc protection or pre-painted, produced according to EN 10204-3.1

- Aluminum alloy of series 1xxx, 3xxx ñ 5xxx
- Hardness degree H14, H24 ñ H44
- AluZinc protection from az70 gr/m<sup>2</sup>
- Nominal thickness from 0,35 mm to 1,0mm
- Polyester color coating with min 20µm thickness

Stainless Steel, produced according to EN 10088-1

- Metal grade AISI 304 2B ñ AISI 316 L
- Nominal thickness from 0,35 mm to 1,0mm
- Mat or gloss color coating

**Metal Face profile options****Trapezoidal 42/250****Box 83(39-44)****Flat****Perforated****External face profiles:**

- Trapezoidal 42/250

**Internal face profiles:**

- Box 83(39-44)
- Flat
- Perforated\*

\*Upon request, the internal face may be perforated with dustproof sheet. The diameter of perforated holes is 3mm, with 5mm distance between them and hole percentage 28% of the total surface. Perforated metal faces are available in two colors, RAL 9005 (reduction of reflections) and RAL 9002.

**Mineral Wool Roof Cover Panel / R . MW 5.15 / Data sheet****Color coating options**Typical Polyester coating

Polyester paints are the most common and the most economical coatings. They are suitable for both external and internal surfaces.

With a nominal thickness > 15µm, it has a very good resistance to external environmental conditions.

Durable Plastisol coating

Plastisol coating is very durable to external environmental conditions. It is suitable for outdoor applications where the durable requirements are high.

The nominal coating thickness is up to 200µm.

High req PVDF coating

PVDF coating is suitable for buildings of architectural applications where the texture and color conservation are important. Also its reaction to fire is excellent because it has limited production of smoke, **class S1**. The nominal thickness is > 50mm.

**Insulated High Density Mineral Wool Core**

The 100 kg/m<sup>3</sup> high density mineral wool insulation core offers excellent resistance to fire and thermal transmittance.

It has low indicators of water permeability and air permeability and high sound absorption index.

The mineral wool is **bio soluble** and is certified according to the supplier declaration.

It does not contain or release dangerous substances for health and environment.

Upon request, mineral wool roof cover panels with 120 kg/m<sup>3</sup> high density mineral wool core, are available.

**Mineral Wool Core Essential Characteristics**  
(according to EN 13162)

Characteristic	Value	Unit / Reference
Reaction to fire	A1	Euroclass (EN 13501)
Thermal conductivity λ	0,033	W / m.K
Special thermal capacity C	0,84	kJ/kg.K
Water / vapor permeability μ	1	
Long term water absorption Wlp	< 3	Kg / m <sup>2</sup>
Resistance to air permeability	66	kPa.s/m <sup>2</sup>
Compression strength	10	kPa
Density	120	kg/m <sup>3</sup>
Density	100	kg/m <sup>3</sup>

**Characteristic properties**

Nominal Panel Thickness	Panel Weight	Thermal Transmittance	Fire Resistance Index
D [mm]	[kg/m <sup>2</sup> ]	U [W/m <sup>2</sup> .K]	
50	15,2	0,63	REI 45
60	15,9	0,53	REI 120
80	18,3	0,40	REI 120
100	19,9	0,32	REI 120
120	22,2	0,27	-
150	25,3	0,21	REI 240

**Fire resistance index**

Mineral wool panels are classified according to EN 13501-1 and EN 13501-2, in terms of reaction and resistance to fire. Mineral wool panels are classified as **A2-s1-d0**. They do not transmit fire, do not ignite, have very limited smoke production and do not drop flaming or non-flammable particles.

**Panel weight**

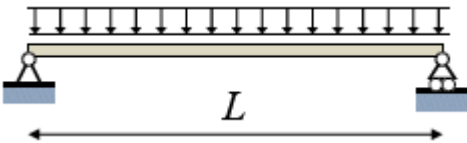
Panel weight was calculated including the following parameters:

- Core density of 100 kg/m<sup>3</sup>
- Metal sheets thicknesses 0,50/0,50 mm, Polyester coating (typical metal faces)

**Thermal transmittance U**

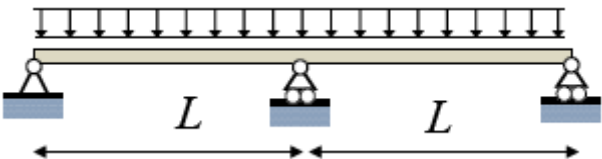
Panel thermal transmittance was calculated according to EN 14509 & EN 10211-2 including the following parameters:

- Core density of 100 kg/m<sup>3</sup>,
- Core thermal conductivity 0,033 W/m.K,
- Metal sheets thicknesses 0,50/0,50mm, Polyester coating (typical metal faces)
- Calculations to the nominal panel thickness.

**Mineral Wool Roof Cover Panel / R . MW 5.15 / Data sheet****Max load in span - Load bearing capacity (kg/m<sup>2</sup>)****Single Span Load Table**


Panel thickness	Max Span L [m]															
	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00	
<b>50</b>	220	180	165	140	120	105	85	75	60							
<b>60</b>	255	210	180	160	140	125	105	95	85	65						
<b>80</b>	300	260	220	190	165	155	140	125	115	90	85	75	65			
<b>100</b>	345	285	250	220	190	170	160	145	130	115	95	85	75	75	65	
<b>120</b>	350	300	255	225	200	175	165	150	135	125	115	105	95	85	80	
<b>150</b>	360	305	260	235	205	180	165	155	140	130	120	110	100	90	85	

- \* Calculations according to EN 14509, the values indicate the ultimate limit state or the serviceability limit state (l/200).
- \* Steel sheet face thickness: external 0,50mm / internal 0,50 mm.
- \* Support width 120mm. Anchoring should be able to withstand the panel loads.

**Multi Span Load Table**


Panel thickness	Max Span L [m]															
	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00	
<b>50</b>	230	190	175	150	130	110	90	80	65							
<b>60</b>	270	225	190	170	150	135	115	100	90	70						
<b>80</b>	320	280	235	205	180	165	150	135	125	100	95	80	70	60		
<b>100</b>	370	310	270	240	205	185	175	155	140	125	105	95	85	85	75	
<b>120</b>		325	280	245	220	190	180	165	150	140	125	115	105	95	90	
<b>150</b>			290	260	230	200	185	175	155	145	135	125	115	100	95	

- \* Calculations according to EN 14509, the values indicate the ultimate limit state or the serviceability limit state (l/200).
- \* Steel sheet face thickness: external 0,50mm / internal 0,50 mm.
- \* Support width 120mm. Anchoring should be able to withstand the panel loads.

**Metal sheet color coating options. Please visit our website:**  
<https://www.metallemporiki.gr/products/xromatologio>

**Manufacturers of Cladding Products for the Construction Industry**

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