



# Magnelis® Light

Magnelis® is an exceptional metallic coating which contains 3% magnesium, 3.5% aluminium and zinc. This unique composition provides an unprecedented surface and cut-edge protection against corrosion. Magnelis® is available since a decade and has proved itself to be a superior coating for a wide range of applications like solar energy, building construction, agriculture, and HVAC.

Now, ArcelorMittal presents Magnelis® Light – the range of Magnelis® coatings between 70 and 175 g/m<sup>2</sup>. Magnelis® Light can be used to substitute galvanised coatings between Z100 and Z350 while offering equal or better performance. Magnelis® Light has demonstrated its ability to protect against corrosion through numerous field and laboratory tests.

## The benefits of Magnelis® Light

In comparison with galvanised steel, Magnelis® Light offers additional benefits during processing and use.

### Profiling & bending

Magnelis® Light requires very little adjustments in the set-up of forming tools used to process galvanised steels. Magnelis® Light has a lower friction coefficient than galvanised material, resulting in less powdering. The harder surface of Magnelis® Light also reduces the occurrence of scratching.

During forming operations, Magnelis® Light:

- diminishes the pollution of forming tools such as profiling rolls;
- reduces the cleaning frequency and overall maintenance of manufacturing tools;
- reduces – and in some cases eliminates – the need for lubricants.

### Welding

The welding set-up parameters used for Magnelis® Light are similar to those used for galvanised steels. During welding operations, Magnelis® Light:

- consumes less energy and reduces fume thanks to its thinner coating;
- can reduce reactive gas consumption during MAG welding;
- offers increased productivity (welding speed);
- minimises the use of consumables including filler wire, reactive gas, energy...

### Cutting

Whatever the cutting process, Magnelis® Light and galvanised steel can be cut with similar parameters.

*"We believe in Magnelis® from day 1. It is no coincidence that we have been a partner and ambassador of Magnelis® from the very beginning. We want to grow even further with the addition of Magnelis® Light to our product range. With Magnelis® we are already booking great projects in the agricultural sector and installation sector, among other sectors. By adding the quality Magnelis® Light to our product line, our customers are even better able to process their products efficiently and sustainably."*

**MCB** Tjarda Vanmeenseel, Purchase Manager MCB Netherlands.

## Additional advantages

Thanks to its unique chemical composition, Magnelis® Light can be in most cases in direct contact with a higher number of metals than galvanised steels, including aluminium, stainless steel or zinc lamellar.

For post-painted parts made with Magnelis® Light, a better paint adhesion is expected. This reduces the need for maintenance of the final product.

Magnelis® Light is available with A and B surface qualities, and with different surface treatments to meet any surface aspect requirements.

As Magnelis® Light contains magnesium, its aspect can be slightly darker than conventional galvanised steel. This is a minor difference especially when Magnelis® Light is non-visible or used in non-aggressive environments.

## Environmental benefits

Magnelis® Light is 100 percent and infinitely recyclable. Replacing galvanised steel with Magnelis® Light reduces the environmental footprint of manufactured products by:

- lower use of raw materials and natural resources at galvanising stage: when comparing equivalent performances of both according to their respective EPDs, Magnelis® has 58% less impact on resources consumption and 20% less on energy consumption;
- reducing zinc run-off during the product's life;
- increasing the lifetime of the finished product.

*"Previously, our silos were made from sendzimir galvanised plates. By using Magnelis® we not only notice a positive difference in quality, but also speed of the product, such as no post-treatment. We have many requests for urgent work, if we use Magnelis, the material is immediately well protected against corrosion. Magnelis® Light is therefore an excellent addition to the existing range at MCB. In addition, working more efficiently and delivering quality fits perfectly into our policy".*

Wim Martens, Construction and welding company Martens, Someren (The Netherlands)



An Environmental Product Declaration (EPD) according to EN15804 is available for Magnelis® Light. It can be adjusted on request for specific Magnelis® coating weights and steel thicknesses.

> EPDs on our website

Cable trays and electrical equipment



Flooring



Indoor ventilation





Metallic furnitures



Ceilings



Walls and partitions



Storage and racking



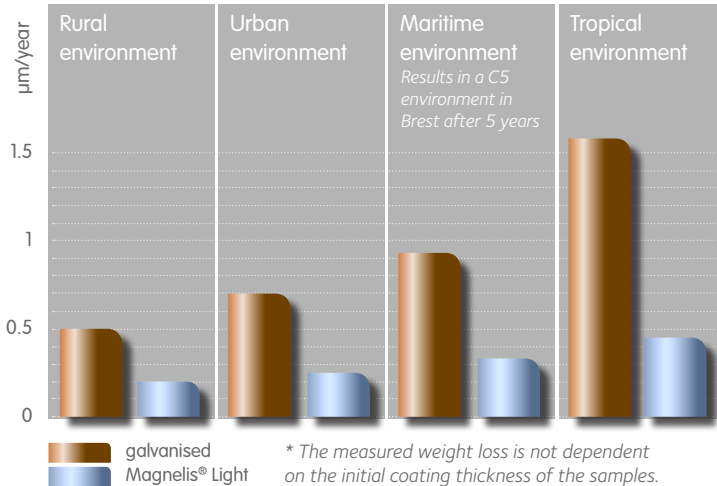
Profiled members



Opened and closed profiles

## Magnelis® Light: outperforms galvanised steel

Mean yearly consumed thickness\* in different environments in microns/year (after 2 years) Source: ArcelorMittal R&D



Based on many different field exposure tests, Magnelis® Light has proven to offer up to three times better corrosion resistance than galvanised steel.

The comparative performance of zinc (Z) and zinc-magnesium (ZM) coatings has been described in standards like the German DIN 55634:2018. Magnelis® has also been certified for use in construction by building standards organisations including CSTB in France, DIBt in Germany, and RISE in Sweden. These certifications validate the durability of different Magnelis® coating weights when exposed in C2, C3, C4, and C5 corrosion environments.



## Available worldwide

Magnelis® Light is available worldwide with dedicated and optimised service offers in each region. Magnelis® Light is produced in several ArcelorMittal mills, allowing a secure supply chain.

Coating Designation	ZM70	ZM90	ZM120	ZM175	
Coating mass (total both sides)	g/m <sup>2</sup>	70	90	120	175
Coating thickness <sup>(1)</sup>	(µm/per side)	5	7	10	14
Aspect	MA or MB aspect <sup>(2)</sup>				
Surface treatment	C (E-Passivation® CrVI-free), O (oiled).				
Thickness	0.45 to 6.00 mm				
Width	Up to 1680 mm				

**Steel grades**  
DX51 to DX57+ZM  
S220GD to S450GD+ZM  
S420GD-HyPer®+ZM, S450GD-HyPer®+ZM and S550GD-HyPer®+ZM  
HX260LAD+ZM up to HX700LAD+ZM

<sup>(1)</sup> Magnelis® density is 6.2 kg/dm<sup>3</sup>  
<sup>(2)</sup> Contact us for detailed feasibility



## More information about Magnelis®

Visit the Magnelis® homepage at [industry.arcelormittal.com/magnelis](http://industry.arcelormittal.com/magnelis)

Documentation available:

- Safety datasheet
- Environmental product declaration (EPD)
- Durability certificate
- Fire certificate
- RoHS certificate

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