



MetFloor & Magnelis® ZM310 / ZM430

Standard MetFloor products are manufactured in galvanised steel in accordance with BS EN 10346 & BS EN 10143 for continuously hot dipped structural steel strip. This results in a minimum galvanized coating total mass of 275g/m².

MetFloor profiles can also be manufactured using a Magnelis® Coating. This is generally specified for more demanding or aggressive C4 and C5 environments and as per ArcelorMittal guidance, it will provide more protection than standard galvanising.



COATING THICKNESS:	BS EN 10346
SURFACE TREATMENT	C (E-Passivation® CrVI-free, O (oiled))
TYPICAL STEEL GRADES AVAILABLE FROM CMF	S350GD + ZM

COATING

The Magnelis® Coating is a unique metallic steel coating that is used in a range of applications and offers long-term surface protection and highly effective corrosion resistance. Magnelis® ZM310 provides 310 g/m² of coating mass which equates to a thickness of 24µm (micron) per side. Magnelis® ZM430 provides 430 g/m² of coating mass which equates to a thickness of 35µm (micron) per side. The unique composition contains 3.5% aluminium and 3% magnesium. The Magnesium content ensures a stable and durable protective layer, with excellent self-healing properties. (Magnelis® online: https://industry.arcelormittal.com/products-solutions/Products_in_the_spotlight/magnelis)

COATING DESIGN LIFE OF 50+ YEARS

Based on all outdoor field tests, ArcelorMittal has calculated the coating design life* expectations for Magnelis ZM310 and ZM430 (respectively 24 and 35 microns per side).

Corrosivity Category for Zn <small>(based upon BS EN ISO 12944-2:2017 - Table 1)</small>	Magnelis ZM310 <small>(years)</small>	Magnelis ZM430 <small>(years)</small>	Examples of typical environments (informative only)	
			Exterior	Interior
C2 low	> 50	> 50	Atmospheres with low level of pollution: mostly rural areas	Unheated buildings where condensation can occur e.g. depots, sports halls
C3 medium	30 to > 50	40 to > 50	Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity	Production rooms with high humidity and some air pollution, e.g. food-processing plants, laundries, breweries, dairies
C4 high	15 to 30	20 to 40	Industrial areas and coastal areas with moderate salinity	Chemical plants, swimming pools, coastal ship and boatyards
C5 very high	8 to 15	10 to 20	Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity	Buildings or areas with almost permanent condensation and with high pollution

* The expected coating design life is the average time until 100% of the undamaged coating, exposed only to atmospheric conditions, is consumed on the surface. At that point, the structural integrity of the coated part is no longer assured and major repair is necessary. These estimates are valid for both outdoor and indoor applications, excluding situations where the coating is in permanent contact with a moisture source, such as soil or concrete. These durations are indicative and non binding.

WELDING

Due to access for coating repair being impractical to the underside of decking at beam locations, Magnelis® is considered as not suitable for through deck stud welding. CMF recommend single span decking with pre-studded beams for Magnelis® applications.

STANDARD GALVANIZED Z275

ARCELORMITTAL MAGNELIS® »

Note: Magnelis® coated MetFloor decking is a non-standard product; supply is subject to minimum volume and contract assessment.

For further information please contact CMF:

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Magnelis® is a registered trademark of ArcelorMittal.



Construction Metal Forming

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