

ZINC MAGNESIUM



ZINC MAGNESIUM STEEL CABLE MANAGEMENT

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ADVANTAGES & APPLICATION

What are the benefits of having ZM coating on your steel cable management solutions?

- Unmatched corrosion resistance
- Superior durability and performance
- Self-healing protective film
- Cost-effective
- Reduced lead times
- Environmentally friendly
- Enhanced aesthetics



Our Zinc Magnesium (ZM) coated offering is versatile and can be used across a variety of industries.

Data Centres: Data centres need high-performance containment systems to handle heavy electrical loads in controlled environments. ZM's lightweight design eases installation in complex, high-density cabling systems, while its corrosion resistance ensures long-term durability with minimal maintenance.

Marine and Coastal Areas: Zinc Magnesium (ZM) performs well by resisting saltwater corrosion. It is suitable for any projects near the sea where exposure to moisture and salt can quickly degrade traditional galvanised steel.

Industrial Facilities: Zinc Magnesium (ZM) protects against corrosive chemicals, pollutants, and humidity, ensuring the long-term performance of essential cabling.

Renewable Energy: Typically located in harsh outdoor environments. Zinc Magnesium (ZM) provides the corrosion resistance needed to protect cables from environmental exposure, such as salty air, heavy rain, and wind.

Infrastructure: Whether above ground or in underground ducts, Zinc Magnesium (ZM) offer protection making them ideal for infrastructure.

ZINC MAGNESIUM ZM310 COATING

What is Zinc-Magnesium (ZM)?

Zinc Magnesium (ZM) is a cutting-edge anti-corrosion coating that offers exceptional protection against corrosion. This innovative coating is a notable advancement over traditional Hot-Dip Galvanizing (HDG).

The ZM coating comprises 93.5% zinc, aluminium (3.5%) and magnesium (3%) formulated to create a corrosion-resistant, self-healing protective layer. Thanks to its 3% magnesium content, this protective layer is designed to withstand the harshest conditions, ensuring long-term performance, and making it a cost-effective solution.

This high corrosion resistance means less metallic coating is required (weight reduction), which also facilitates processing steps such as welding.



**ZM310
COATING**

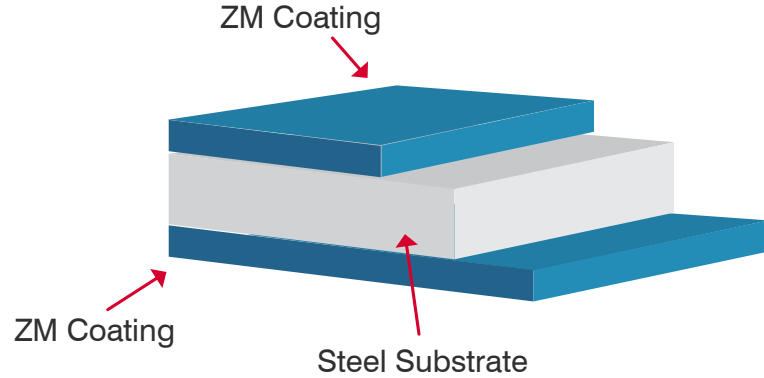
Main Advantages

- **Exceptional Corrosion Resistance:**
Offers up to 10 times better corrosion protection than traditional hot-dipped galvanised.
- **Self-Healing Capability:**
The ZM coating can heal itself if scratched or cut, thanks to the reaction of magnesium and aluminium within the coating.
- **Lightweight Design for Easier Handling:**
Lighter than traditional HDG systems, makes it easier to transport, handle, and install. This leads to quicker installations and lower labour costs.
- **Eco-Friendly and Sustainable:**
The ZM coating process reduces carbon footprint by using fewer raw materials, processes, and energy.
- **Long-Term Cost Efficiency:**
Due to their superior durability and reduced need for maintenance, ZM offers significant long-term savings.

ZM PROPERTIES

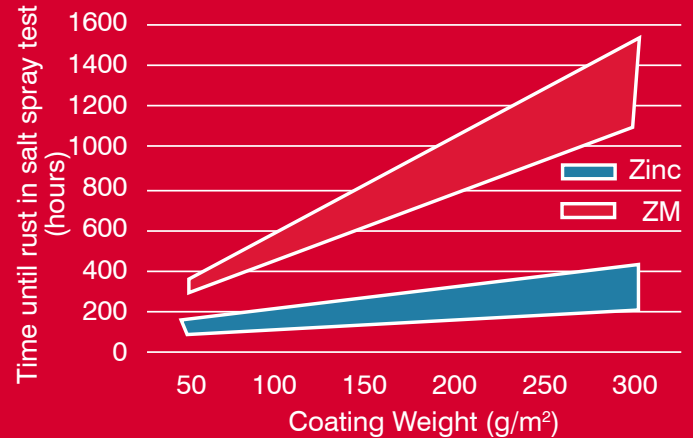
Zinc Magnesium (ZM) is a state-of-the-art anti-corrosion coating that delivers superior protection against corrosion, representing a significant improvement over the conventional Hot-Dip Galvanising (HDG) method.

Its ability to form a sturdy, long-lasting barrier under challenging conditions underscores its superiority over conventional zinc coatings, making it an invaluable material in industries like construction, data centres, automotive, and infrastructure that demand high-performance, long-lasting protective solutions.



SURFACE PROTECTION	GALVANISED STEEL	ZINC MAGNESIUM (ZM)	COATING WEIGHT DOUBLE SIDED (g/m ²)	COATING THICKNESS (μm PER SIDE)*
Light Coating	Z100	ZM70	70	5
	Z200	ZM90	90	7
	Z275	ZM120	120	10
	Z350	ZM175	175	14
Heavy Coating	Z450	ZM200	200	16
	Z600	ZM250	250	20
	Z725	ZM310	310	25
	Z1000	ZM430	430	35

Coating Weight



SELF-HEALING EFFECT

Initial exposure period (up to several weeks)The exposed cut end of the substrate is oxidised and forms red rust.

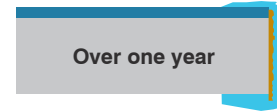
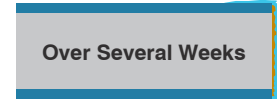
When subjected to rain and condensation (beyond several weeks *).The zinc-based film containing the magnesium on the coating layer migrates over the cut end.

Long exposure period (after more than a year)
Disappearance of red rust and the increase of white rust.

The speed of the self-healing may depend on the environment.

Zinc/Magnesium (ZM)

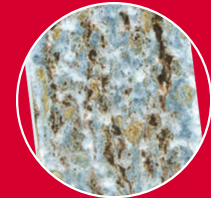
ZM Layer



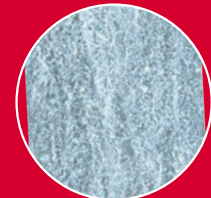
Self-Healing

Similar to the protective qualities of our skin, zinc magnesium (ZM) coated steel possesses the ability to autonomously safeguard compromised regions. These regions may include those that have undergone deformation during the forming process, such as bending, or areas where the bare steel surface has been revealed due to cutting or punching.

Although red rust may momentarily manifest in these exposed areas, the coating from the unaffected surface migrates to cover the red rust, thereby facilitating a self-repairing mechanism. This is referred to as the self-healing effect.



HDG 85 µm after 12 weeks



ZM 20 µm after 12 weeks

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