

MAIN ADVANTAGES:

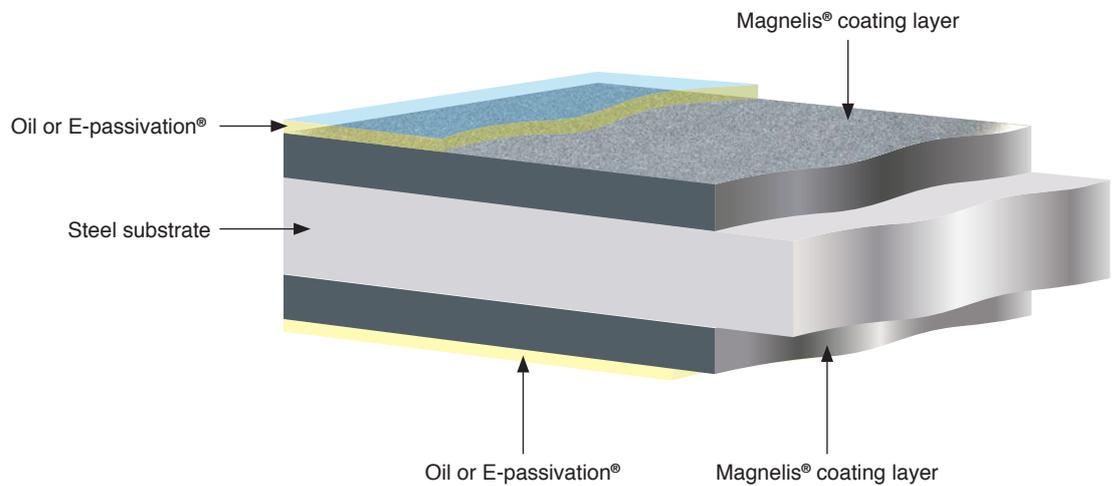
- Excellent corrosion resistance: three times better than galvanised steel (based on outdoor tests)
- Self-healing effect ensures excellent edge protection
- Best & most cost-effective alternative to post-galvanised steels
- Wide feasibility range
- Excellent processing properties
- Environmentally friendly

WHAT IS MAGNELIS®?

Magnelis® is an exceptional metallic coating which provides a breakthrough in corrosion protection. Magnelis® is also the best choice for a wide variety of applications.

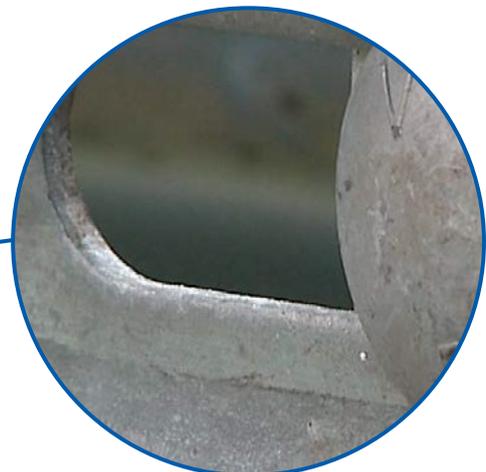
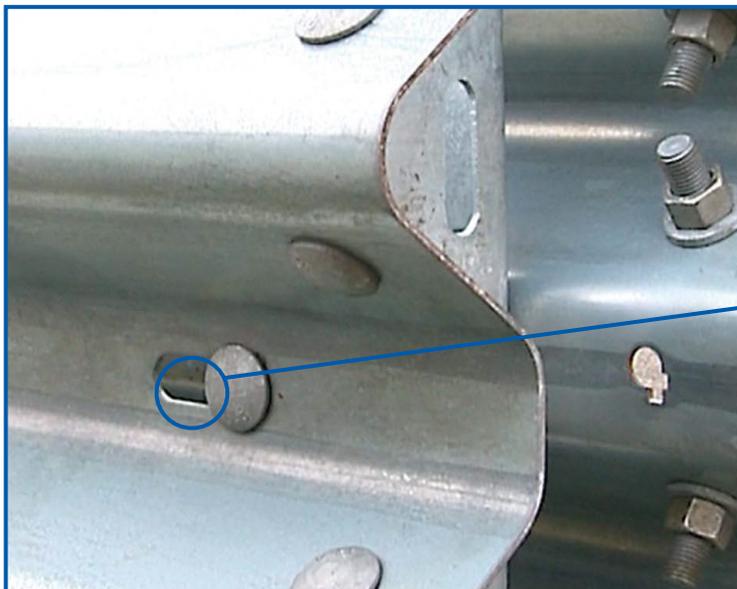
Thanks to its unique composition, Magnelis® provides an unprecedented level of surface and cut-edge protection, even in the most hostile environments.

Magnelis® is produced on a classic hot dip galvanising line, but the molten bath has a unique chemical composition including zinc, 3.5% aluminium, and 3% magnesium.



Magnelis® has a naturally dark grey aspect. It is available with an environmentally friendly E-passivation® or it can be oiled on request.

The self-healing effect of Magnelis® ensures the protection of uncoated edges, scratches and perforations.



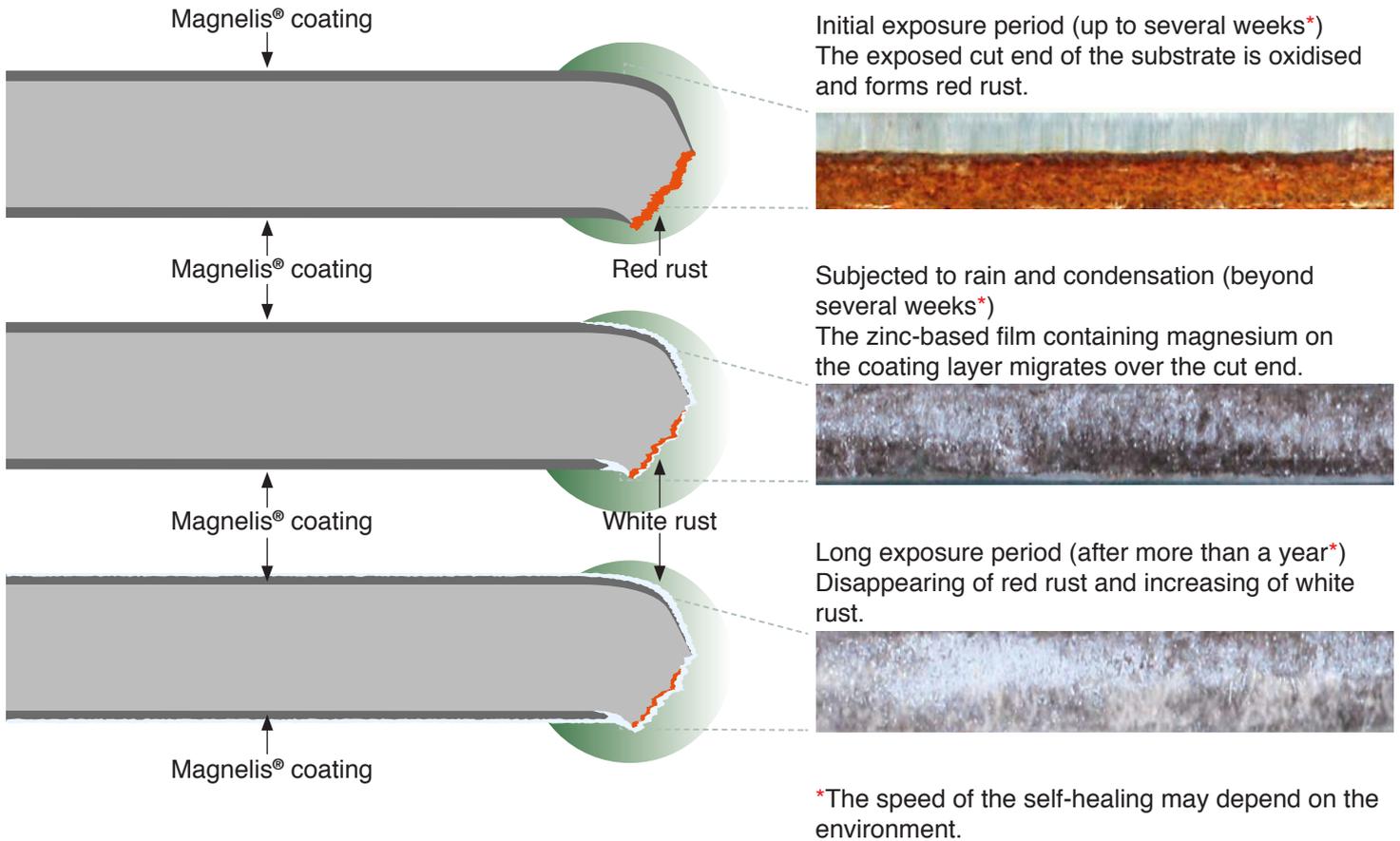
The perforated zone on a safety barrier is protected by the self-healing effect of Magnelis®.

EDGE PROTECTION WITH SELF-HEALING EFFECT

When exposed to the environment, Magnelis® forms a very dense zinc-based protective film, unlike galvanised where the film is very porous.

This unique dense film is also formed on edges, welds, perforations and scratches. In case some red rust was present on these uncoated zones, the red rust will be gradually covered by the Magnelis® film.

It is almost impossible for the environment to penetrate this film. The result is that Magnelis® provides perfect protection of the whole structure, even on the uncoated edges, scratches and perforations.



CORROSION RESISTANCE, ACCELERATED CORROSION TESTS

Magnelis® versus pre-galvanised
(salt spray test)

Magnelis® versus post-galvanised
(salt spray test)



Hot dip galvanized 20 µm
after 6 weeks.

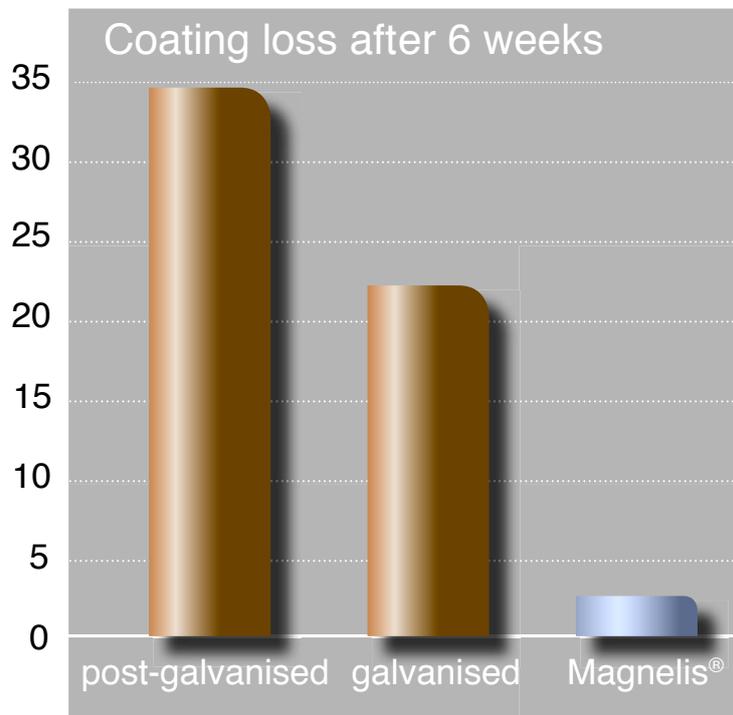
Magnelis® 20 µm
after 34 weeks.

Post-galvanized 85 µm
after 12 weeks.

Magnelis® 20 µm
after 12 week.

Salt spray and cyclic corrosion test results highlighted the superior performance of Magnelis® compared to other metallic coatings.

No red rust was observed on steel with a 20 µm coating of Magnelis® after 34 weeks of salt spray testing. Magnelis® offers a real advantage over post-galvanized steel.



These are results from a 3CT (VDA 621-415) cyclic corrosion test. Source: ArcelorMittal R&D.

BENEFITS OF MAGNELIS® IN A NUTSHELL

Features		Magnelis® versus hot dip galvanised (Zn)
Anti-corrosion properties	Outdoor corrosion	+ + +
	Agricultural buildings (animal housing, barns, greenhouses, silos...)	+ + +
	Marine environments (construction, swimming pools...)	+ + +
	Industrial environments (acid- or alkaline-rich environments)	+
	High humidity	+ + +
	Contact with concrete	+ + +
	Abrasion	+ + +
	Soil corrosion	+ + +
	Edge protection thanks to self-healing effect	+ + +
	Perforations or scratches on exposed applications	+ + +
	Corrosion of formed parts (bent or stamped)	+ + +
	Temporary protection (transport, storage)	+ + +
Processing properties	Bending and profiling	+
	Forming and shaping	+
	Welding (equivalent coating thickness)	=
	Painting	+ +

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