Ventilation units with exceptional corrosion resistance











SODECA offers solutions for industrial ventilation, smoke exhaust, staircase pressurisation, tunnel ventilation and improved indoor air quality

SODECA has grown by seeking out the best path, always innovating and offering the best customer service, while respecting the environment and remaining committed to energy savings. It would therefore like to be a part of the change and focus on a sustainable model.

The environmental management system of the production plant at SODECA's headquarters has **ISO 14001 certification from Bureau Veritas**, thereby endorsing our environmental performance and the continuous improvement derived from activities targeted at mitigating any impact on the environment. At SODECA, sustainable solutions are integrated in its business strategy, which means producing with clean energy, reducing emissions and working to decrease waste generation.



Magnelis[®] is a metal coating that is three times more resistant than galvanised steel, thereby offering exceptional anti-corrosion protection, even in the most aggressive environments

Magnelis

ArcelorMittal

An ArcelorMittal produc

Manufactured on a classic hot-dip galvanisation line, Magnelis[®] uses a bath of zinc with 3.5% aluminium and 3% magnesium. This chemical composition creates a stable and long-lasting layer that provides great corrosion protection on the housing of SODECA equipment, thereby ensuring the ideal protection for a broad range of applications thanks to its long-term resistance to wear and its effective protection of the surface and edges.



Magnelis® has a natural, dark grey look. It is offered with ecological passivation (E-Passivation®).



An environmentally-friendly coating



Magnelis[®] is 100% recyclable and contains no harmful elements An environmentally-friendly coating

The application of Magnelis® contributes to preserving natural resources and respecting the environment, given that it uses less zinc than galvanised coatings. Magnelis® is 100% recyclable, it contains no harmful elements and it complies with the REACH regulation, whose main objective is to protect human health and the environment against the risk that could be involved with the manufacturing, marketing and use of chemical substances and mixtures.

Moreover, it contains an Environmental Product Declaration (EPD), a report that provides detailed information about the environmental impact of a product throughout its life cycle.

Corrosion resistant

Superior and long-lasting anti-corrosion protection, even in the most extreme environments, thanks to its innovative composition, which surpasses standard galvanisation



Corrosion resistant (C5 according to ISO 12944)



Magnelis[®] offers great and long-lasting anti-corrosion protection on the housings of SODECA equipment in comparison with the standard galvanised finish that has been used to date, thanks to its special composition of 3% magnesium and 3.5% aluminium. Magnelis[®] also provides exceptional protection along cut edges, something not achieved by other metal coatings, consequently providing the same protection as on the surface of a metal.

The result is very effective protection against corrosion, even in the most aggressive environments, such as chemical or marine atmospheres, where SODECA fans are often installed.

Magnelis[®] also provides exceptional protection along cut edges, something not achieved by other metal coatings, consequently providing the same protection as on flat areas. This has been demonstrated in numerous salt spray tests. This resistance to corrosion makes Magnelis[®] the perfect coating for SODECA fans.



After 1,440 hours of salt spray testing on a Magnelis® coating layer, no red oxide is observed, while the galvanised coating layer appears completely corroded.





Edge protection with self-healing effect

Nearly impenetrable protection that, with the coating's patina of zinc, aluminium and magnesium, ensures maximum durability and makes it nearly 4 times lighter





Under environmental exposure conditions, the zinc component of Magnelis[®] forms a dense and resistant patina, unlike conventional galvanising. **This protective patina also forms on edges, welds, perforations and scratches, thereby covering any zone where rust could appear.**

The protection by Magnelis[®] is nearly impenetrable by the atmosphere, thereby ensuring complete protection for a structure. In addition to the protection provided by zinc, Magnelis[®] includes magnesium to create a fine film that prevents corrosion along cut edges.

Accelerated corrosion testing.

The definitive protection that multiplies the durability of SODECA fans, thereby ensuring superior resistance to corrosion in the most extreme conditions





Results of an accelerated corrosion test: loss of coating after 6 weeks.

The results of salt spray and corrosion testing, after having taken over 1,000 samples, clearly show the better behaviour of Magnelis[®] in comparison with other metal coatings.

Magnelis[®] is the perfect coating for applications where SODECA fans are exposed because it increases their corrosion resistance. This means that SODECA fans last longer.



Results of a 3CT (VDA 621-415) cyclic corrosion test. Source: ArcelorMittal Global R&D.





Reduced maintenance costs

Reduced maintenance costs

Using Magnelis[®] eliminates the need to paint equipment, which saves in costs and improves productivity

The greater durability of this coating significantly reduces maintenance costs, thereby making Magnelis® more cost-effective than the galvanised and post-galvanised solutions that have been used up to now.

Basic corrosivity categories according to ISO 12944

Very low	C51	Very high
,		(Industrial)
Medium	C5M	Very high
High		(Marine)
		Low Medium C5M



C5I Industrial Industrial areas with high humidity and an aggressive atmosphere.

Buildings and areas with nearly constant condensation and **high pollution**.



C5M Marine Onshore and offshore

areas with **high** salinity. Buildings and areas with nearly constant condensation

and high pollution.

Standards and Certifications

Magnelis[®] sets the benchmark for excellence in the industry with its impressive range of international certifications, which provide customers with the assurance of its superior quality, sustainability and performance standards

Magnelis[®] is the only metal coating certified for working under corrosion classification C5 for corrosion resistance according to the ISO 12944 standard, which is the international standard for the protection of steel structures against corrosion through the use of coating systems. This standard classifies atmospheres into various categories of corrosivity, from C1 (very low) to C5 (very high).



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