



Magnelis®

Magnelis® - for conditions requiring exceptional corrosion protection

Magnelis® is a highly durable protective coating on steel plates that effectively protects surfaces from long-term wear. Its superiority comes from its excellent corrosion resistance and self-repairing properties. Magnelis® is the best and most cost-effective alternative to post-galvanized steels.

The composition of the Magnelis® is optimised for maximum corrosion resistance. It consists of an alloy containing zinc, aluminium and magnesium. Sufficient magnesium content increases the durability of the surface protection and ensures highly effective corrosion protection - three times better than galvanized steel.

How does Magnelis® work?

The composition of the Magnelis® protective layer has been optimized to achieve the best possible corrosion resistance. An alloy containing 3.5% aluminum and 3% magnesium in addition to zinc is used in the surface layer. The hot-dip galvanized steel surface is porous, but Magnelis® forms a smooth and seamless, impermeable film on the protected surface.

The self-repairing property of Magnelis® also causes a protective film to form on surface edges, weld seams and scratches. Even if brown rust has already formed on the surface to be treated, the protective film of Magnelis® displaces the brown rust from the surface.

The self-repairing feature ensures excellent edge protection and makes Magnelis® a cost-effective alternative to stainless steel and aluminum.

Excellent corrosion resistance makes Magnelis® an ideal surface protection for challenging environments where the risk of corrosion is high, or where ammonia or chlorides are more present than usual.

Properties of the Magnelis® surface protection:

- a superior solution for environments with a high risk of corrosion.
- a self-repairing feature ensures that even a damaged surface is protected.
- does not contain volatile organic compounds (VOCs).
- a cost-effective alternative to stainless steel.

Magnelis® protects in demanding conditions and is suitable for:

- environments where the risk of corrosion is higher than normal, such as public saunas and spas.
- environments with higher than normal levels of chlorides and ammonia, such as swimming pools or animal shelters.
- the ventilation ducts and their components, as well as fastening plates, required in these environments.

Magnelis® is available for the following ETS NORD product groups:

- NORDduct
- NORDaccessories
- NORDrect
- NORDdoor
- NORDdamper
- NORDroof
- NORDsilencer
- NORDexternal
- NORDfilter
- Repair air handling units

Magnelis® meet the standards: (DX51D+ZM310) (EN 10346:2015)

Kuopio's Kuntolaakso relies on Magnelis® surface protection

Kuntolaakso is Kuopio KalPa's home hall, which was expanded and renovated in 2018-2020. The extensive renovation project also covered the swimming pool and parking facilities.

The extension and renovation of Kuntolaakso was carried out as a life cycle project: the client, the City of Kuopio, signed a 20-year service contract with YIT Rakennus Oy and Caverion Suomi Oy. Caverion was responsible for the building services engineering during the construction phase and will take care of the technical service, maintenance and energy consumption management during the contract period.

Project Development Manager Arto Taivassalo from Caverion Finland Oy says that a lot of effort was put into finding sustainable sewer materials. – We went through many options to find a solution that combined good sustainability with a reasonable price," he says.

– We ended up with ETS NORD's Magnelis®, which has good corrosion resistance but is significantly cheaper than stainless steel.

Kakola Spa is protected against corrosion by Magnelis® coated ventilation ducts

The Kakola Spa is investing in a wide range of wellness services, including a sauna world, various wellness showers and pools, and many different treatments.

The ventilation ducts and duct components for Kakola Spa were purchased from ETS NORD. The ducts are processed with Magnelis® coating, which provides protection for surfaces exposed to challenging conditions. Magnelis® is a protective coating for steel plates with a sufficient magnesium content to significantly increase the durability of the protection. The corrosion resistance of the coating is three times better than galvanised steel.

Peter Lausmäki, site manager at Rakennuspalvelu Lausmäki Oy, says that the excellent properties of Magnelis® coating made ETS NORD's ventilation ducts and duct components a very viable option, but the choice was not a foregone conclusion. Magnelis® coating has already been used in a few indoor swimming pools in Finland, but Lausmäki was concerned about the lack of experience with the material. – We carefully investigated the backgrounds and possible complaints from these previous sites," he says.

– Everything was in place, and the choice of ETS NORD ducts and Magnelis® material was ultimately determined by three factors: cost, workability and availability.

Magnelis® is significantly cheaper than other materials with comparable corrosion resistance. – Its workability matches that of a conventional ventilation duct – and we also received confirmation from the duct installers that this is indeed the case," confirms Lausmäki. – ETS NORD was also able to guarantee the availability of material, which is even more important today," says Lausmäki.



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