TECNADIS METALCOAT EASY TO CLEAN

EASY TO CLEAN COATING FOR METALLIC SURFACES THAT PROTECTS FROM CORROSION, IMPACTS AND SCRATCHING



Tecnadis Products range, produced by TECNAN

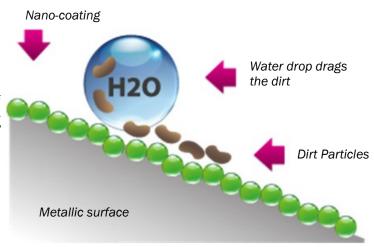


TECNADIS METALCOAT EASY TO CLEAN

What is it and how does it work?

TECNADIS METALCOAT "Easy-To-Clean" is a highly-durable coating for the protection and easy cleaning of metallic surfaces.

Its formulation is based on a dispersion of ceramic nanoparticles, and avoids polluting particles and food leftovers from sticking to the surface, simplifying cleaning tasks at the same time than protects from corrosion and impacts, also reducing cleaning times and frequencies and elongating lifetimes of the metals.

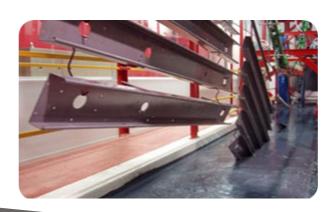


TECNADIS METALCOAT "Easy-To-Clean" provides a long-lasting easy-to-clean effect by the creation of a **transparent film which acts as a barrier, preventing dirt from adhering to the surface**, thus making the metal surface very easy to clean and protecting it from corrosion.

With the application of *TECNADIS METALCOAT "Easy-To-Clean"*, cleaning processes that usually need plentiful resources such as manpower, time, water and detergents are simplified and the use of physical abrasion or decaling agents is substantially reduced. This advantages are finally translated into an **increase of productivity** of the processing lines. In addition, it favors the **transport of fluids** in pipes and conduction channels, and protects the metal from **corrosion**.

How to use it

TECNADIS METALCOAT "EASY-TO-CLEAN" is applied through common coating or painting techniques such as **spraying** with commercial gun or by **dip-coating**.





Benefits

HIGH DURABILITY

TRANSPARENT COATING, IT KEEPS THE NATURAL COLOUR OF METALS AS WELL AS THEIR SUPERFICIAL STRUCTURE

PROVIDES EASY-TO-CLEAN PROPERTIES BY **PREVENTING DIRT PARTICLES FROM STICKING TO THE SURFACE** DUE TO ITS HYDROPHOBIC AND OLEOPHOBIC PROPERTIES







NO RISK OF MIGRATION. MEETS APPLICABLE LAW ON MATERIALS AND OBJECTS TO BE IN CONTACT WITH FOOD ACCORDING TO

- 1-DIRECTIVE 2005/31/CE AND REGULATION 1935/2004.
- 2-US. FDA (CPG 7117.06 & 7117.07).
- 3-REGISTER InS Service AS R1, Nº:1805038.

ALLOWS THE REDUCTION OF THE RESOURCES USED IN THE CLEANING PROCESSES (TIME, WATER AND DETERGENTS CONSUMPTION, PHYSICAL ABRASION, DECALING AGENTS, ETC.)

HIGH RESISTENCE TO HEAT SHOCKS AT 350°C

DELAYS METAL **CORROSION**, PROTECTING TREATED SURFACES FROM CORROSIVE AGENTS LIKE OXYGEN, WEATHERING, MARINE ENVIRONMENTS, AND EVEN FROM ACID AND ALKALINE CHEMICAL AGENTS.











HOME APPLIANCES SECTOR

Within the home appliances sector, the coating Tecnadis METALCOAT "Easy To Clean" is applicable to both white line of home appliances and small appliances. In fact, three of the largest manufacturers of this type of equipment have tested the coating and have admitted that, currently, it is the best easy to clean coating in the market.

Due to its non-sticking and easy to clean properties, the coating Tecnadis METALCOAT "Easy To Clean" has application on **gas cooktops, ovens, griddles, fridges and exhaust hoods,** among others, to facilitate cleaning tasks and avoiding the use of abrasive agents and aggressive cleaning products.





Also within this sector, the coating Tecnadis METALCOAT Easy To Clean is applicable on **sinks** to avoid limescale deposits, on **smoothing I rons** to prevent clothes from irretrievably sticking to the iron sole in case of burns and, finally, on **dishwashers** to protect the tanks from the corrosion to which can be exposed due to the saline environment generated during operation of the appliances at certain temperatures, 65-70 °C .





INDUSTRIAL KITCHENS AND CATERINGS SECTOR

As in the home appliance sector, and for the same purpose, the coating TECNADIS METALCOAT "Easy To Clean" is applicable in **industrial kitchens and caterings**, for example in **griddles**, <u>making easier their cleaning</u> because it <u>avoids food partially or totally adhesion to the surface, eliminating the use of abrasive agents and / or aggressive cleaning products.</u>



KITCHENWARE

The coating TECNADIS METALCOAT "Easy To Clean" has also application in the sector of kitchenware to replace the use of Teflon and ceramics coatings that are usually used in frying pans, pots and other types of kitchenware, as it offers





outstanding anti-adherence performance, even to cook eggs without oil.

Other interesting property of this coating that makes it very suitable for frying pans and kitchenware is its <u>scratch and impact resistance in comparison with Teflon and ceramic coatings</u> that are nowadays on the market.

CERAMIC KITCHENWARE:

Another application of TECNADIS METALCOAT "Easy To Clean" has its focus on the coating of frying pans, plates and ceramic casseroles for the catering sector, where snaks and tapas are presented. In these cases, the coating is used to facilitate cleaning, completely eliminating any traces of



grease or food that may remain after use, with a simple pass of water and a quick wash in the dishwasher, without the need to rub, thus <u>saving cleaning time</u>, <u>water and detergents</u>.

FOOD AND AGRICULTURE SECTOR



Other application of the coating TECNADIS METALCOAT "Easy-To-Clean" is focused on the food-processing industry in order to facilitate fluids' transport and to reduce cleaning frequencies, as well as to protect the pipes, tubes and canals from corrosion, increasing their lifespan. Concretely, the coating can be directed to both end users of the food-processing industry and also to producers of those kind of equipment.



TECNADIS METALCOAT "Easy-To-Clean" presents numerous advantages for the food-processing industry such as simplifying the cleaning processes, in reduced significantly which can be resources used, staff hours, water, cleaners, indeed it can be avoided the use of abrasive agents and descaling products, as well as reducing the cleaning

frequencies. On the other hand, due to its sliding properties, the coating facilitates the conduction of liquids in pipelines, which means a saving in pumping energy consumption and a reduction in the percentage of reject due to adhesions, which is very useful, for example, for confectionery companies. Finally, TECNADIS METALCOAT "Easy-To-Clean" increases the lifespan of these equipment thanks to its anti-scratching properties and good resistance to impacts and corrosion, delaying its appearance.

Within the agri-food sector, and given the advantages described above, the Tecnadis METALCOAT "Easy To Clean" coating is directly applied in **companies producing fried tomato and sauces, milk and cheese, pastries and pre-cooked meals**, among others, to prevent the accumulation of waste and facilitate cleaning. Additionally, it can be implemented in **companies producing tinned food, wineries and desalting industries** to protect their lines and facilities against corrosion.





VENDING MACHINES SECTOR

TECNADIS METALCOAT "Easy-To-Clean" has also application in the **vending machine industry**, especially in those cases that some kind of food is prepared and where cleaning is difficult and corrosion appears.

Specifically, there is a known problem in **popcorn machines** where TECNADIS METALCOAT "Easy-To-Clean" offers the ability to <u>facilitate the cleaning of this equipment</u>, avoiding the use of aggressive agents necessary to eliminate fats, oils, salt, sugar and dirt that remains adhered during the continuous use of this equipment, as well as to <u>reduce the cleaning frequency</u>. On the other hand, it <u>protects surfaces and internal ducts against the corrosion</u> that can be caused by the combination of temperature and saline environment with aggressive cleaning agents, <u>thus increasing its life</u>.

Another field within the vending machines sector is the application of TECNADIS METALCOAT "Easy-To-Clean" in **coffee machines** to protect the boiler against limescale, avoiding machine's dismantling for the cleaning and the use of descaling agents, which are highly aggressive.

WATER TREATMENT PLANT

Other industrial application of the TECNADIS METALCOAT "Easy-To-Clean" is on water treatment plants and waste processing companies, where the organic pollution is extreme. In these cases, the coating is used to <u>facilitate the cleaning of such facilities</u>, reaching considerable savings because of resources optimisation, as well as to <u>protect them against the corrosion</u>, since the acids and vapours that are released from the decomposition of organic matter are highly corrosive.

INDUSTRIAL COOLING & HEAT EXCHANGERS

In the industrial refrigeration sector, the TECNADIS METALCOAT "Easy-To-Clean" coating is used to protect metal resistances against vapours and corrosive liquids resulting from the cleaning of equipment.

In the case of **heat exchangers**, in addition to <u>protect</u> <u>against corrosion</u>, TECNADIS METALCOAT "Easy-To-Clean" <u>makes easier the fluid transport and enhances</u> <u>heat transfer</u>, thanks to the reduction of waste <u>depositions on the pipes</u>.



PETROCHEMICAL



Within the **petrochemical sector**, the coating TEC-NADIS METALCOAT "Easy-To-Clean" has direct application in **all the stages of fuel production and oil-processing from crude oil extraction to distillation and separation of the final product.**

First of all, in **oil drilling wells** it is very useful to protect the installations against corrosion,

especially in the case of maritime wells, where this problem is very pronounced. In the case of oil pipelines, the TECNADIS METALCOAT "Easy-To-Clean" is used to make easier the move of the oil reducing the pumping energy consumption and reducing solid wastes on the pipes walls. At the same way, the coating protects against the corrosion that can be caused both by petroleum sulphide agents inside transport pipelines and by the saline environment outside maritime tubes. Finally, TECNADIS METALCOAT "Easy -To-Clean" has also direct application in crude oil-processing companies since, in addition to the properties mentioned above, it is highly resistant to thermal shock and can withstand operating temperatures of around 400-450°C, even peaks of higher temperatures.

CHEMICAL AND PHARMACEUTICAL INDUSTRY

TECNADIS METALCOAT "Easy-To-Clean" can also be applied in **chemical and pharmaceutical plants**, where the importance of cleaning is crucial to avoid contamination in the final products. In this sense, the coating is applied to <u>make easier the cleaning processes</u>, avoiding contaminations and assuming therefore considerable savings due to resources optimisation. In addition, TECNADIS METALCOAT "Easy-To-Clean" protects them against corrosion, as the chemicals used can become highly aggressive and/or corrosive



INDUSTRIAL PAINTING SECTOR

Thanks to the non-sticking properties that offers the coating TECNADIS METALCOAT "Easy-To-Clean", it can be also used in the industrial painting sector to cover both spray booths and paint tunnels, as well as in painting lines tools. The properties of the coating make it easy to remove excess paint or contaminants that may remain on these surfaces or



accessories with pressurized water, as it does not adhere to the metal. In this way, the cleaning of this type of surfaces and elements is greatly facilitated, reducing the use of resources, especially the staff hours dedicated to manual mechanical cleaning such as blasting or scraping, and even reducing the frequency of such cleaning. On the other hand, due to its hydrophobic and oleophobic properties, the coating is effective with paints of both organic and aqueous nature and, because of its resistance to different solvents, the coating's durability is high. As an additional benefit, the coating protects the metal surfaces against corrosion, scratches and impact.

PLUMBING SECTOR AND VIDEO DOOR PHONES



In the field of **plumbing sector** the TECNADIS METALCOAT "Easy-To-Clean" coating has application to <u>protect metal</u> <u>parts against limescale deposits</u>, thus making easier the <u>cleaning of them</u>, taps are a clear example of this application.

In the case of **video door phones**, the coating also offers the ability to <u>waterproof the surface</u>, reducing the entry of rain water drops that can penetrate through the device's <u>holes</u>, avoiding the problems that could cause in the interior electronic systems. Since the coating also provides <u>protection against corrosion</u>, <u>impacts and scratching</u>, it extends the service life of these elements while maintaining their aesthetic appearance unchanged.

OTHER SECTORS

Apart from the sectors described previously in detail, and thanks to the versatility of TECNADIS METALCOAT "Easy-To-Clean", its application can be extended to other sectors such as the ones listed below:

- Construction and metal structures sector to protect metallic elements against weathering and corrosion .
- Electrical and electronic industry to waterproof and protect electrical contacts and circuits.
- Boiler sector and storage tanks to prevent waste depositions and facilitate cleaning.
- Restoration sector to protect valuable metal parts and monuments from weathering and therefore from corrosion, as well as from deterioration caused by the growth of algae, lichens or mosses.
- Smelting and forged industry to facilitate the cleaning of moulds and auxiliary equipment, as well as to protect them against corrosion.
- **Jewellery sector** to protect the parts from passivation and the loss of the noble metal bath .
- **Livestock industry**, equipment and infrastructure for livestock farms, can be protected against corrosion caused either by exposure to the weather or by deposition and dirt generated by animals on farms and feedlots, among others.
- Anticorrosive coatings sector, to protect metal parts such as screws, rivets, springs, bushings, bolts, flanges, valves, among others, as a substitute for or in addition to other treatments, for instance zinc-coated, to increase their corrosion resistance and thus their service life

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Find out more about the product at:

www.metalcoat-by-tecnan.com/es/



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