




MIRAPAKONTM

THE ONLY ANTIFOULING-FOULING RELEASE WITHOUT BIOCIDES -
AFFORDABLE, TRANSPARENT, EASY TO APPLY
AND IT COATS ALL SURFACES.



At **MIRAPAKON**, our goal is to meet your marine coating needs. We produce highly specialized protective marine coatings (*biocide-free fouling release* and *antifouling**) that are cost-effective and environmentally friendly. **MIRAPAKON™ MK300** is an innovative coating technology that can help you save time, money and increase efficiency.

A UNIQUE PRODUCT FOR THE MARINE INDUSTRY



After 15 years of research and development, **MIRAPAKON** is proud to provide the global maritime market with technologically-advanced coating based on silica gel derivatives.

MIRAPAKON™ MK300 is a biocide-free **fouling release* and *antifouling* coating designed to protect ship hulls and other submerged components. It does so while protecting the marine environment and upholding sustainable development principles. With our product, absolutely zero contaminants are released into the marine ecosystem.

Whether you are a boat owner, a fleet operator, a rental agency manager or a shipyard operator, **MIRAPAKON** offers you a product that is efficient, easy-to-apply, cost effective and environmentally friendly.

LEADING-EDGE TECHNOLOGY



By forming a thin hydrophobic layer **MIRAPAKON™ MK300** creates a barrier against biofilm generation and an extremely smooth, sleek surface that microorganisms and biofouling will not adhere to.

Unlike other products on the market, MK300 forms small, clear drops that do not contain any biocides or silicone. Tests have shown that **MK300** does not harm the normal development of natural marine microorganisms that come into contact with the treated surface.

AT THE FOREFRONT OF ITS FIELD



MIRAPAKON™ MK300 is a unique product at the forefront of antifouling technology. Unlike fluorinated silicone-based coatings, it contains no silicone and does not release any biocides. It also meets current shipping industry regulations and environmental requirements.

The fouling of structures by marine organisms is a problematic natural phenomenon that leads to decreased performance and major financial loss. The solution? Biocide-free* *fouling release* and *antifouling technology*. **MIRAPAKON™ MK300** fouling release is one of the top-performing products of its kind on the market.

*According to the Classification, Labelling and Packaging (CLP) regulations the European Chemicals Agency (ECHA).

FEATURES

- Clear
- Single-component formula
- Hydrophobic
- Biocide-free*
- Non-toxic
- Prevents the formation of biofilm
- Does not bubble or peel off
- Protects against UV
- Protects against corrosion and bio-corrosion
- Environmentally-friendly
- Cost-efficient
- Can be applied in temperatures ranging from 4 °C to 40 °C

BENEFITS

- Adheres to all surfaces: aluminium, fiberglass, steel, metal, wood and even Teflon
- Increases boat speed
- Reduces maintenance costs by 50%
- Reduces fuel consumption by 10% to 20%
- Optimizes shipyard operations
- Reduces costs of sludge treatment processes
- Extends the maintenance season
- Reduces application time
- Instant drying time (15-60 min)

FACT SHEET

Appearance Clear liquid

Density 0.87 kg/l

Viscosity Similar to water

Application Brush and foam roller, paint gun
(for professionals only)

Base Hybrid xerogel

Yield 20 to 40m²/L (according to application method and surface type)

Finish Translucent

Elasticity Similar to rubber, 006 GPa

Film Thickness Similar to rubber, 006 GPa

MIRAPAKON™ MK300 produces a single-component catalytic reaction to form a three-dimensional surface film network. It coats the hull with a thin, translucent and elastic-textured layer. The flexible film is chemically bound to the surface and will not crack.

APPLICATION AND ADHESION



MIRAPAKON™ MK300 looks like water, is easy to apply, and adheres to a variety of surfaces, including fiberglass, aluminium, composites, wood, polyester, metal, epoxy, polymers and all types of paint. Its liquid consistency allows application time and the amount required to be reduced by half.

LASTING PROTECTION



MIRAPAKON™ MK300, protects your vessels for 2 to 5 years. Our product can be applied at a wide variety of temperatures (4 °C to 40 °C), and at any time of the year, so you decide when to relaunch. This also extends the maintenance season and optimizes shipyard operations.

MAINTENANCE



MIRAPAKON™ MK300 makes upkeep a breeze. A medium-pressure wash is all it takes to rinse off small bits of fouling on the surface, which translates into cost savings. Long-lasting protection means fewer applications.

ENVIRONMENTAL COMPLIANCE



MIRAPAKON™ MK300 complies with the International Maritime Organization's (IMO) MARPOL Convention and the *Convention on the Control of Harmful Anti-fouling Systems on Ships*. **MIRAPAKON™ MK300** coating is not subject to Canada's Pest Control Products Act or related regulations, as the product creates a physical barrier on boat surfaces.

*According to the Classification, Labelling and Packaging (CLP) regulations the European Chemicals Agency (ECHA)

PUT TO THE TEST

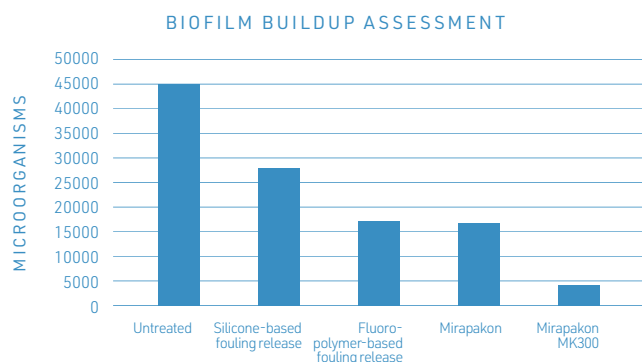


MIRAPAKON™ MK300 has been compared in certified testing centers to several other biocide-free **fouling release* and *antifouling* products on the market and to biocide-based paints and commercial fluoro-polymer- and silicone-based coatings.

Tests showed that **MIRAPAKON™ MK300** was the most efficient biocide-free **fouling release* and *antifouling* product, reducing biofilm buildup by 80%, eliminating fouling two times more efficiently than the silicone-based product and reducing drag by 10 to 20%.

Biofilm Buildup: 80% Decrease

Results of surface microalgae growth analysis show that **MIRAPAKON™ MK300** reduced biofilm buildup by 50%. As a result, microorganisms have a harder time developing on the surface. Its performance was equal to fluoro-polymer fouling release, and it outperformed silicone-based products.



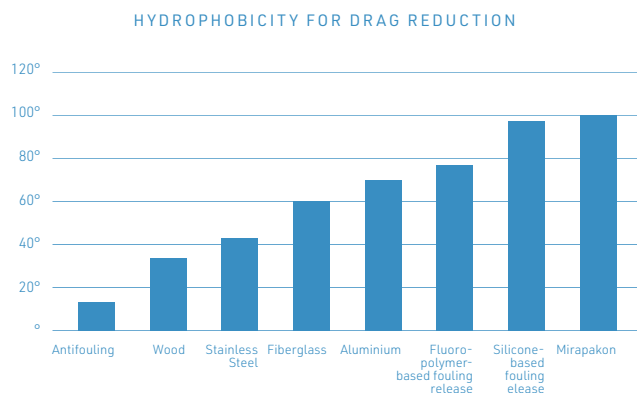
Biofilm Elimination: Twice as Efficient

Thanks to **MIRAPAKON™ MK300** the small amounts of biofilm that manage to cling to the surface are eliminated, as the microorganisms are only partially attached and cannot survive.

Tests at low-speeds and cruising-speeds in the water showed that surfaces coated with **MIRAPAKON™ MK300** released two times more biofilm than those treated with fluoro-polymer fouling release. The surface simply cleans itself when the boat is in motion.

Drag: 10 to 20% Reduction

Unlike traditional biocide-free* antifouling products that have a permeable outer layer, **MIRAPAKON™ MK300** creates a hydrophobic surface, thus repelling water and reducing drag by 10 to 20%. This increases maximum speed, which in turn, leads to fuel savings. The graph below demonstrates that **MIRAPAKON™ MK300** is among the top competitors on the market for drag reduction.



The St. Lawrence Estuary beluga whale is an endangered species. MIRAPAKON has developed an environmentally-friendly product to fulfill its mission to respect and protect the environment. We are proud to have adopted a beluga that will be named after our product.

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