

The background of the advertisement features a large, dark blue sailboat hull in the upper right corner, viewed from below. In the lower left, a scuba diver in a wetsuit is swimming near the surface of the water, which has a deep blue to turquoise gradient. Sunlight rays are visible through the water, creating bright highlights.

MacGlide

Sail Responsibly

*A biocide-free, antifouling
adhesive film.*

Press release

mactac®

MacGlide:

Zero toxicity adhesive underwater paint
*A reliable and long-lasting solution
for a revolutionary application*

Each year, nearly 150,000 tonnes of biocide-containing, antifouling paint is applied to hulls in Europe with harmful consequences for marine fauna and flora as well as for human health. These paints could be banned as of 2020.

Today, Mactac, the world leader in high-performance adhesive films, offers an anti-fouling hull coating free of impact on the marine environment or on human health. Revolutionary in its application, it is effective, durable and economical.

Baptised MacGlide, the alternative to bio-toxic antifouling treatments works immediately allowing real sea lovers to sail responsibly without delay.

MacGlide consists of a protective adhesive film for below the waterline, coated with silicone paint developed specifically with PPG, a world leading paint manufacturer. In other words, it is an “adhesive underwater paint”, a technological leap with multiple benefits.

MacGlide is based on an active, anti-stick principle. Hence, MacGlide prevents the colonisation of the hull, without spreading biocides and other pesticides,

which impact the very base of the aquatic food chain. MacGlide is different from traditional paints in that it does not erode and maintains its properties over time - five years - irrespective of the biological variations of the waters sailed in.

Along with preserving marine life, there are also other benefits which for several years now have provided the motivation for using this kind of anti-stick coating on cruise ships, merchant ships and naval **vessels: drag reduction, optimisation of fuel consumption, self-cleaning above a critical speed and five year durability**, which increases the operational profitability of ships.

Up until now, the problem of using a silicone spray (- 30% of overspray, deposited up to a kilometre away...) acted as a brake to the technology and indeed this type of manual application yields results which are only moderately effective.

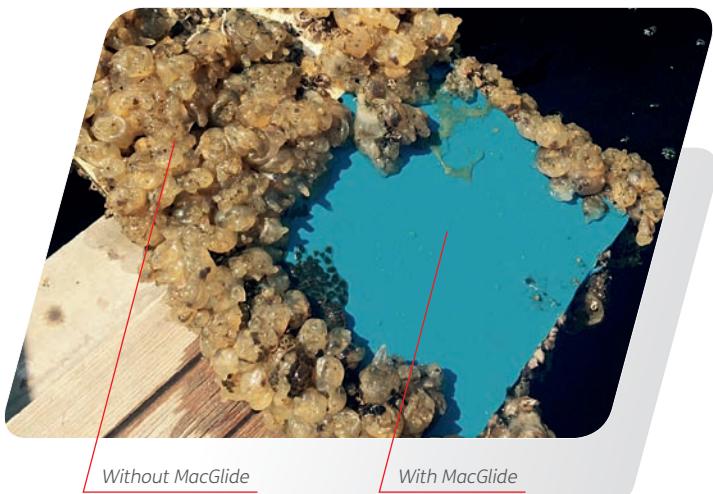
The revolutionary MacGlide solution overcomes the inconveniences while only keeping the benefits and making them available to the pleasure boat community: the silicone covering **is coated onto the self-adhesive film by means of a factory**

process, with control of the thickness profile and without emitting volatile organic compounds (VOCs) into the atmosphere.

Developed by Mactac after five years of Research and Development, this particularly robust and sea-water impermeable adhesive complex is sold in a 60 cm x 25 m roll. It is distributed by AderNautic through a network of certified film applying professionals.

An exclusive sealing varnish completes the MacGlide solution and can also be used to make localised repairs.

Plate immersed in Istanbul
Static immersion over 3 months



In conclusion, MacGlide combines the recognized properties and qualities of an anti-stick coating for the benefit of pleasure boat owners and ship-owners who care about looking after the marine environment as well as the long-term protection of their investment.

Data (numbers)

10,000m³

the volume of water contaminated by 1 g of biocides, while one m² contains 15 g and the surface area of the hull of a 10 m sailboat is 25 m². That makes 3.75 million m³!

15 tonnes

the amount of toxic antifouling paint applied each year in the Bay of Arcachon alone, adding to the contamination from land-based pesticides.

12

the number of antifouling molecules most often identified by water analyses, including numerous pesticides and also traces of highly carcinogenic arsenic trioxide.

80%

of French pleasure boat owners apply or have applied a new coat of antifouling paint each year whose bio-toxic effectiveness generally lasts for only 8 months...

25,000

the number of species, from phytoplankton to molluscs, likely to colonise your hull with up to 150 kg per m². This indicates the limitations of this chemical combat which is so harmful to the marine environment.



Motor boat - Istanbul (Turkey)

Antifouling, a long quest

60 AD

The Romans, like the Phoenicians, used copper and lead. These heavy shells served especially as armour for the battleships of that time.



- 600 BC

Archaeology tells us that the Greeks coated their handsewn hulls with resin and beeswax. There was no silicone, but anti-stick worked already.

1492

The contemporaries of Christopher Columbus used pitch, tallow, grease and again beeswax for a smooth sail which led them to the New World.

1805

Sheets of copper nailed to the hulls helped Nelson to destroy the Franco-Spanish fleet whose ships did not have them so that below the waterline they were dirty.

1566

Eldorado mine waste, inorganic arsenic, is the first “biocide” to enter into the composition of a toxic anti-fouling compound, with mercury as an alternative.

1914-1918

The deadly gases of the first chemical war in History industrialised the field of agricultural pesticides and indirectly, that of marine anti-fouling.

MacGlide, operating procedure

Faultless hull, gel coat and health preserved.

A faultless hull surface state: this is the key to success for the perfect application of the MacGlide solution, applied by professionals, trained and certified through the national network (boatyards, distributors, etc.) which AderNautic has developed. This prerequisite

already leads to improved drag reduction, and therefore better performance when sailing and fuel savings (up to 5-6%) when running with your engine, thanks to the anti-stick properties of the silicone coating.

1982

Tributyltin (TBT), a powerful pesticide used as an antifouling agent during the golden age of pleasure boating, ravaged oyster production in particular. Hence its definitive ban in 2003.

2008

The launch of the MSC Poesia, a giant cruise ship (294 m) whose hull was painted below the water line with 10,000 litres of silicone paint, at the request of its Italian ship-owner. A first.

1943

The heavy chemicals industry contributed to the efficiency of the American Navy during the War in the Pacific and succeeded in developing the first synthetic pesticide.

2005

Combinations of copper salts and pesticides replaced TBT, but already their impact was questioned. Hence the research on “bio-friendly” or non-polluting materials such as silicones.

2016

Launch of MacGlide, an adhesive coating with a biocide-free silicone layer, which makes the pleasure of clean and responsible sailing immediately accessible.

Obviously, this operation is easier and quicker to do on new boats just out of the boatyard whose gel coat doesn't need to be carefully degreased so that the MacGlide adhesive film acts perfectly. MacGlide is just as good for hulls previously coated with underwater paint, but they must be stripped to expose the gel coat first, which takes more work. However, the boat will still spend less time in dry-dock than with conventional anti-fouling paint.



Fishing boat (Croatia)



Sailboat - Southampton (United Kingdom)

Immediate benefit of the MacGlide solution: the health of the workers

who apply the protective coating and this is a crucial point in the eyes of the AderNautic managers. MacGlide being factory coated, there are no longer any problems of the overspray of pollutants and VOCs, of risks related to solvents, not to mention the hazards of using toxic underwater paints, including minor effects like fevers, irritation of the respiratory tract, stomach troubles, etc. And more serious ones such as cellular lesions...

MacGlide provides antifouling effectiveness for a period of at least five years. Five years during which the pros of the AderNautic network can take charge of its maintenance, on condition of visually examining or checking the coating after 12 to 14 months of immersion. The application of the strips and

the special MacGlide Top Coat varnish allow local repairs to be done if need be, in case of heavy abrasion or tearing.

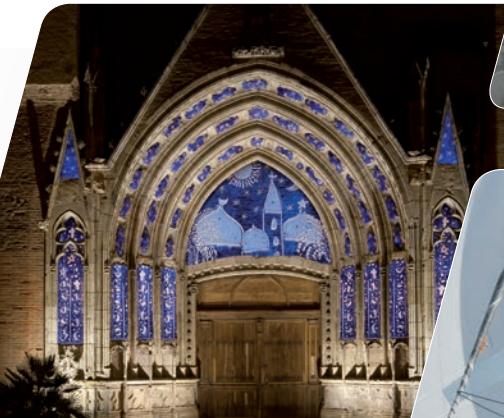
Despite its high mechanical resistance, MacGlide is not designed for transportable units intended for repeated grounding or beaching and therefore subject to intense and frequent abrasion.

Because there are no biocides, the MacGlide silicone film does not prevent the formation of biofilms which are the precursors to the colonisation of the hull. However, the heaviest elements drop off from their own weight and the hull is self-cleaning at a critical sailing speed of 5 knots. Its everyday maintenance only requires a sponge or a soft brush and does not generate any pollution.

*In the air, at high speed,
on buildings or underwater...*

Mactac,

the art of the formula
that sticks



On the stones of a gothic 14th century cathedral, the fuselage of an Emirates Airlines Boeing or Airbus aeroplane, the bodywork of cars, the sides of high speed trains, the anti-graffiti coatings of trams and underground trains, Mactac successfully meets all the most difficult challenges head-on in situations where an adhesive vinyl film works better than paintwork.

This is especially the case for modern anti-graffiti media, for instance, on taxis in Germany.

By law, they must be a specific beige colour which means that the owner must have them repainted in order to be able to resell them.

If Mactac adhesive films are used to dress half of all German taxis, it is because this Car Wrapping solution solves the problem. When the film is removed, the paintwork looks like new with no UV damage, scratches, cracks or other deterioration. This interesting application has led us to look at other areas such as nautical applications.



Taxi covering (Germany)



Mactac knows the world of boating.
A world leader in high performance industrial adhesive films, known everywhere in the visual communications sector (banks, shops, etc.) Mactac approached the boating sector with a solution for customising boats to change them from their uniform white colour. These days, the TuningFilm line offers 70 colours and textures which allows boats to be set apart with the racing trimaran Ocean Addict **and the skipper Eric Defert as ambassadors.**

Mactac films have appeared in The English Transat 2016 with Gilles Lamiré, winner of the Multi50 and in the Tour de France sailing race under the colours of Dynamique Homkia. Fourteen of the participants of the Barracuda Tour organised by Bénéteau, out of La Rochelle, are dressed in films printed by ATM Communication. Speaking of Bénéteau, for several years, Mactac has supplied decorative stickers for the boats of this world leading French boatbuilder. Another example of collaboration is with Outremer on deluxe catamarans.

**At Mactac, the search for creativity
 - see the Mactac Challenge Awards -
 matches the love for a challenge.**

The challenge of a biocide-free adhesive film antifouling system to put an end to this paradox of polluting the sea which we love, was not the easiest in the world.

On the adhesive film side, Mactac has the know-how and always comes up with a formula that sticks, whether its for resisting air flows around a Boeing aeroplane at 12,000 feet or the friction of water under a hull. On the anti-stick side on the other hand, the Eureka moment came five years ago through a partnership with PPG with the development of a non-toxic silicone layer which would provide the durability for MacGlide. Gamble won! Nowadays, integral Boat Wrapping with Mactac is a real possibility. And along with this come many potential benefits.

MacGlide

Eight benefits in one
“clean” solution



Hull cleaning of a motor boat - Nieuwpoort (Belgium)



Ecological: preserves the marine environment and human health

Non-erodible in water and biocide-free, MacGlide is also non-hazardous to the professional who applies it.



Unmatched ease of maintenance

A simple sponge or a soft brush allow any biofilms to be removed before the hull is colonised. The absence of a toxic active ingredient means that the operation can be done anywhere.



Self-cleaning

The fouling comes off by itself when the boat sails often and with a speed of more than 5 knots.



Effective: in all seas

The product has low sensitivity to the biological variables of the marine environment.



Superior durability: up to five years

Compared to six to eight months for toxic anti-fouling agents currently on the market.



Drag lowering

It provides a fuel savings estimated to be 5 to 6%.



Reduction of the risk of osmosis

The MacGlide film complex is impermeable to water: this brings unprecedented protection to the below the waterline gel-coat with a humidity content much lower than conventional solutions.



Financial savings

On maintenance costs, spread over the five years of the effectiveness of the antifouling coating: refitting and its costs are minimal.



Graphic design: Nathalie LANDOT - Photos : shutterstock, Mactac - 2016

mactac 



GIANT STRIDE GRAPHICS

ANTI FOUL WRAPS - INTERIOR STYLING WRAPS - HULL WRAPS - NAMES & STRIPES

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