

Oceanic+ series®

Excellent value antifouling
for demanding sailing routes



Oceanic antifouling range

High idle days and flexible trading in demanding fouling conditions

Our Oceanic antifouling series gives vessel owners and operators an efficient solution for demanding trading conditions by providing effective fouling protection and high idle days without a significant investment cost.

Proven since 2012, the range has now been reformulated to deliver even higher performance, better control of the leached layer and exceptional mechanical strength. It also has higher volume solids, an increased dry film thickness per coat and lower VOCs – to reduce your costs, time and emissions during application.

With dedicated versions for each trading pattern, you know our Oceanic coatings will perform throughout the entire docking interval, even in fouling aggressive waters and when slow steaming.

Up to 30 idle days

Speed loss 5.5 per cent

Low VOC

Hempel’s Oceanic series at a glance

Product	Activity level	Speed	Water temperature	Service period	Segment	Maximum idle days	Volume Solids
Oceanic Protect+	>50%	>9 knots	All	60 months	Maintenance Newbuilding	28	64%
Oceanic Flex+	<50%	<9 knots	All	60 months	Maintenance Newbuilding	30	64%

Why choose our Oceanic series

High idle days and trading flexibility

In challenging market situations with unpredictable trading, slow steaming and long idle periods, flexibility is key. Our Oceanic series gives you high idle days and trading flexibility, even in the most demanding operating conditions.

- Dedicated versions for each trading pattern
- Idle period of up to 30 days
- Up to 60-months service intervals with a maximum speed loss of 5.5 per cent

Proven fouling protection in tough conditions

Even modest micro-fouling such as slime can result in increased fuel consumption. Fouling depends on a variety of factors, including water temperature, nutrients, light and vessel speed. Our Oceanic antifouling range gives you proven fouling protection in all these diverse conditions.

- Proven track record since 2012
- Powerful biocide package against animal fouling, algae and slime
- Based on zinc carboxylate technology and incorporating Hempel's patented Smartfibre technology for predictable polishing and exceptional mechanical strength
- Excellent colour retention

Minimise your costs

Budget control is essential in an increasingly competitive market. With a low investment cost, our Oceanic antifouling coatings help you reduce dry dock expenses.

- Reduced film thicknesses and high volume solids reduce paint consumption
- High maximum DFT per coat means fewer coats are needed
- Reduced VOC emissions

Smartfibre technology reinvented

We've improved our patented Smartfibre technology to deliver a stronger, smoother hull throughout the entire service interval.

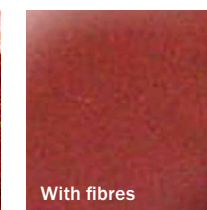
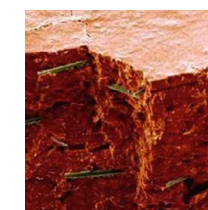
Fibres have been used in all our antifouling coatings for over 20 years. They provide exceptional coating film cohesion to ensure best-in-class mechanical strength throughout the coating's service life. Now, we've taken our patented technology one step further.

Our new Oceanic series contains 20 per cent higher fibre content. By maintaining a level of cohesion that can't be achieved in non-fibre containing coatings, the increased

fibre content enabled the reformulation of the coating to improve its hydrophobic characteristics – and reduce the leached layer.

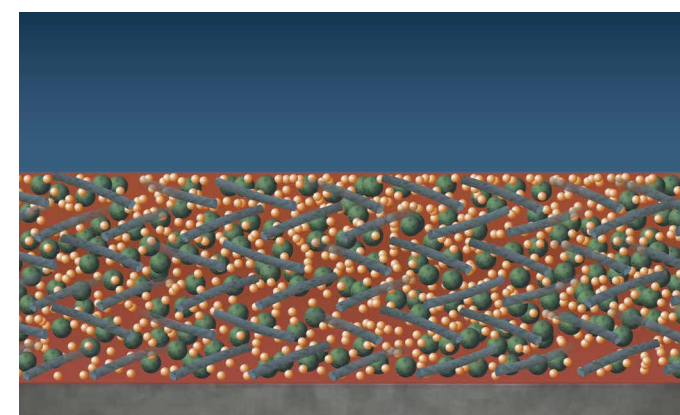
Additionally, fibres are evenly distributed parallel to the surface throughout the entire film thickness, enabling a uniform removal of the leached layer as the vessel sails. The result is better leached layer control, controlled polishing and a smoother fouling-free hull throughout the service period.

Hempel's microfibre technology

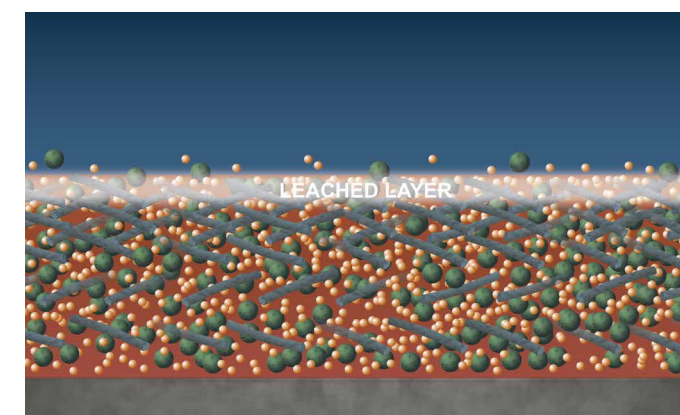


The microfibres run close to the surface to ensure best-in-class mechanical strength.

Coating condition after exposure to a cyclic blister box test: No failures were observed on the panel reinforced with microfibres. The coating without microfibres showed severe cracking.



Fresh antifouling coating before exposure to seawater. The Smartfibres run parallel to the surface.



The antifouling coating after exposure to seawater. As a result of the biocide release, a leached layer starts to form. Water flow and the parallel structure of the fibres facilitates the smooth and uniform removal of the leached layer, ensuring a well-controlled polishing rate throughout the coating's entire service life.

You're in safe hands

Enjoy the benefits of Hempel's world-leading expertise and global presence.

From the frozen expanses of the Arctic to stormy southern seas, Hempel coatings can be found on ocean-going vessels of all types, protecting steel from corrosion above the waterline and ensuring maximum fuel efficiency below it. We have supplied marine coatings for over 100 years and today are one of the marine industry's most trusted suppliers.

Global service and efficiency

From the ballast tanks to the hatch covers, we can supply a reliable coating solution that will prove its worth at sea and increase your efficiency in dry dock. When it comes to hull protection, we understand the unique requirements of every vessel and can put together a comprehensive coating and service package for every need and budget. And, with a global network of factories and R&D centres strategically located near key shipbuilding locations, you know that we will always supply you with the coatings you need, when you need them.

At Hempel, we say that trust is earned. We earn this trust every day – through our expert technical services and the superior performance of our coating solutions.



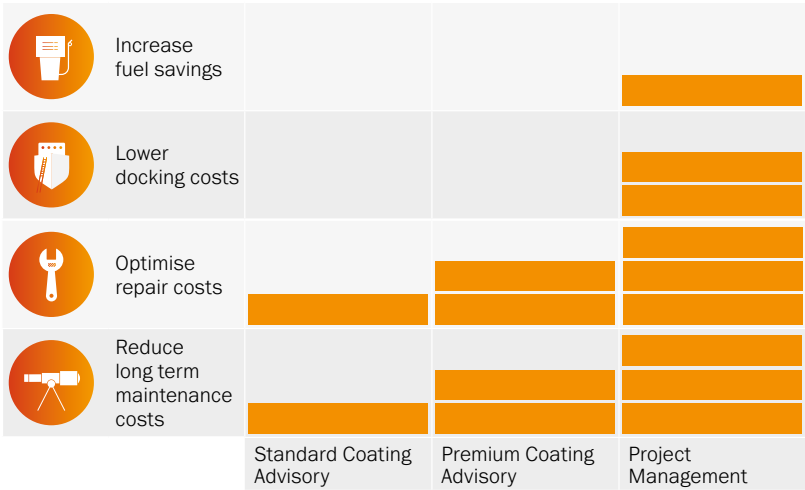
Your vessel, our expertise – a performance partnership

For the ultimate in coating performance and project efficiency, choose Hempel Services.

Coating advisory services

- Standard Coating Advisory**
We offer a moderate degree of onsite monitoring and project oversight.
- Premium Coating Advisory**
We offer complete coating application oversight and advice during the entire project.
- Project Management**
We offer complete coating application management and other essential services during a project.

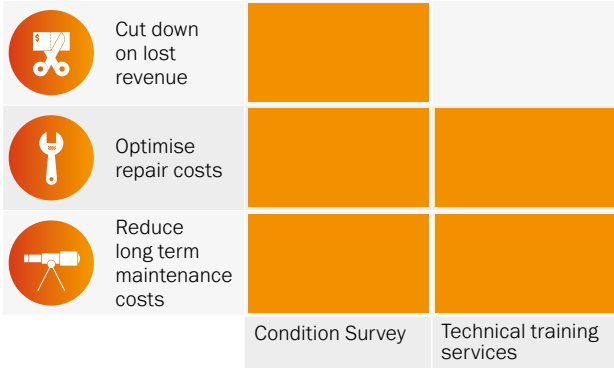
Service value chart



Specialised services

- Condition Survey**
We evaluate your asset's structure and coating system and help plan future maintenance work to extend asset lifetime and reduce maintenance requirements.
- Technical training services**
We provide a number of training courses for applicators, supervisors, technical staff and quality assurance personnel to ensure improved efficiency and quality.

Service value chart



Why use Hempel Services?

- | | | | | |
|--|--|---|---|---|
| Reduce long-term maintenance requirements <ul style="list-style-type: none">• Reduced total cost of ownership• Longer service intervals• Less maintenance across the vessel's lifecycle• Extend asset lifetime | Lower docking costs <ul style="list-style-type: none">• Optimise coating consumption• Lower surface preparation costs• Fewer days in dry dock | Increase fuel savings <ul style="list-style-type: none">• Lower fuel bills during docking intervals• Higher reduction in speed loss• Higher fuel and emissions savings | Optimise repair costs <ul style="list-style-type: none">• Optimise your maintenance budget• Reduce rework• Reduce dock rents | Cut down on lost revenue <ul style="list-style-type: none">• Fewer off-hire days• Optimised curing time• Efficient surface preparation and coating application |
|--|--|---|---|---|

For more information, visit services.hempel.com

As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the protective, marine, decorative, container and yacht industries. Hempel employs 6,700 people in 80 countries and has 28 factories, 15 R&D centres and more than 150 stock points worldwide.

Across the globe, Hempel's coatings protect surfaces, structures and equipment. They extend asset lifetimes, reduce maintenance costs and make homes and workplaces safer and more colourful.

Hempel was founded in Copenhagen, Denmark in 1915. It is proudly owned by the Hempel Foundation, which ensures a solid economic base for the Hempel Group and supports cultural, social, humanitarian and scientific purposes around the world.

Hempel A/S

Lundtoftegårdsvej 91
2800 Kgs. Lyngby
Denmark

Phone: +45 4593 3800
E-mail: hempel@hempel.com