

Intersleek_®1100SR

Groundbreaking patented slime release fluoropolymer technology

AkzoNobel

Intersleek_®1100SR,the first patented micro fouling-focused fluoropolymer based slime release technology specifically designed to tackle the impact of slime.

The proof is in the polymer

The new patented fluoropolymer in Intersleek_®1100SR has been developed by enhancing the slime resistant polymer groups used in earlier generations of Intersleek_®. The tailored surface chemistry of this new technology specifically influences and resists the adhesion and settlement of organisms that make up slime colonisation. It is necessary to create a surface that limits the capability of the extra cellular polymeric substances (EPS) to adhere and spread. This is achieved by modifying the surface energy of coatings to become more hydrophilic and yet maintain a hydrophobic portion. The surface of Intersleek_®1100SR remains amphiphilic yet has a more hydrophilic characteristic.



During the technology development process we enlisted the help of external experts at Newcastle University, University of Birmingham and Sultan Qaboos University, to conduct experimental work on a range of coatings. This independent data, combined with our in-depth research have proven that Intersleek_®1100SR is significantly better at deterring the settlement and release of slime compared to other foul release products, and displays reliable foul release performance against weed, barnacles and other macro fouling organisms.

Slime Release test results from Hydrodynamic Flume



Intersleek has real and verifiable benefits to the environment and shipping

Intersleek_®1100SR, the ground-breaking innovation which delivers outstanding macro and micro fouling control with improved static resistance, even in warm waters and is suitable for slow steaming. Slime that does build up during static periods is released by the movement of the ship through water and at considerably lower speeds than earlier generation foul release coatings. As a result vessels can achieve reduced drag, improved fuel efficiency and reduced CO₂ emissions.

Intersleek_®1100SR allows ship owners and operators to maintain performance throughout the full docking cycle for all commercial vessels.

The key benefits of this technology are: Independently verified fuel and emissions savings of up to 9%

Verified fuel savings in comparison to biocide containing self-polishing copolymer (SPC) antifoulings. This also means that there is up to 9% reduction in CO_2 emissions.

With over 5,500 coating applications worldwide, Intersleek_® reduces environmental impact and saves fuel for ship owners

Intersleek_® is biocide-free, which results in no leaching of biocides into the sea. This offers cost advantages at the next drydocking on waste treatment and disposal, plus enhanced environmental profile. Intersleek also has higher volume solids and lower required film thickness than SPC systems. Only a single full coat is required every five years through a vessels lifetime, therefore paint consumption is significantly reduced – further enhancing your environmental profile.

As a result of the reduction of environmental impact, ship owners can earn valuable carbon credits

On top of the substantial fuel savings, conversion to Intersleek coatings also makes the vessel to generate carbon credits.



Proven long-term performance

This container ship was coated with $\rm Intersleek_{\odot}1100SR$ and showed exceptional performance after 5 years in-service.

- Only light slime
- No macro fouling, such as weed or barnacles

These pictures were taken before high pressure fresh water washing.



This LNG vessel was coated with Intersleek_®1100SR together with a test patch of competitor foul release coating. An inspection after 3 years in-service showed excellent results compared with the other coating, specially the slime release performance.



Competitor foul release coating after 3 years

Intersleek_® 1100SR after 3 years



We got an average of 9 -10% fuel savings after application. Good for the environment, good for the business.

Dario Bocchetti, Corporate Energy Saving Manager for Grimaldi Group

These pictures were taken before high pressure fresh water washing.

Grimaldi has over 40 vessels coated with Intersleek and were one of the pioneers to try this technology



Proven static performance

Exquisite, owned by Excelerate Energy was converted to Intersleek_®1100SR. After 19 months static period in the high fouling challenge middle east region, the areas coated with Intersleek showed minimum fouling compared to areas coated with the other coating.

Intersleek®1100SR after 19 months static



Other coating after 19 months static



Inspection <u>after five weeks static at</u> <u>Ras Laffan, Qatar</u>, after application of Intersleek_®1100SR, showed the vessel to be in good condition with only very low slime levels and no macro fouling.

> Michael O'Rourke, LNG Fleet Manager at OSG Ship management (UK) Ltd



Gold Standard Intersleek_® Carbon Credits are generated from an award-winning pioneering methodology

Gold Standard

Gold Standard Carbon Credits

Intersleek_® 1100SR is eligible for the generation of Gold Standard carbon credits following the award-winning AkzoNobel methodology. For every tonne of avoided CO_2 emissions, the vessel operator can be awarded a single carbon credit after converting to Intersleek_® 1100SR.

International is the brand of AkzoNobel's Marine and Protective Coatings business. AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals.

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