

selektope®

The unique ingredient for marine coatings with
a bio-repellent mode of action.



RETHINKING

Selektope® is an approved active agent for marine coatings that delivers superior antifouling performance for hard fouling prevention. Offering a unique bio-repellent mode of action, Selektope® protects ship hulls from barnacle settlement by temporarily stimulating the barnacle larvae's octopamine receptor. This keeps the larvae in swimming mode, rendering them unable to attach to the hull.

FOULING PREVENTION

Barnacles are a species that pose great threat to vessel operations and maintenance due to their rapid accumulation on wetted surfaces. Present in all marine and brackish waters, these crustaceans, once established, attract other barnacles to form mass colonies. When attached to a ship's hull, their shells cause microturbulence, significantly increasing drag and fuel consumption as a result.

Biofouling – a growing problem

Average global water temperatures are rising. Ships are increasingly idle in biofouling hotspots. There is a growing regulatory movement against the transportation of invasive species by biofouled ships. Barnacles, once attached have to be mechanically removed - creating huge cost for the ship operator.

The issue of biofouling is becoming an increasingly dominant problem for shipyards, with newly launched vessels laying idle in warming waters suffering the effects of intense fouling during outfitting. This accumulation of biofouling on the hull can impact both the newly applied coating and the performance of a newbuild ship leaving the yard. Selektope's® anti-barnacle technology that ensures both superior static and in-service fouling prevention performance is the only answer.

Futureproofing ships

Ship owners must futureproof their ships by selecting marine coatings that contain Selektope® to ensure that good fouling prevention is consistently delivered for ships with differing activity levels, whether in constant active service, idle for long periods of time, or at risk of fluctuating between the two during a ship's lifetime.

A revolution in antifouling innovation

I-Tech AB has dedicated over a decade of research and development to developing a bio-tech approach to fouling prevention. The resulting organic, non-metal compound, Selektope®, delivers unrivalled efficacy at minute concentrations, yet within the limits of the most rigorous risk assessment bodies in the industry.

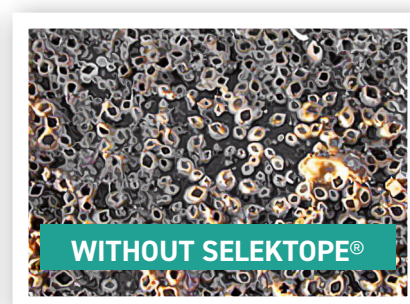
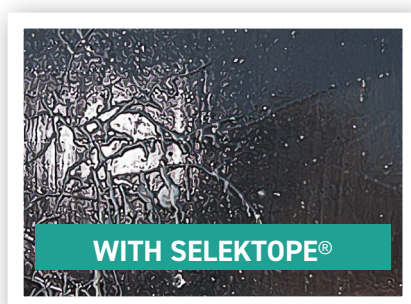
When present in marine coatings, Selektope® prevents barnacle larvae from settling on a ship's hull (and other structures) by temporarily inducing hyperactivity in the barnacle larvae. Selektope® works by stimulating the octopamine receptor of the barnacle larvae activating swimming behavior. The effects of this neurological scrambling are reversible, with the larvae returning to normal functional capacity shortly after encountering Selektope®.

Less is more

Selektope® has, in the hands of leading paint makers, proven its position as a core ingredient in antifouling coatings, delivering remarkable fouling protection even in the most demanding situations. Performance is delivered at only a few grams per litre of paint, leaving room for differentiation and innovation at the paint maker level to optimize hull performance, while sharply reducing biocide loadings.

Versatility delivered

Selektope® is approved for use in the major regions for commercial shipbuilding and repair. A comprehensive regulatory file also enables Selektope®, as one of few substances, to be applied on leisure boats as a DIY product. Selektope® is compatible with all other biocides.



Comparative results after 7 months in static conditions on the west coast of Sweden.



For Ship Operators

- Superior static performance
- Unique, bio-repellent mode of action with non-fatal effect
- Cleaner hulls, reduced need for hard scrubbing
- Low environmental loading
- Ultra-low leaching
- Improved fuel saving

For Paint Makers

- Efficacy delivered at 0.1% w/w
- Compatible with existing formulations and active agents
- Offers ultimate freedom to formulate
- Flexible enough to boost copper-based formulations, powerful enough to replace copper

CASE STUDY - TANKER 32 MONTHS

Vessel specifics: 2010-built, 46,067dwt IMO II chemical and products tanker 'Calypso'

Operating pattern: Global - more than 50% of the vessel's operating time is in biofouling hotspots with > 25°C (up to 32°C) temperatures.

Coating type: Copper-free, Selektape based anti-fouling coating applied to vertical sides

Application date: November 2015 (during 5-year dry-dock)

INDEPENDENT PERFORMANCE RESULTS:

Total added resistance 7%

(a benchmark new vessel would see an increase in resistance of 10-20%.)

Hull added resistance 6%

Propeller added resistance 1%



CASE STUDY - TANKER: 12 MONTHS

Operating pattern: Very low activity

Geography: Tropical waters off Japanese coast

Test patch: Copper-free, Selektape-based anti-fouling coating

Main hull: Traditional copper-based anti-fouling coating

RESULTS:

The main hull is heavily fouled with both macro and micro fouling, leading to significantly increased fuel consumption when moving. In contrast, the test patch is clean from fouling

Compliance

Selektope® conforms to IMO guidelines for antifouling coatings and is in line with global regulatory schemes. Selektope® has received approvals in all leading markets for new builds and dry-docking including China, South Korea and Japan. In the EU, Selektope® has received UK HSE recommendation for approval. For Africa, South America and the rest of Asia, no registration is needed for the use of Selektope®.

The company behind Selektope®

Selektope® is sold and marketed by I-Tech AB, a public held bio-tech company based in Gothenburg, Sweden. Since 2006 I-Tech has successfully transformed the scientific invention into a commercially ready and available antifouling agent. I-Tech holds all proprietary rights to Selektope® as well as global regulatory files for its use in the field of marine antifouling.

Contact

If you would like to find out more about Selektope®, please email us via info@i-tech.se and a member of our team will contact you. Alternatively you can call +46 31 788 05 60, visit www.selektope.com or www.i-tech.se

