

Hripa ehf

Hripa Sweden AB

BaSiliCoat® is an environmentally friendly antifouling coating for use on pleasure boats, ships and in marine aquaculture



Antifouling Marine Coatings

The Problem of Biofouling in Sea

At least 1.700 marine organisms, like algae, shells, worms, sponges and more, must glue themselves to surfaces to live.
This is called biofouling.



BaSiliCoat® - safe for the environment

Therefore methods and chemicals that prevent biofouling have been used for long time.
Most antifouling products are based on chemicals which are toxic to life or bad for the environment.

The Market Opportunity

Biofouling causes friction and slows down sailing of boats up to 10% and can increase fuel consumption as much as 40% to keep the same speed.

Our solution - BaSiliCoat®

- Made of environmentally safe grease and alkaline silica
- Contains no toxic or environmentally damaging chemicals
- No biocides, heavy metals, silicones, or other non-biodegradable organic compounds normally found in standard antifouling paints



Studies done in sea 2019-2022

- Test on cage nets and fiberglass plates were done at Arctic Fish aquaculture company in Dýrafjörður NW-Iceland 2019-2021.
- Picture on right shows how aggressive the growth can be on untreated fiberglass plates after 8 months in the sea



Nets after 5 months in sea - closeup

- Untreated net below
- Net treated with BaSiliCoat®



Treated boat was over 1 year in sea

- The treated body was clean with no mussels or macroalgae
- Only few barnacles were seen that fell off by touching
- The untreated motor was covered with slime, many large barnacles and some stalks of macroalgae



Test on 40 boats in Sweden 2022

- Pleasure boats harboured in the West-, South-, and East coast of Sweden used BaSiliCoat® in the summer
- The results were very promising and 80% of the boat owners were satisfied
- A product version made by a simpler method was used on some of the boats.
- This did not work well and it resulted in growth of barnacles on those boats
- All boats that were treated with original more complex product, returned clean after the summer season



Sailboat checked on 12. sept. 2022

- After 5 months in sea near Göteborg, where growth is aggressive
- The bottom of the boat was clean and no fouling growth was seen

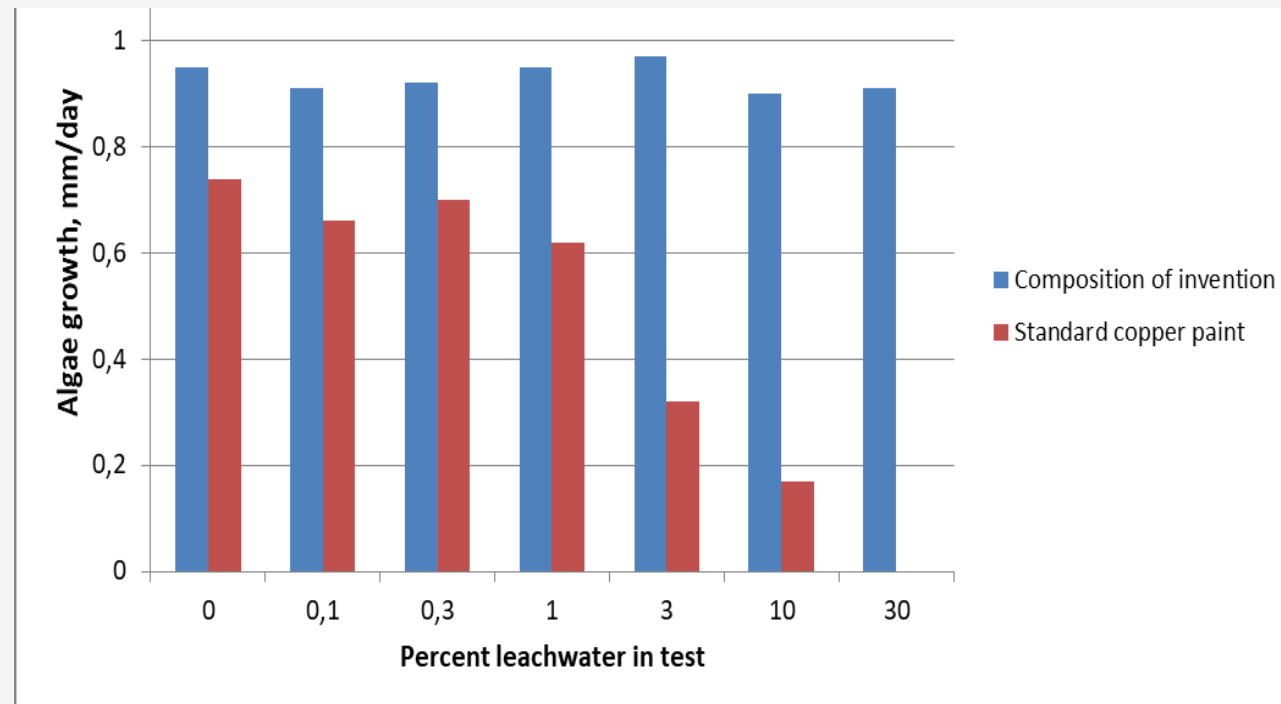


Biosafety of antifouling paints

- Biosafety of antifouling paints is of major concern
- EU harmonized product approval process ECHA 2020
- Measure release of toxic compounds, effects on non-target organisms and environmental risk assessment
- If a product falls under EU Biocidal Product Regulation no 528/2012 - BPR it must only contain approved chemicals and must obtain a marketing permit for each product before selling in EU or EEA countries

BaSiliCoat[®] was tested by Chalmers

- Standard toxicity test on algae *Ceramium tenuicorne*
- No toxic effect of >30% BaSiliCoat[®] leach water
- Toxic effects by >1% of standard copper paint leach water



Biosafety tests on salmon

- The Iceland Marine Research Institute tested effects of BaSiliCoat® on salmon growth
- About 175 fish with average start weight of 1.35 kg were divided in four cages
- Two each with treated and untreated nets
- Fish was weighed after 75 days at 10°C
- The weight gain was 66.5% in untreated cages
- The weight gain was 65.5% in treated cages
- Conclusion: BaSiliCoat® treatment has no effect on survival and growth of salmon



IP protection

- Patent titled „Environmentally benign antifouling coating“ no EU9125 filed in Iceland on 13. sept. 2019
- Inventor is Hreggvidur Davidsson. All rights are assigned to Hripa ehf
- PCT for international protection no. WO2021048880 filed on 13. sept. 2020
- US no 17/753,667 filed 10. March 2022
- European national no EP20776242.8 filed 8. April 2022
- BaSiliCoat® trademark no VO126249 filed 8. June 2022



BaSiliCoat® is biocide-free

- BaSiliCoat® has been evaluated by competent authorities in Sweden and Iceland
- Statement from the Swedish Chemicals Agency:
- “I can agree that one could consider the product as physically acting – in that case, you do not even need to apply for approval”
- Statement from the Environment Agency of Iceland:
- “Since the product is based on physical effects, it is not considered a biocidal product according to EU regulation 528/2012. The product can therefore be available on the Icelandic market without marketing restrictions



The Opportunity - Summary

- Pressing need for more environmentally safe antifouling
- Our product contains no toxic or unsafe chemicals
- Proven technology and sound scientific background
- Documented evaluation and expert opinion from the Swedish Chemicals Agency and the Environment Agency of Iceland has been obtained
- Marketing authorization or permit is not required
- All ingredients are widely available commodity
- Patent pending in Europe and USA



Thank you for your attention

For further information go to our website; hripa.se

Or contact at info@hripa.se

