

## TECHNOLOGY OFFER

# ANTIFOULING COMPOUND, METHOD AND USES THEREOF

The present disclosure relates to a synthetic antifouling compound, compositions, methods and uses thereof. The present disclosure further relates to the use of said compound as antifouling agent and compositions thereof, such as coatings and/or paints for surface protection of underwater surfaces.

### KEYWORDS

Antifouling

Biofouling

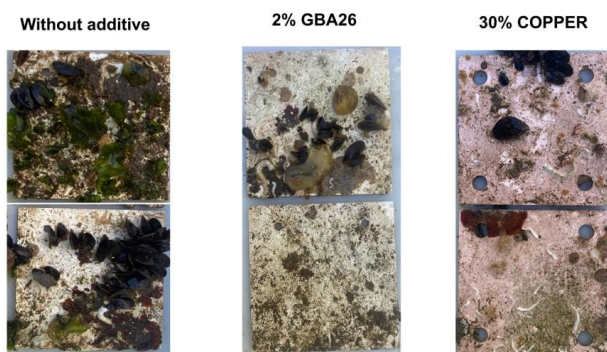
Copper-free coatings

Surface integrity

Eco-friendly agents

## DESCRIPTION

Biofouling stands as a severe issue to numerous industrial sectors due to costly high maintenance and increased fuel consumption. Also, it contributes to the emission of more greenhouse gases, due to an increase in the ship's weight caused by the organism-augmented drag friction. The currently used anti-adhesion techniques imply toxic biocides (banned within the EU) that cause an even greater environmental burden to marine life. In addition to inhibiting the settlement of biofouling species without causing mortality, new anti-fouling agents should also be compatible with commercial marine coatings.



Biofouling colonization of coated panels with maritime polyurethane-based coatings after 30 weeks of immersion in the sea.

This invention provides a nature-inspired and eco-friendly solution to the underwater adhesion of certain organisms (bacteria, algae, invertebrates) on surfaces known as biofouling, which causes deterioration, systems clogging in boats and contamination.

## ADVANTAGES & INNOVATIONS

Nature-inspired, non-toxic antifouling agent to prevent organisms' underwater adhesion. The invention is compatible with commercial marine coatings, which ease the commercial availability of this underwater surface-protecting agent.

Application in antifouling paints or varnishes composition for protecting underwater surfaces, in particular surfaces submerged in a marine environment.

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### INTELLECTUAL PROPERTY RIGHTS

#### Patents status

International Patent Application via PCT [WO2023053059](https://patents.google.com/patent/WO2023053059)

Priority date: 30.09.2021

Pending in EU



### STAGE OF DEVELOPMENT

TRL5 - Technology validated in relevant environment



### COOPERATION OPPORTUNITY

Licensing agreement.

R&D partnership.



### RELEVANT PUBLICATIONS

Neves AR, Pereira D, Gonçalves C, Cardoso J, Pinto E, Vasconcelos V, Pinto M, Sousa E, Almeida JR, Cidade H, et al. Natural Benzo/Acetophenones as Leads for New Synthetic Acetophenone Hybrids Containing a 1,2,3-Triazole Ring as Potential Antifouling Agents. *Marine Drugs*. 2021; 19(12):682. <https://doi.org/10.3390/md19120682>



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