



Antifouling in recreational boating

Guidelines for a safe and environmentally sound use

For our environment

**Umwelt
Bundesamt**

Background

This leaflet provides brief information on the most important legally binding regulations **[Mandatory]** for a safe and environmentally sound handling of biocide-containing antifouling coatings and gives further non-binding recommendations for handling **[Exemplary]**.

Due to the compact format, not all aspects concerning the handling of antifouling products can be presented. Only the topics of product selection, product application and boat cleaning are addressed in this flyer. The German Environment Agency has published a more extensive guideline „Antifouling im Wassersport – Was ist das Beste für Mensch, Umwelt und Ihr Boot?“ for all other aspects concerning the handling of antifouling (including disposal), which provides additional detailed information to optimally prepare you for the next boating season.

You can view the publications
on the following website
www.umweltbundesamt.de



What are antifouling products?

Antifouling products are used to protect the hull from fouling. These products often contain biocides (e.g. copper), which are released from the coating and kill or damage the fouling organisms (e.g. algae or mussels). In this way, the biocides are released into the surrounding waters, where they may also harm other aquatic organisms.

Alternatively, biocide-free antifouling products are available such as special surface coatings, which minimise the formation of fouling through physical properties. Mechanical cleaning systems, tarpaulins and boat lifting systems can also be used to protect the boat hull from fouling.

Selecting an antifouling product

Mandatory

- Biocidal antifouling products may only be sold if they are **registered** or already **authorised**. This is indicated by a:

Registration number (e. g. N-12345) or

Authorisation number (e. g. DE-oo12345-21)

- **AND** the products are still marketable at the time of sale. The marketability („marketable until“ or „end of authorisation“) should always be checked under the following links:



- Organotin compounds (e. g. TBT), Cybutryn/Irgarol®, Terbutryn and Diuron are prohibited as active ingredients in antifouling products.
- Boats treated with Tolyfluanid or Dichlofluanid will not be allowed to operate in inland waters in the future – if possible, avoid these active ingredients today!
- If there are regional regulations for your area, do not use an antifouling product that is not permitted in your area.



Exemplary

- ▶ Check whether a biocide-containing antifouling coating is necessary! If your boat ...
 - ▶ is used regularly,
 - ▶ is only used in fresh water,
 - ▶ is only in the water during the season and then mechanically cleaned,
 - ▶ is only temporarily in saltwater and mechanically cleaned after leaving the saltwater,you may be able to avoid the use of biocidal antifouling.
- ▶ If possible, choose a biocide-free antifouling system, for example:
 - ▶ a cleanable hard coating (including regular cleaning),
 - ▶ a non-stick coating or non-stick film,
 - ▶ a boat lifting unit, stationary hull protection device or tarpaulin or other technical solution.
- ▶ If a biocide-containing antifouling coating is desired or necessary, choose a product that is designed to suit your area and your individual use.



Use of biocidal antifouling



Mandatory

- ▶ A biocide-containing antifouling product may be used as long as it is marketable. The usability can be researched based on the registration or approval number.
- ▶ Please take note of the risk mitigation measures printed on the product or the enclosed information.
- ▶ Carry out application, maintenance and repair activities only on an impermeable solid ground or on soil covered with an impermeable tarpaulin.
- ▶ Follow the instructions for use and all other safety instructions.



Exemplary

- ▶ Wear long-sleeved clothing, gloves and, if necessary, a dust mask during application, maintenance and repair activities.
- ▶ Please wait as long as possible before applying a new antifouling coating.
- ▶ Only apply as much coating as recommended by the manufacturer.
- ▶ Apply the new antifouling coating in a different colour than the old coating. The colour change will indicate whether and where the antifouling coating needs to be renewed.
- ▶ The washing or boat cleaning area is not a suitable place for applying or removing antifouling coating.
- ▶ Antifouling products that are applied by brush or paint roller are preferable.

Cleaning of boat hulls



Mandatory

Boat is lying dry

- ▶ Wastewater from hull cleaning activities must not enter the environment untreated (without official permission). If necessary, observe the municipal wastewater regulations.
- ▶ Removed hard fouling and antifouling coating residues must be properly disposed of as waste. It is prohibited to dispose of these in surface water.
- ▶ The cleaning of hulls with biocide-containing or biocide-free coatings on unpaved ground is subject to permission. An exemption exists if it is ensured that washing water and removed fouling do not enter the environment but are disposed of.
- ▶ When hull cleaning work is carried out on paved, impermeable surfaces, the wastewater must be collected and disposed of safely.
- ▶ Hull washing and cleaning work on the slipway is subject to permission.

Boat is lying in water

- ▶ The cleaning of boats with biocide-containing coatings is subject to permission.
- ▶ When cleaning biocide-free coatings
 - ▶ Soft fouling (biofilm, for example from algae and slime) may be discharged into surface water,
 - ▶ Hard fouling (encrusting fouling, for example from mussels and barnacles) may only be removed with the permission of the competent water authority and must be collected and disposed of on land.



Exemplary

- ▶ The washing or cleaning area is not a suitable place for application, maintenance and repair activities.
- ▶ The use of high-pressure equipment is not suitable for hull cleaning, as it can damage the coating.
- ▶ Please inform other marina users or club members about what to consider when cleaning the hull.
- ▶ If your marina or club does not yet have a dedicated washing area, encourage the establishment of one. A joint use with other clubs/marinas can be beneficial and save costs.

Note: The responsibility for wastewater from cleaning of boat hulls lies with the federal states. Our interpretation of the regulations does not claim to be complete and binding.

Subject to permission in this context means that a permit must be issued by the competent authorities, usually the water authorities.



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