



The EU will protect

- You –
and children:
- - and the
environment:



Biocidal Products Regulation

Paintmakers' toolbox:

- Copper
- Copper thiocyanate
- Cuprous oxide
- Zineb
- Copper pyrithione
- Zinc pyrithione
- Dichlofluanide
- Tolyfluanide
- Tralopyril
- Medetomidine
- DCO isothiazolone
- Cybutryne



Biocidal Products Regulation – Stage 1: The biocides



May 2006 – 2014/2015: Review of antifouling biocides

Prediction: All biocides still supported will be approved – in theory

But:

- Two biocides used in yacht products have been withdrawn by the supplier. Too small market to maintain production.
- Coppers + 9 biocides expected to be approved, but only 1-4 organics may be approved for yacht products
- The protection goal was – at this stage - set outside the marina in order for products to pass the environmental risk assessment
- Biocides may be approved with considerable use restrictions (e.g. no spray application)
- No new biocides expected due to very high registration costs

Biocidal Products Regulation – Stage 2: The antifouling products



2018-2020: Review of antifouling products

Predictions for the human health risk assessment:

- Consumers do not consider the health and safety implications and do not follow basic advice.
- Antifouling paint is being applied without gloves by consumers wearing T-shirt and shorts
- Children play in boatyards and may touch newly applied antifouling paint – and children lick boats painted with antifouling

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- Gloves must be supplied with each paint container
- Reformulation to poorer – less effective –products
- No products for spray application



Biocidal Products Regulation – Stage 2: The antifouling products



2018-2020: Review of antifouling products

Predictions for the environmental risk assessment:

- If the protection goal will be set inside the model marinas – almost all products will fail
- Cumulative “assessment factors” and extreme conservatism
- Some member states will claim more sensitive environments and set their own stricter protection goals

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- Single biocide (copper) products only?
- «Mutual recognition» between member states will not work
- Poorer and fewer products – and more so in Sweden

MOTORTEST

HALVA FÖRBRUKNINGEN MED REN BOTTEN!

TESTADE AV

Staffan Westerling

Mellan en ren och beväxt båtbottnen skiljer oceaner vad gäller bränsleförbrukning, fart, acceleration och ljudnivå. Vi släpper ut massor av skit i naturen helt i onödan och det kostar både pengar och njutning.
Text och foto: Staffan Westerling

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Basics for environmental risk assessment

$$RQ_{\text{Product}} = \sum_{i=1}^n \left(\frac{PEC}{PNEC} \right)_i$$

PEC = Predicted environmental concentration

PNEC = Predicted no effect concentration

Acceptable risk if $PEC/PNEC < 1$



Environmental protection – Responsible use



Collection of paint waste

Waste storage and disposal system



Cleaning effluent:
Collection and settling