

3 CCR § 6190: Copper-Based Antifouling Paints and Coatings Regulation



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DPR Mission: “To **protect** human health and **the environment** by regulating pesticide sales and use, and by fostering reduced-risk pest management”

The copper in antifouling paints is considered a biocide and is under regulatory authority of DPR.

Regulatory Authorities

Federal Authorities

Federal Insecticide, Fungicide, and Rodenticide Act



Clean Water Act

California Authorities



Regulates:

Sale and use of pesticides

Discharge of water quality contaminants (pesticides)

Background on Regulation

- Sampled in 22 marinas in California
 - Freshwater (rivers and lakes)
 - Brackish water (San Francisco Bay area)
 - Saltwater
- Northern, Central, and Southern California
- Saltwater boat ranges:
 - 413–5000 boats
- Sampled Copper



Sampled in 2006

Results from DPR Monitoring

- Southern and Central California saltwater marinas had highest Copper concentrations
- Compared to 2 water quality parameters
 - Short-term (acute) level
 - Long-term (chronic) level
- Exceedances
 - 33% were over the acute level
 - 51% were over the chronic level



Triggered a series of regulatory actions

New Regulation

3 CCR § 6190: Copper-Based Antifouling Paints and Coatings

- No copper-based antifouling paint/coating shall be registered over a **leach rate** of $> 9.5 \mu\text{g}/\text{cm}^2/\text{day}$
- Any currently registered paint above that leach rate will be cancelled
- For recreational boats only

Effective: July 1, 2018

Existing Stock

- Paint manufacturers can no longer sell noncompliant paints to dealers/retailers or import them into CA
- Boatyards and retailers with non-compliant paint in stock have two years to sell or use (June 30, 2020)





Recreational Vessels ONLY

- Only applies to vessels for pleasure and/or residences
 - Includes vessels chartered to and for pleasure
- This does not apply to commercial vessels



Recreational vessels often spend long periods of time in poorly flushed marinas

Examples of Commercial Vessels

- Passenger Ferries
- Excursion Vessels 
- Tugboats and towboats
- Crew and supply vessels
- Fishing Vessels 
- Work vessels
- Government Vessels

Excursion vessels transports passengers for, but not limited to, dinner cruises; harbor, lake, or river tours, scuba diving expeditions; and whale watching tours

Fishing vessels INCLUDE:
Charter vessels used for hire by the general public and dedicated to the search for and collection of, fish for the purpose of general consumption

Not limited to this list!

Label is the law!

HEMPEL'S ANTIFOULING OLYMPIC HI 76600 - 50300

DANGER

Light red

KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT:

Cuprous oxide 48.79 %

INERT INGREDIENTS 51.21 %

Total: 100.00 %

*Metallic copper equivalent 43.07 % by weight

Contains petroelum distillates, xylene or xylene range aromatic solvents

Contains (US Gallon)

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**FOR USE IN COMMERCIAL OR NAVY SHIPYARDS ONLY. NOT FOR SALE FOR USE
OR STORAGE BY PRIVATE APPLICATORS OR MARINA PERSONNEL.
Only for use on commercial vessels. Not for use on recreational vessels. Not for
stationary structures.**

Important to follow
directions on label and
technical data sheet



Leach rate is calculated
using these parameters

This will help result in copper concentration reductions

How did DPR develop this leach rate?

- Used a model to determine the leach rate
- What leach rate will be sufficient to achieve that concentration or lower in California marinas?
- Included **Best Management Practice Cleaning** and Reduced Cleaning Frequency in the modeling.

CTR Chronic
Criterion =
 $3.1 \mu\text{g}/\text{L}$



The successful implementation of this
leach rate is **contingent** on BMP Cleaning
and Frequency

Local Solutions for BMPs

- Santa Barbara training and certification program
- Port of San Diego and LA Beaches & Harbors are implementing programs associated with BMPs
- Port of San Diego: All hull cleaning businesses are required to obtain a permit; includes a BMP plan template
 - No plume associated with cleaning



thelog.com

Local Solutions: LA Beaches and Harbor

- Hull Cleaning Ordinance passed in June, 2018
 - Certification process for best management practice cleaning
 - Pollution prevention and control devices designed to maintain and improve water quality
 - If the ordinance is violated 3 times in a 12-month period, that is a misdemeanor



Mitigation Recommendations

- BMP cleaning methods
- Hull cleaning be done no more frequently than every 4 weeks
- Increase boater awareness and acceptance of copper antifouling paint alternatives
- Foster new incentive programs and continue to support existing programs to convert copper-painted boat hulls to those painted with alternatives
- Site specific objectives for copper for certain marinas or harbors

Alternative Paints

- DPR makes no endorsement of any paint or pesticide.
- Biocide-free paints are outside the regulatory authority of DPR and thus are not regulated
- Evaluated by Port of San Diego and Institute for Research for Technical Assistance
- Northwest Green Chemistry in Washington State
- Marina del Rey Pilot Hull Paint Study



2019 DPR Marina Monitoring Study

- Determine the effectiveness of the copper antifouling paint regulation
- What are the concentrations of dissolved copper in selected, representative California marinas?



- Newport Harbor is on our list
- Working with the City/R8 to pick sites for sampling
- Continue to work with R8 to coordinate management of copper in marinas

Questions

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