



**IRTA**

*Institute for Research and Technical Assistance*

## **Alternative Application Methods for Nonbiocide Boat Hull Paints**

Copper biocide paints have been used historically to protect boat hulls from fouling. Many basins and marinas in California now have copper levels that exceed the toxic water quality limit. Alternative biocide and nonbiocide paints have been and are being tested as potential replacements for the copper paints used today. From an overall health and environmental standpoint, the best alternatives are nonbiocide paints. The common wisdom is that these paints need to be spray applied rather than rolled on which is the industry standard and that they need to be applied the first time to a stripped boat hull. Spraying paints and stripping boats are expensive and can raise the cost of a paint job considerably. This fact sheet describes alternative application methods that can help reduce the cost of a nonbiocide paint job.

### **How Are Boat Hull Paints Applied Today?**

Boatyards generally apply the copper paints widely used today to the boat hulls by rolling them on. In certain cases, where boaters want to race their sailboats, the paint is sprayed on the hull for a smoother result. Spraying is expensive, however, so boaters only choose this option if they are committed to racing. Boatyards also most often apply new copper paint over the old copper paint in a typical paint job. Eventually, after several coats of paint build up on the boat, the boatyard must strip the paint from the boat hull. Boaters are reluctant to have the boatyard strip the paint, however, because it is very costly and raises the cost of the paint job.



## How Are the Safer Nonbiocide Hull Paints Applied?

Most suppliers recommend that the alternative nonbiocide paints be applied by spraying rather than rolling. The nonbiocide paints are designed to present a smooth surface so that fouling organisms have a difficult time attaching to the hull. A smoother surface can be achieved by spraying so suppliers believe the paints will perform better if they are sprayed. Suppliers also believe that the nonbiocide paints will perform better if they are applied to a boat hull that has been completely stripped. Some of the nonbiocide paints contain silicon compounds and these materials do not adhere to other materials well. A fully stripped hull provides a smooth surface for adhesion. Boatyards may charge an additional \$600 for spraying the paint on and an additional \$2,500 for stripping the boat hull for a 30 foot boat. Since the cost for a typical copper paint job is about \$1,000 for a 30 foot boat, the cost of applying the nonbiocide paints is much higher.

## Have Alternative Application Methods Been Investigated?

In a project sponsored by EPA and Cal/EPA's Department of Toxic Substances Control (DTSC), the Institute for Research and Technical Assistance (IRTA), a technical nonprofit organization, tested and evaluated alternative methods of application for the nonbiocide paints that could reduce the cost of the paint job. The final report, entitled "Safer Alternatives to Copper Antifouling Paints: Nonbiocide Paint Options" describes the detailed results of the analysis. It can be accessed on IRTA's website at [www.irta.us](http://www.irta.us).



## Can Boaters Use Alternative Application Methods to Reduce the Cost of a Paint Job?

The alternative application methods IRTA tested and analyzed were rolling on the paint rather than spraying it on, and applying the nonbiocide paint over the copper paint rather than stripping the boat. IRTA applied nonbiocide paints to ten boats during the project and, in eight cases, the paint was rolled on. This did not seem to affect the paint performance and it reduced the cost of using the paint substantially. IRTA also worked with suppliers of three nonbiocide paints to apply the paint over copper paint on four of the ten boats. The suppliers have developed sealers that can be used over the copper paint and under the nonbiocide paint topcoat. Although more testing of this concept is likely to be required over the next several years, the results show promise. Both alternative application methods, rolling rather than spraying and not stripping the boat, can reduce the cost of the paint job significantly.



### Where Can I Find Out More About Alternative Application Methods?

For more information on rolling nonbiocide paints and applying nonbiocide paint over copper paint, contact Katy Wolf at IRTA at (323) 656-1121.

#### DISCLAIMER

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