

CAUTION ON APPLICATION

1. Ensure that COP-R-BOTE does not contact, or make direct or indirect electrical contact, with any metal on the hull other than stainless steel, copper, or brass – especially zinc anodes, and any aluminium or alloy fittings such as stern drives, or, of course, a metallic hull itself. Contact with such metals can set up electrolytic cells which can either negate the antifouling effect, or cause serious corrosion.
2. Ensure that COP-R-BOTE does not contact any metals which are connected to the boat's electrical system – radio grounding plate, propeller shafts, through-hull fittings which are earthed to the battery, etc.
3. Leave a 25 mm minimum gap between all such fittings and the COP-R-BOTE. Manually de-foul this gap periodically as required.

MAINTENANCE

Periodic cleaning will be necessary to remove bacterial slimes and associated light growths. These are easily removed, and the boat may be brushed with a soft broom, sponged by a swimmer, or hosed down on a hard stand between tides. No pollution will enter the water from the COP-R-BOTE. The cleaning frequency will depend on the water quality, temperature, and amount of use of the boat. In polluted waters with a high nutrient load it may be necessary to revert to a strong abrasive antifouling paint. These may be applied directly to a sanded COP-R-BOTE surface.

RECOATING AND REPAIR

COP-R-BOTE is expected to last several years before recoating may be necessary. A single recoat is all that should be required to restore the surface to its full activity.

1. Scrub away any growth which may have taken hold on the surface.
2. Sand the surface only enough to completely clean the weathered outer layer and smooth any imperfections. It is undesirable to sand away any more COP-R-BOTE than is necessary to obtain a fresh clean surface.
3. Fill any imperfections with filled Bote-Cote, allow to cure, sand smooth.
4. Spot prime any bare or thin areas with COP-R-BOTE, allow to set tacky.
5. Apply a full coat of COP-R-BOTE to the entire bilge area, noting all details described above for new applications.

HEALTH AND SAFETY

1. Refer to full Material Safety Data Sheet available.
2. Avoid contact with skin and eyes. Do not ingest. Wear suitable protective clothing, including complete coveralls, rubber gloves and safety glasses or a face mask. Avoid breathing vapour by working in a well ventilated area.
3. Remove any COP-R-BOTE spilled on the skin immediately with detergent and water. Do not use solvents on the skin. Change and dispose of contaminated clothing.
4. If COP-R-BOTE contacts the eyes, flush immediately with water for 15 minutes and rinse with eye wash solution. Seek medical attention if any irritation remains.
5. Some individuals may become sensitised to the hardener components in COP-R-BOTE. An irritating rash or breathing congestion are the usual symptoms. If this occurs, cease using any epoxy materials and seek medical advice.
6. COP-R-BOTE contains flammable solvents including xylene. Avoid all naked flames near containers or when working with COP-R-BOTE. Never smoke when using COP-R-BOTE. Do not allow containers of mixed COP-R-BOTE to overheat.
7. If spraying COP-R-BOTE ensure all industrial hygiene practices are observed. Wear full protective clothing. Wear a respirator fitted with organic vapour cartridges. Avoid spray drift to other people nearby.

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the

ANTIFOULING

that lasts and lasts and lasts

COP-R-BOTE is a 2 component epoxy based antifouling paint containing pure copper metal. It is a permanent coating containing no leachable components and no toxins.

Developed and manufactured in Australia by:

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COP-R-BOTE is a permanent antifouling coating developed in Australia by BoatCraft Pacific to meet all current ecological requirements.

There has been much concern over the build up of heavy metals in marine organisms resulting from leaching and ablative antifouling coatings (TBT's and similar). So we went back to first principles, knowing that one of the most effective and safest treatments is a sheathing of copper metal. Its major drawbacks are weight and cost, due to difficulty of application. Our aim was to develop a coating which would expose a complete copper surface over the whole bilge area of the boat, but also have benefits of ease of application, light weight, and minimal cost.

Utilising our **Bote-Cote** epoxy technology, we have combined a strong, durable epoxy coating with finely divided pure copper, to produce a coating which is three quarters copper metal. It can be applied by spray, roller, or brush, cures in a few hours, and leaves exposed a pure copper surface strongly adhered to the hull of the boat.

COP-R-BOTE is suitable for all timber, fibreglass, and ferro-cement craft. COP-R-BOTE is not recommended for coating steel vessels. It must never be applied to any aluminium or alloy boats, nor come into direct contact with outboard motors, stern drives, zinc anodes, etc. Serious electrolytic corrosion can result from such metal to metal contacts.

COP-R-BOTE is beneficial on fibreglass and ferro-cement hulls as its epoxy base actively prevents osmosis - the permeation of water into the structure of the hull which causes gel coat or paint blistering.

COP-R-BOTE effectively limits attachment and growth of a wide variety of marine organisms. Some bacterial slime may develop on a hull protected with COP-R-BOTE, and limited amounts of weed may in turn develop in the slime. It is recommended that this be removed regularly by light brushing.

COP-R-BOTE is available in colours red, blue, green or black. The colours will change with time and take on more weathered copper appearance as the exposed copper develops its natural tarnish layer.

DIRECTIONS FOR USE

1. Cop-R-Bote can be applied over a two pack base such as Bote-Cote or another epoxy system, directly onto polyester fibreglass or gel coat, or onto ferro-cement.
2. Surface preparation: Remove all loose, degraded or single pack paint and all old antifouling paints especially ablative or leachable types which do not provide a firm base. Wet sandblasting is the most efficient technique for surface preparation. Observe all safety, hygiene, and waste disposal rules for any such cleanup process, as many such coatings contain toxic ingredients, lead, or other heavy metals. Fill any imperfections with filled Bote-Cote. Sand the surface to the desired finish.
3. Unpainted timber boats should be primed with 2 coats of Bote-Cote epoxy – refer to booklet "Boat Building with Bote-Cote". Apply COP-R-BOTE directly over other surfaces provided they are clean, in sound condition, and are well prepared.
 - *Fibreglass and ferro-cement boats should be primed with one coat of Bote-Cote epoxy.
 - *Lead keels should be sheathed with fibreglass to provide solid protection from inter-metallic contact in the event of gouges from grounding etc.
4. Allow all previous coats to dry thoroughly, then sand lightly to present a smooth clean surface. Wipe with a cloth dampened with COP-R-BOTE solvent to remove dust immediately before painting.
5. Mix COP-R-BOTE resin thoroughly before use, ensuring that all the copper is stirred into the liquid. Copper is very heavy and partially settles in the can.
6. Measure the resin and hardener in a ratio of two volumes of resin to one volume of hardener. Do not depart from this ratio, do not add extra hardener for any reason. Mix thoroughly.
7. Apply this mixed COP-R-BOTE by spray, roller or brush. The pot life of the mixture is 2 – 6 hours, depending on temperature and volume. It is necessary to stir frequently during use to maintain an even suspension of the copper particles. Ensure a surface finish as smooth as possible, to eliminate brush marks, roller stipple, etc, as this will make subsequent burnishing more arduous (section 13).

8. For spraying, the recommended equipment is a gravity feed gun with a 1.8 or 2.0 mm tip. Avoid thinning as this allows copper to separate faster. A well stirred pressure pot is an alternative. Conventional suction guns cannot be used as copper is too heavy.
9. When spraying it is important to take full precautions to avoid breathing the vapour or having it get onto unprotected skin. A clean air supply for the operator is recommended. Refer to the health and safety directions in this brochure
10. Allow sufficient time for the COP-R-BOTE to become tacky, then apply a second coat. If a longer time elapses between coats, and the surface sets hard, it will be necessary to sand between coats.
11. The coverage of COP-R-BOTE is 10 – 12 m²/l/coat, i.e. the total application will require 0.2 litres per square metre.
12. COP-R-BOTE may be applied at all temperatures above 12°C. Add accelerator to ensure efficient cure at lower temperatures. If the pot life appears too short at high temperatures, mix smaller quantities.
13. After the final coat of COP-R-BOTE has cured, the surface must be fine sanded using #150 grit or finer abrasive paper, to burnish the surface and expose the copper particles. This most important step must not be omitted. The antifouling effect will be seriously diminished if the copper remains hidden beneath a film of epoxy. Sanding will also produce a desirably smooth, slick surface finish. If patches of copper remain unexposed due to surface roughness, brush marks, etc, stainless steel wool may be used to work into such areas and complete the burnishing process.
14. COP-R-BOTE should be thoroughly cured before launching the boat. There is no time limit between application and launching.
15. All application equipment should be cleaned thoroughly with solvent such as acetone or similar before any material starts to set. It is desirable to leave brushes etc soaking in solvent overnight to remove the last traces of COP-R-BOTE.
16. Use detergent or hand cleaner to remove COP-R-BOTE from the skin, never use solvents. Do not smoke or allow any naked flames near containers of COP-R-BOTE or solvents, nor during application of COP-R-BOTE. Keep out of reach of children.