



# Application Do's & Don'ts

**STOP!** Coppercoat is not like any other anti-fouling paint; it's easy to apply, but different!

Do not apply Coppercoat without thoroughly reading this document and watching our video, which is on the application page of our website

## CoppercoatUSA.com

Based on thousands of applications in the US and Caribbean and suggestions from our customers, we have created the following directions to ensure the successful application of Coppercoat. Page 1 is a list of the tools you will need, page 2 is the timeline, and page 3 is the "Do's & Don'ts", which are the details and techniques we have learned here, and are sometimes a little different than in other parts for the world.

### Tools you need to have available before you start Coppercoat application

- Foam rollers for epoxy, or 3/16" or 1/8" mohair rollers – allow approximately 1 cover for each 3 or 4 kits of Coppercoat (change cover when worn out)
- A small "cigar" sized foam roller if you need to roll up in small places
- A small paint brush, in case you need to reach small areas
- A paint tray – can be washed out with water when finished, NEVER use an aluminum paint tray without a plastic liner and never use an aluminum liner or foil
- A clean 1 gallon mixing bucket
- A small measured mixing pot for mixing a partial batch at end of project
- A stir stick to mix the Coppercoat
- Painters tape and plastic sheeting to make a "rain skirt"
- A small knife or scissors to open the copper packages
- 80 grit sandpaper to prepare hull
- 320 grit sandpaper to sand Coppercoat prior to launch – see detail
- Dual action (DA) or Random Orbital sander-necessary to adequately sand
- Isopropyl alcohol (90%- 99% pure), for thinning and cleaning the hull; you can buy this in drug stores and pharmacies such as Walmart; very inexpensive
- Barrier coat (aka primer coat) product and associated accessories (rollers, etc.) if it is being applied before the Coppercoat
- DO NOT USE other types or grades of alcohol, Acetone, MEK, or other solvent or oil based cleaners or thinners; their residue may cause compatibility issues with Coppercoat, resulting in problems during or after the application
- Other suggestions: Plastic gloves, a paper face mask, paper towels, lots of clean rags, a source of water like a sink or hose, a small table to mix Coppercoat
- Three people are optimum for the Coppercoat application - so call a couple of friends!



## Coppercoat Antifouling (updated 2-1-2017)

### Preparation and Application Outline

1. Remove all the old anti-fouling; leave existing barrier coat, if there is one.
2. Sand the surface with 80 grit sand paper.
3. Wash hull with water or wipe thoroughly with Isopropyl Alcohol (90-99%) on clean rags, allow hull to dry.
4. Barrier Coat; follow direction A, B or C, depending on your situation.
  - A. If a new barrier coat is not being applied, proceed to next step (5).
  - B. If the barrier coat being applied is Coppercoat USA CK426, which has 100% solids and zero VOC's:
    - Apply the CK426 to the clean hull, following the CK426 directions, which are also on our website.
    - After the CK426 is applied, generally the next day and always within 24 hours, proceed to the next step (5) to apply the Coppercoat anti-fouling. It is not necessary to sand the CK426 before applying the Coppercoat anti-fouling, as long as it is applied within 24 hours.
  - C. If you are applying a solvent borne barrier coat of your choice, wait 2-3 days for the solvents to "gas out" (The product label should specify the solvent and % of solids).
    - Sand with 80 grit sand paper. If not sanded well enough the Coppercoat will smear and will not stick to the surface. Our customers have reported this when using InterProtect 2000.
    - Wash hull with water or wipe thoroughly with Isopropyl Alcohol (90-99%) on clean rags, proceed to next step (5).
5. Mix 1 of the 1.5 liter kits of Coppercoat at a time (mix part A and part B, add alcohol thinner- see "Thinning" in Do's & Don'ts for quantity- and then the copper), rolling it on the hull in 4 thin coats, wet on tacky, all in the same day.
  - The application video on [www.CoppercoatUSA.com](http://www.CoppercoatUSA.com) shows very detailed instructions and you can see just how thin it should be applied to keep the Coppercoat from dripping or "sagging".
  - Always mix all of each of the parts (or follow the "Small batch" instructions in the "Do's & Don'ts), Coppercoat is formulated with just the right amount of each part to work – Do not "save" some of the copper for something else!
6. Wait 2-3 days, depending on the temperature, before moving your jack stands and prepare & paint the area under pads in the same manner as the rest of the hull.
7. Wait 2-3 more days before sanding all the Coppercoated areas with 320 grit sandpaper on a DA or random orbital sander prior to launching the boat.
  - Refer to the picture that was sent with the Coppercoat shipment which shows the correct amount of sanding necessary to expose copper, which is what makes the surface "anti-fouling".
  - You can delay the launch as long as you want with no effect on the Coppercoat efficiency.



# Coppercoat Antifouling (updated 2-1-2017)

## Do's and Don'ts

- ✓ Never apply Coppercoat over existing anti-fouling paint
  - This means all the old anti-fouling must be removed or the Coppercoat will lift the old anti-fouling paint, resulting in the Coppercoat and the old paint peeling off.
- ✓ New Coppercoat can be applied over existing Coppercoat with no problems, for example when touching up or reapplying after many years
  - If you need to touch up or repair damaged Coppercoat you need to sand the area well with 80 grit sandpaper, as well as overlap the old Coppercoat for about 1". Call for additional information.
  - Copperpoxy or Copperclad: Coppercoat can be applied over these with correct preparation; please call us for instructions. (These products have not been available for many years, but some people still have them on their boat.)
- ✓ Leave your existing barrier coat, that should be a two-part epoxy; sand it as described below
- ✓ Hull repairs
  - If you need to make repairs to your hull before applying Coppercoat, please use epoxy to make the repair; polyester and vinyl ester repairs may cause issues with the Coppercoat application.
- ✓ Only apply Coppercoat to a clean and well abraded surface
  - Thoroughly sand the existing or new barrier/primer coat with 80 grit sand paper (or sand the gel coat if there is no barrier coat). The smoother the surface is under the Coppercoat, the smoother the Coppercoat will be, and smooth is what you want. If not sanded well enough the Coppercoat will slide and smear on the surface, which is not good.
- ✓ Never clean the hull with a solvent based cleaner before applying Coppercoat
  - Solvents like MEK, Acetone, etc. leave a residue that Coppercoat does not stick properly to. Clean the hull prior to applying Coppercoat; either wash with water, or wipe with Isopropyl alcohol (90-99% pure), this is a safe cleaner which leaves no residue.
- ✓ You cannot "hot coat" Coppercoat over a solvent based epoxy. This is different from most anti-fouling. If you are applying a new solvent based barrier coat, wait 2-3 days before applying Coppercoat.
  - Read label for percentage of solids; almost all are solvent based.
  - You must sand the barrier coat with 80 grit sandpaper (it should not be shiny) before applying Coppercoat. If there is less than 60% solids in the barrier coat, additional cure time may be required or the solvents in the barrier coat will "gas out", resulting in small blisters under the Coppercoat. Please call Coppercoat USA for more information about overcoat times and temps.
- ✓ You CAN "hot coat" Coppercoat over CoppercoatUSA epoxy Barrier Coat CK 426, which is 100% solids and has zero VOC's. Coppercoat anti-fouling should be applied to the Coppercoat Barrier coat within 24 hours, after the barrier coat has cured enough to not be sticky.
  - During this window, it is not necessary to sand the Coppercoat Barrier coat prior to application of Coppercoat Anti-fouling.
- ✓ People needed to apply.
  - We recommend 3 people to apply Coppercoat to your hull. One person to mix, and 2 people to roll the Coppercoat. If there are only 2 people doing the application, we recommend mixing half a kit at a time so you don't run out of pot life, following the instructions for mixing small batches later in this document. Correct measurements are important!



# Coppercoat Antifouling (updated 2-1-2017)

- ✓ Use 3/16" nap foam rollers for epoxy, or 3/16" or 1/8" pile mohair rollers
  - Others don't work well. We have found that the foam rollers leave the smoothest surface.
  - If the surface of the hull isn't sanded enough the foam rollers tend to slide on the surface.
  - Use the small "cigar" roller and the small brush where necessary to get into small areas; be careful to prevent drips.
- ✓ Mixing – Set up an "assembly line" (see video for example) and work with one kit at a time.
  - Always shake the resin tub well before opening.
  - When opening the part A bottle, do not allow small bits of the plastic cap lock to fall into the mixing bucket. If you do, you will have white plastic spots on your hull!
- ✓ Thinning Coppercoat with isopropyl alcohol. Mix 3 PART B capfuls (4 capfuls if you are in a warmer climate) of isopropyl alcohol into the part A & B as you mix them together in the bucket, before adding the copper.
  - Use an empty PART B hardener bottle cap, NOT the alcohol bottle top.
  - Do not add the isopropyl alcohol to the Coppercoat after it is in the roller trays, it will not mix correctly and will cause problems later.
  - Keep the Coppercoat suspended (mixed) when applying. The copper powder is heavy and settles in the epoxy; stir the Coppercoat each time before you pour it from the mixing tub into the roller pan.
  - You can use a drill mixer, but a stir stick works great as the Coppercoat mixes easily. The key is to not over mix, which shortens the working life.
  - Coppercoat has little odor, but we recommend wearing a dust mask and gloves for mixing.
- ✓ Coppercoat is applied in four (4) thin coats, "wet-on-tacky", all in the same day

When the previous coat is tacky (when you touch it with your finger and it doesn't come off on your finger ; 20-30 minutes' is average time), it's time to put on the next coat.

If your boat is too large to complete in a day, only paint part of the boat at a time. For example, paint all four coats on one side of the hull or on a catamaran, paint one hull at a time.

  - Remember, apply the Coppercoat in thin coats (you can see through the first two), thick coats cause the copper to run or sag, which will be a problem and you will use more Coppercoat than needed. Watch the application video, [CoppercoatUSA.com](http://CoppercoatUSA.com) to see how thin each coat needs to be.
  - If you start to apply your first coat of Coppercoat and it "smears", the surface wasn't sanded enough. The surface should not be "shiny".
  - If you start to roll the next coat and the previous one is pulling off, **STOP** and wait a few minutes, the previous coat isn't set enough yet.
  - The goal is to have a smooth surface when the job is done, which is why Coppercoat is thinned with the Isopropyl alcohol and applied in thin coats.
- ✓ Coppercoat is temperature and moisture sensitive! You should not start applying Coppercoat before 9AM  
As with most epoxies, published cure times are based on a 72°F. If the temperature is warmer, the cure time as well as the pot life gets shorter. Thinning Coppercoat with Isopropyl alcohol helps increase the pot life. If the temperatures are colder than 72°F, the cure time and pot life are longer. If you have any questions regarding cure times, please contact Coppercoat USA 1-321-514-9197.
- ✓ Keep the hull dry, give it a "skirt", see the examples on [www.coppercoatusa.com](http://www.coppercoatusa.com)

Even if you don't expect rain, unless you are inside a building we recommend that you make a short "skirt" for your boat with plastic sheeting and painters tape.

  - Keep rain, dew, and water off the Coppercoat for 48 hours after applying. Coppercoat is a water-based epoxy and will wash off with very little water until cured; even dew running down the hull can remove freshly applied Coppercoat.
  - Make sure the skirt can't get stuck in the wet Coppercoat.
  - Remember to plug through hulls and drains.



# Coppercoat Antifouling (updated 2-1-2017)

- ✓ Clean up Coppercoat with fresh water  
Until it dries Coppercoat wash's off easily with fresh water, so you can clean the rollers, pans, your hands, your clothes and any other place you didn't want it. Once it's dry, it's there for a long time.
- ✓ After applying Coppercoat to the rest of the hull, allow 48 hours before moving jack stands/keel pads to coat under them  
When coating the pad areas sand the cured Coppercoat where you will overlap with 80 grit sandpaper. Allow Coppercoat to cure for 3 days after coating the pad areas, for a total of 5-6 days.  
- If the weather is cool, allow extra curing time.
- ✓ Mixing small batches of Coppercoat; the mix ratio is 1 to 1 to .8 by volume  
In a small, measured mixing pot, mix the resin and hardener together with 5% isopropyl alcohol before adding the copper powder. ALWAYS measure carefully; do not "eyeball" the quantities.  
Example: 3 fluid ounces of part A, plus 3 fluid ounces of part B, plus 2.4 fluid ounces of the copper powder make 8.4 fluid ounces of Coppercoat.  
- Be careful when measuring in the copper powder because the liquids will "dome up" when adding the copper powder and it is easy to add too much copper. Stir the Coppercoat gently with a stir stick when adding the copper, and check the levels carefully.
- ✓ After the Coppercoat has cured for 2- 3 days and before launching, sand the bottom with fine (320 grit) sandpaper on a DA or random orbital sander to expose the copper  
You are sanding to expose the copper, which is otherwise encapsulated in the epoxy. Look at the pictures on the website to see examples of how much sanding is required. Remember, **if you don't sand the Coppercoat you will NOT have an anti-fouling bottom!** When Coppercoat is working, the copper will turn green in salt water.  
- Note: We recommend that you wear thin rubber or Nitrile gloves, safety glasses and at least a dust mask while sanding.
- ✓ For props, shafts, trim tabs, sail drives and out drives, please follow these directions  
Before applying Coppercoat to your props, shafts, trim tabs, sail drives and out drives you will need to remove all old anti-fouling paint. After you have removed all of the old anti-fouling paint, sandblast the metal to achieve a 1.5 to 2 mil anchor profile. Then apply at least 2 coats of a good epoxy barrier coat; see instructions above for barrier coats and primers. After the barrier coat has cured completely, sand the drives and apply Coppercoat in 4 even coats. Remember to sand before launching. This also applies to props, shafts and trim tabs.  
- **Bronze thru hulls** can be hand sanded with 80 grit before applying barrier coat following our barrier coat guide. Or, if you don't intend to coat them, tape the bronze to keep the paint off.
- ✓ Simple Maintenance  
Coppercoat repels hard growth, but contains no harsh chemicals that would kill slime or the grass that grows in some areas, therefore most people find they need to do some cleaning when they are not actively using their boat. This generally consists of wiping the hull with a towel, carpet, squeegee or plastic spreader to remove the slime and grass, while not removing any measurable amount of coating. If the boat is out of the water it can be pressure washed at 4000 psi without damaging the Coppercoat, and it doesn't die, no matter how long it's out of the water.

Do you have questions about your application? Have you just become the owner of a boat with Coppercoat on the hull and want to understand how long it should last (10-20 years) and what you need do to care for it? We are constantly updating our website with more FAQ's, testimonials and information for our owners. And, you can always call us!

**Coppercoat USA at 321-514-9197, EST**

We are located on the east coast of central Florida