Pettit Technical Bulletin

Bottom Painting Bare Fiberglass

There are four methods used to apply antifouling paint to bare fiberglass hulls. One of the most important parts to each system is to be sure the bottom is completely cleaned and de-waxed prior to sanding or applying any products. All bare fiberglass, regardless of age, should be thoroughly cleaned with 92 Bio-Blue Hull Surface Prep or de-waxed several times with Pettit D-95 Dewaxer or 120 Brushing Thinner. When using 92 Bio-Blue Hull Surface Prep, pour out some of the 92 Bio-Blue into a roller pan, then using a short nap roller (3/16 inch maximum) apply the 92 Bio-Blue Hull Surface Prep to an area approximately 5 feet by 5 feet. Once the area has been covered with the Bio-Blue, scrub the surface by hand in a circular motion using a fine to medium Scotch-Brite pad. Wipe the area with a wet sponge until all of the 92 Bio-Blue and scrubbing residue has been completely removed from the surface. Rinse sponge and change rinse water often. Where feasible, hose off the surface residue and residual 92 Bio-Blue with fresh water and let dry. When using D-95 Dewaxer or 120 Brushing Thinner, apply in a circular motion, applying a liberal wet coat. Wipe dry with a clean rag to remove contaminants. Change applicator and cleaning rags often. Follow all directions on product label closely. Modern boat hulls constructed of Vinylester resins generally retain more mold release waxes, therefore, they should be cleaned and de-waxed at least four times prior to applying primer coat.

Application Methods:

I. Sanding Method

II. High Build Epoxy Primer Method

III. Sandless Method:

IV. Easy 2-Step Sandless Method

I. Sanding Method:

Thoroughly clean and de-wax the hull as described above with 92 Bio-Blue Hull Surface Prep, D-95 Dewaxer, or 120 Brushing Thinner. Sand thoroughly with 80 grit sandpaper to a dull, frosty finish and rewash the sanded surface with 120 Brushing Thinner to remove sanding residue. Careful observation of the above instructions will help ensure long term adhesion of this and subsequent years' antifouling paint. Apply at least two coats of antifouling paint.

II. High Build Epoxy Primer Method:

This method is highly recommended where blister protection is a concern or on boats that have recently been stripped by a blasting method. Pettit Protect High Build Epoxy Primer is a heavy duty, two component epoxy coating for use where maximum resistance to fresh or salt water is required. It reduces water absorption in fiberglass hulls, making it an excellent choice for the prevention and repair of osmotic blisters. Pettit Protect's high-solids formula allows for quicker and easier application with fewer coats necessary for effective protection.

Thoroughly clean and de-wax the hull as described above with 92 Bio-Blue Hull Surface Prep, D-95 Dewaxer, or 120 Brushing Thinner. Sand the surface thoroughly with 60 grit sandpaper and rewash with 120 Brushing Thinner to remove sanding residue. Apply at least three coats of Pettit Protect High Build Epoxy Primer following the application and recoat instructions. Total dry film thickness is more important than the actual number of coats applied. On metal and fiberglass, if 12 mils total DFT is not achieved with three coats, additional coats are recommended until 12 mils total DFT is achieved. Finish with two coats of Pettit antifouling paint. For detailed application instructions on Pettit's High Build Epoxy Primer see Technical Bulletin *TB1000 Gelcoat Blister Repair and Prevention.*

A single coat of Pettit Protect High Build Epoxy Primer can also be used in place of Pettit 6998 Skip-Sand Primer for the Sandless Method providing the hull has been thoroughly cleaned and prepped using 92 Bio-Blue and a Scotch-Brite pad.

III. Sandless Method:

To eliminate the sanding operation, thoroughly clean and de-wax the hull as described above with 92 Bio-Blue Hull Surface Prep, D-95 Dewaxer, or 120 Brushing Thinner. Then apply one thin coat of Pettit 6998 Skip-Sand Primer. Use a 3/16" or less nap when applying by roller, a 1/8" nap roller is recommended. These rollers can be found in mohair type (usually called "adhesive applicators") or solvent resistant foam type. Consult the primer label for complete application and antifouling top coating instructions. Let dry in accordance with the primer labels and apply bottom paint. Pettit 6998 Skip Sand Primer is a pre-treatment primer designed to adhere tenaciously to un-sanded and de-waxed fiberglass gelcoat. When properly top coated with antifouling paint, the primers and antifouling will bond together strongly, resulting in a finish with excellent overall adhesion. These primers are ideal for use over vinyl ester gelcoats, where sanding of the gelcoat may void osmotic blister warranties. Skip Sand Primer may be used over conventional gelcoats as well, and as a tie-coat between two-part epoxy primers and antifouling paints. Pettit 6998 Skip Sand Primer has a fairly large time window when antifouling paint must be applied. Antifouling paint can be applied in as little as a few hours or up to 7 days making it an ideal primer to use when the antifouling application is not rushed and can be performed over two or more days.

A single coat of Pettit Protect High Build Epoxy Primer can also be used in place of Pettit 6998 Skip-Sand Primer for the Sandless Method providing the hull has been thoroughly cleaned and prepped using 92 Bio-Blue and a Scoth-brite pad.

IV. Easy 2-Step Sandless Method

Thoroughly clean and prep hull using 92 Bio-Blue and a Scoth-brite pad as described above. Wipe surface to remove any excess moisture and apply one of the Hydrocoat antifouling paints.

Tips for Using Skip Sand Primer

Allow the 6998 Skip Sand Primer to dry completely tack-free. The primer has dried tack-free when no surface tackiness is felt when applying moderate pressure with a fingertip. Use the chart below to determine when to apply antifouling paint. Humidity, ventilation, film thickness, as well as temperature can all affect the rate at which this Primer dries.

6998 Skip Sand Primer Application Temperature	**When Used Under All Ablative or Hard Bottom Paints** *Must be Completed Within 7 Days*
50 - 60 Degrees	Apply bottom paint after a minimum 4 hours and up to a maximum of 7 days
70 Degrees	Apply bottom paint after a minimum 3 hours and up to a maximum of 7 days
80 - 100 Degrees	Apply bottom paint after a minimum 2 hours and up to a maximum of 7 days

COMPETITIVE LEVELS OF ANTIFOULING PROTECTION

Neptune 5 and the Hydrocoat family provides four levels of water-based technology and effectiveness from entry level to the most advanced, multi-functional products. There is now, no reason to stay stuck in dirty, old, toxic technology when Pettit offers a breath of fresh air for your customers, your yard and your environment.

Neptune 5 offers all these great advantages

- 25% Cuprous Oxide
- Hard Hybrid Thin Film Technology
- Cost Effective Seasonal Protection
- Priced for budget conscious consumers

Compare to:

Bottomkote NT

AF33

Unepoxy

Hydrocoat offers all the advantages of Neptune 5 plus

- 40% Cuprous Oxide
- Copolymer Ablative Technology
- PTFE for slick fast finish
- Largest selling multi-season water-based ablative

Compare to:

Micron CSC

Cukote

Horizons

Hydrocoat SR offers all the advantages of Hydrocoat plus

- Dual Biocide: Copper and Irgarol, reduced slime
- Copolymer Ablative Technology
- Designed for challenging conditions
- First dual biocide, multi-season, water-based ablative

Compare to:

Micron Extra

Cukote Biocide Plus

SR40

Hydrocoat Eco offers all the advantages of Hydrocoat SR plus

- Copper free ECONEA® organic biocide
- Copolymer Ablative Technology
- Safe for all substrates, including Aluminum
- Best selling Econea, multi-season, water-based ablative

Compare to:

Micron CF

Ultima Eco

HYDROCOAT now offers a complete spectrum of advanced, environment friendly, water-based antifouling technologies. If water and boats are in your DNA, one of these amazing new antifouling bottom paints is in your future. All are, multi season, ablative, self-polishing copolymers, all have 50% less VOC's and are as effective, if not more so, than the old solvent technology. Clean-up with soap and water is easy, no nasty solvent smell and chemical mess and you can apply Hydrocoat over any other existing bottom paint.

DO YOUR PART TO PROTECT THE AIR AND WATER AND GET THE CLEANEST BOTTOM ON THE WATER.

HYDROCOAT ECO
Completely copper-free, water-based, self-polishing ablative, using the highest level of metal-free Econea dual biocide for unprecedented multi-season protection.

HYDROCOAT SR
Water-based, dual biocide, multi-season ablative using copper technology with an organic algaecide for outstanding hard and soft fouling protection.

HYDROCOAT
Self-polishing, dual biocide, water-based, copper protection against all types of fouling. Cleans up with soap and water, apples easily and has no heavy solvent smell.

PETTIT

Apply the future.

In the world of antifouling, Hydrocoat is a breath of fresh air.

The Hydrocoat family is the clean, bright future of antifouling.

Harmful VOCs have been reduced to a bare trace, there's no nasty solvent odor, no toxic fumes, no volatile solvent mess to clean up. Yet for all its user-friendliness, the Hydrocoats deliver the highest levels of fouling and slime protection.

Better protection than premium priced, solvent-based antifoulings.

Hydrocoat antifoulings are the most advanced, high performance, multi-season ablatives and are formulated to resist even the extreme fouling conditions of the tropics. Powerful as they are, everything cleans up easily with plain soap and water; brushes, rollers, rags, clothing, the dog... you.

This is the one perfect antifouling choice for all boats.

Hydrocoat goes over anything; any bottom paint, any substrate, any underwater metal and it meets or exceeds all current and future, local and state environmental regulation. The fact is; Hydrocoat takes the wind out of the argument for using any other antifouling.

HYDROCOAT

HYDROCOAT
The Worlds Best Selling Multi-Season, Water Based Ablative

HYDROCOAT SR
The Worlds Best Selling Dual-Biocide, Water Based Ablative

HYDROCOAT ECO
The Worlds First Dual-Biocide, Copper-Free, Multi-Season, Water Based Ablative

PETTIT

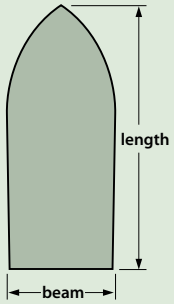
Apply the future.

HYDROCOAT TECHNOLOGY

The Hydrocoat family of products utilize the most advanced antifouling technologies to improve and increase the ability to provide faster, safer and more efficient service to boat owners. The benefits speak for themselves!

How Much Hydrocoat Antifouling Bottom Paint Do I Need?

1. Calculate the square footage of the hull to be painted – multiply the length of the hull by the beam then multiply that total by .85



Length x Beam x .85 = Square Feet of Hull

2. Divide that number (your square foot total) by the amount of coverage the selected bottom paint offers. This will give you a one-coat total.

Note: All Hydrocoat Gallons Cover at least 450 Sq Ft when applied with a short nap 3/16" roller (3.75 wet mils)

Pettit Bottom Paint Compatibility Chart

Use this chart to determine compatibility and application preparation necessary to overcoat with Pettit Paint Hydrocoat Antifoulings

NEW ANTIFOULING	OLD ANTIFOULING: All Hard Modified Epoxy, Sharkskin, Talon, Tropikoat, Fiberglass Bottomkote, Epoxy Cop, Ultra & Ultrakote, Bottom Shield, Bottom Pro Gold, Unepoxys (All), Trinidads (All)	OLD ANTIFOULING: All Ablatives, Microns (All), Cukote (All), Epoxycop Ablative, Smart Solutions, Awlstar, PCA Gold!, Alumacoat SR, Ultimas (All), Horizons, Vivid (All), Bottomkote (All), CPP Plus, Seamate	OLD ANTIFOULING: Freshwater Antifoulings, SR 21, VC 17 (All), VC 18, FW 21
Hydrocoat	LIGHT SAND & APPLY	LIGHT SAND & APPLY	SAND & APPLY
Hydrocoat SR	LIGHT SAND & APPLY	LIGHT SAND & APPLY	SAND & APPLY
Hydrocoat Eco	LIGHT SAND & APPLY	LIGHT SAND & APPLY	SAND & APPLY

PETTIT
Apply the future.

Application Tips & Tricks

- Hydrocoat does not require sanding between coats.
- Hydrocoat can be painted over a damp hull, doesn't need to be completely dry.
- For the smoothest finish, apply Hydrocoat with a short nap 3/16" quality roller.
- For an optimally slick finish, Hydrocoat may be burnished by dry or wet sanding. The durable copolymer resins and PTFE that is used in Hydrocoat makes surface very efficient when racing or the desire to save fuel.
- Applicators may spray Hydrocoat in the most stringent VOC controlled emission environments with basic equipment.
- To extend the shelf life of an opened can of Hydrocoat, pour a skim of water over the remaining product; do not mix in. Clean rim and snap lid closed firmly. Next time you paint, stir in the water and your ready to apply.

Bottom Painting Bare Fiberglass

All bare fiberglass, regardless of age, should be thoroughly cleaned with 92 Bio Blue Hull Surface Prep. When using 92 Bio Blue, pour out some of the 92 Bio Blue into a roller pan, then using a short nap roller (3/16 inch maximum) apply the 92 Bio Blue to an area approximately 5 feet by 5 feet. Once the area has been covered with the Bio Blue, scrub the surface by hand in a circular motion using a fine to medium Scotch-Brite pad. Wipe the area with a wet sponge until all of the 92 Bio Blue and scrubbing residue has been completely removed from the surface. Wipe surface to remove any excess moisture and apply one of the Hydrocoat antifouling paints.

Bio-Blue Hull Surface Prep 92 de-waxes, cleans, and prepares bare fiberglass for painting. Easily removes unwanted contaminants and mold release agents prior to painting.

PETTIT MARINE PAINT

Hydrocoat

Hydrocoat Copolymer Ablative

- The world's best selling water-based antifouling
- Offers exceptional antifouling protection
- Easy to apply and safer to use
- Ablative finish reduces coating buildup and the need for sanding
- Contains drag reducing PTFE
- Simple soap and water clean up

1240 Blue (Quart and Gallon)

1340 Green (Quart and Gallon)

1640 Red (Quart and Gallon)

1840 Black (Quart and Gallon)

Note: Color differences may occur between actual and color chips shown

Technical Information

Finish: Flat

Solids by Weight: 73%

Coverage: 490 ft^2/gal.

VOC: 150 grams/liter (1.25 pounds/gallon)

Biocide: Cuprous Oxide...40.43%

Flash Point: > 200°F

Application Method: Brush, roller, airless or conventional spray

Maximum Roller Thickness: 3/16"

Number of Coats: 1 minimum per season with additional coat at waterline

Wet Film Thickness: 3.75 mils

Dry Film Thickness: 1.5 mils

Application Temp: 50° F. Min. / 90°F. Max.

Thinner: 140 Water-Based Brushing Liquid or Clean Fresh Water

Dry Time*: (hours)

	To Touch	To Recoat	To Launch
90°F	¼	1-1/2	6
70°F	½	3	10
50°F	1	6	16

* Above times are minimums - there is no maximum dry time before launching.

Hydrocoat is the most advanced water-based, ablative antifouling available. It offers exceptional multi-season protection against all types of fouling. Hydrocoat's innovative technology replaces the harsh solvents found in most bottom paints with water, resulting in an easier application and clean up, with no heavy solvent smell. Hydrocoat's ablative surface wears away with use, exposing fresh biocides while eliminating paint build up and the need for sanding. The low-odor formula is so environmentally friendly, it exceeds even the most stringent air pollution regulations. Hydrocoat withstands frequent trailering, beaching, and launching. Its unique formula allows unlimited dry time to launch, so you can paint in the fall or winter.

Hydrocoat

Application Information

Application Systems and Tips

Hydrocoat is easily applied by brush, roller or spray. When rolling, use only a high-quality short nap (maximum 3/16" nap) roller cover. Apply using thin coats; over-application of this product will virtually assure inadequate coating performance. Mix paint thoroughly to ensure ingredients are evenly dispersed throughout the can. All surfaces must be clean and properly prepared prior to painting. Do not apply Hydrocoat on aluminum hulls or outdrives.

For the smoothest possible finish: Thin the paint approximately 5-10% with 140 Water-Based Brushing Liquid or clean fresh water. Wet the surface to be painted thoroughly with clean fresh water as well. This will provide a truer color and smoother finish.

Slight variations in color and surface texture are not uncommon and will not affect performance. The surface will quickly smooth itself once in the water and any mottling of the color will diminish as well.

Previously Painted Surfaces:

Hydrocoat may be applied over almost all aged hard and ablative antifouling coatings. Consult the Pettit Antifouling Compatibility Chart for specific recommendations. The paint systems outlined below contain references to other products; please read and understand the label and/or Technical Bulletin for these products as well, to ensure that they are used properly.

If the previous coating is in good condition, thoroughly sand with 80-grit sandpaper then solvent clean with Pettit 120 or 120VOC Thinner to remove residue. Apply two finish coats of Hydrocoat. If the previous coating is soft or in poor condition, remove to the bare surface by sanding or using paint remover. Proceed with appropriate bare system as described below. Old tin or copper copolymers or Teflon®-based antifoulings should be sanded thoroughly with 80-grit sandpaper to remove the chalky outer surface, wiped clean of sanding residue, and then may be over-coated directly with Hydrocoat.

Bare Fiberglass:

All bare fiberglass, regardless of age, should be thoroughly cleaned with Pettit 92 Bio-Blue Hull Surface Prep or de-waxed several times with Pettit D95 Dewaxer. Proceed with either Sanding Method or one of the Non-Sanding Methods below.

Sanding Method - After the surface has been de-waxed, sand thoroughly with 80-grit production paper to a dull, frosty finish and rewash the sanded surface with Pettit 120 or 120VOC Thinner to remove sanding residue. Then apply two thin coats of this product, following application instructions. Careful observation of application instructions will help ensure long-term adhesion of this and subsequent years' antifouling paint.

Non-Sanding Method - To eliminate the sanding method, three alternative methods are available:

1) Thoroughly clean, de-wax, and etch the surface with Pettit 92 Bio-Blue Hull Surface Prep using a medium Scotch-Brite® pad in a swirling motion or wash the fiberglass at least three times using Pettit D95 Dewaxer. Then apply one thin coat of Pettit 6998 Skip-Sand Primer. Use a 3/16" or less nap when applying by roller. Consult the primer label for complete application and antifouling top-coating instructions. Apply two thin coats of Hydrocoat.

2) Thoroughly clean, de-wax, and etch the surface with Pettit 92 Bio-Blue Hull Surface Prep using a medium Scotch-Brite® pad in a swirling motion. Thoroughly rinse all residue from the surface and let dry. Then apply one coat of Pettit 4740/4741 H2-Prime Epoxy Primer or Pettit Protect High Build Epoxy Primer (4700/4701 or 4100/4101). Consult the primer label for complete application and antifouling top-coating instructions. Apply two thin coats of Hydrocoat. See Pettit Protect User Manual for complete detailed instructions.

3) Easy 2-Step Sandless Method - Thoroughly clean, de-wax, and etch the surface with Pettit 92 Bio-Blue Hull Surface Prep using a medium Scotch-Brite® pad in a swirling motion. Thoroughly rinse all residue from surface and let dry. Make sure that the entire surface has a dull, frosty finish. Wipe surface to remove any excess moisture and apply two thin coats of Hydrocoat.

Barrier Coat:

Fiberglass bottoms potentially can form osmotic blisters within the gelcoat and into the laminate. To render the bottom as water impermeable as possible, prepare the fiberglass surface as mentioned above (sanding method) then apply two or three coats of Pettit Protect High Build Epoxy Primer (4700/4701 or 4100/4101), per label directions. Apply two thin coats of Hydrocoat. See Pettit Protect User Manual for complete detailed instructions.

Blistered Fiberglass:

See Pettit Protect User Manual for complete detailed instructions.

Bare Wood:

Bare wooden hulls should be sanded thoroughly with 80-grit sandpaper and wiped clean of sanding residue using Pettit 120 or 120VOC Thinner. A coat of Pettit 6627 Tie-Coat Primer thinned 25% with Pettit 97 Epoxy Thinner should be applied directly to the bare wood. Allow to dry four hours and then apply two thin coats of Hydrocoat.

Previously painted wood hulls should be thoroughly sanded. If priming is necessary on bare wood spots, apply a touch-up coat of Pettit 6627 Tie-Coat Primer thinned 25% with Pettit 97 Epoxy Thinner to these areas. Then apply two thin finish coats of Hydrocoat.

Bare Steel and Cast Iron*:

Remove loose rust and scale from the metal surface by sandblasting or wire brushing. Immediately clean the surface using a vacuum or fresh air blast. Apply two coats of Pettit 6980 Rustlok Steel Primer, allowing each to dry only one to two hours prior to over-coating. Follow by two coats of Pettit Protect High Build Epoxy Primer (4700/4701 or 4100/4101), per label directions. If fairing is required, apply Pettit 7050 EZ-Fair Epoxy Fairing Compound between the two coats of Pettit Protect High Build Epoxy Primer. Apply two thin finish coats of Hydrocoat. See Pettit Protect User Manual for complete detailed instructions.

Stainless Steel, Bronze, Lead, and Non-Aluminum Alloys *:

Abrade surface to bright metal; clean off residue using Pettit 120 or 120VOC Thinner. Apply one thin coat of Pettit 6455/044 Metal Primer; allow to dry two hours. Apply two coats of Pettit 6627 Tie-Coat Primer per label directions. Let the second coat of Pettit 6627 Tie-Coat Primer dry at least four hours and apply two finish coats of Hydrocoat.

DO NOT USE THIS PRODUCT ON ALUMINUM HULLS AND OUTDRIVES.

*These are simplified systems. Pettit offers Technical Bulletins containing detailed instructions for most application systems. Please consult your Pettit Representative or the Pettit Technical Department for more complex, professional systems. Always read the labels or Product Data Sheets for all products specified herein before using.

Hydrocoat contains cuprous oxide. As a result, there is a tendency for settling to occur, especially if the paint has been on the shelf for several months. It is necessary to thoroughly mix the paint before using. If possible, shake the can of paint on a mechanical paint shaker. Before using, check the sides and bottom of the can to make sure all the pigment has been mixed in. If mixing is going to be done with a wooden paddle or an electric drill mixer, pour off half of the liquid from the top of the can into another can and then properly mix in any settled pigment; then remix the two parts together thoroughly. Adhere to all application instructions, precautions, conditions, and limitations to obtain optimum performance. Refer to individual labels and tech sheets for detailed instructions when using associated products, etc. When spraying, do not thin Hydrocoat more than 10% (12 ounces per gallon) or inadequate paint film thickness will occur and premature erosion of the finish will be likely.

Surface Preparation: Coating performance, in general, is proportional to the degree of surface preparation. Follow all recommendations very carefully, avoiding any shortcuts. Inadequate preparation of surfaces will virtually assure inadequate coating performance.

Maintenance: No antifouling paint can be effective under all conditions of exposure. Man made pollution and natural occurrences can adversely affect antifouling paint performance. Extreme hot and cold water temperatures; silt, dirt, oil, brackish water and even electrolysis can ruin an antifouling paint. Therefore, we strongly suggest that the bottom of the boat be checked regularly to make sure it is clean and that no growth is occurring. The self-cleaning nature of the coating is most effective when the boat is used periodically. Boats and vessels should not be scrubbed or cleaned for the first six months in the water, and at intervals of not less than three months thereafter.

Burnishing of the surface to create a slicker finish should be done with 400-600 grit wet-or-dry sandpaper after the coating has dried for seven (7) days.

PETTIT

The Top-10 Reasons You Should Use Hydrocoat® Antifouling Paint

1. There is a Hydrocoat antifouling for every boat, every region and every wallet.
2. Hydrocoat can be applied over any other bottom paint.
3. Hydrocoat is easier to apply than conventional antifoulings.
4. Hydrocoat works as effectively or better than the most premium conventional antifoulings.
5. Hydrocoat is an advanced ablative, no scraping or sanding off old bottom paint.
6. Because Hydrocoat is water-based, there are no nasty solvents.
7. There is no smelly chemical odor.
8. With Hydrocoat, very little solvent gets into the air.
9. Allows everyone to breathe a little easier.
10. Clean-up is super-easy with soap and water.

HYDROCOAT

WATER-BASED ANTIFOULING PAINTS

If you're looking for quality maintenance and winterization, visit our website.