

## What is ECONEA™ ?

ECONEA™ is, quite simply, the future of antifouling technology. This copper-free biocide offers unsurpassed protection at very low concentrations.

In fact, tests show that antifoulants made with just

6% ECONEA™ are as effective as those made with 50% copper. This is great news for boaters who are looking for consistently superior antifouling protection, but it's also good news for the environment. The ECONEA™ biocide breaks down quickly in the environment and its breakdown products are biodegradable. ECONEA™ is non-corrosive to metals and is safe for use on aluminum and all other underwater metals.







# ECONEA™

Pettit's Hydrocoat Eco combines the power of copper-free ECONEA™ biocide with our exclusive Hydrocoat water-based, self-polishing, copolymer ablative film technology to provide the cleanest and most advanced antifouling paint available. In fact, Hydrocoat Eco is so advanced it was awarded *Innovative Product of the Year* at IBEX 2013.

As with Ultima Eco and Pontoon Pro, Hydrocoat Eco wasn't designed to be a seasonal copper-free bottom paint like the competition. All of Pettit's ECONEA™ products are true multi-season, dual-biocide, self-polishing, ablatives that will outperform the most popular multi-season ablative paints on the market.

We all know that more biocide in an antifoulant means better performance and longer lasting protection. Pettit has proven this over and over with products like Ultima® SR-60, Trinidad®, Trinidad® SR, and Horizons®. Pettit's products contain over 53% more ECONEA™ than Interlux Pacifica Plus® or Micron® CF, and over 106% more than Sea Hawk Smart Solutions®. This impressive concentration of ECONEA™ biocide not only provides better antifouling protection, it enables Pettit to offer the world's first true multi-season, copper-free bottom paints.

The potent protection that ECONEA™ provides works only against hard growth, like barnacles and zebra mussels. Janssen PMP, the company that manufactures ECONEA™, recommends the use of a second biocide to control soft growth. So Pettit formulated their products with Zinc Omadine, a versatile workhorse in the world of biocide technology. Zinc Omadine is so safe it is FDA approved for use in antidandruff shampoo, yet it delivers real muscle in the fight against marine slime, algae and other soft growth. The powerful one-two punch of ECONEA™ and Zinc Omadine make Pettit's lineup simply the best choice available in antifouling protection.

Which Econe product is right for you?  The choice is simple...	Pettit Paint Hydrocoat Eco	Pettit Paint Ultima Eco	Pettit Paint Pontoon Pro	Interlux Pacifica Plus	Interlux Micron CF	Sea Hawk Smart Solutions
						
Amount of Econe Biocide	6.0%	6.0%	6.0%	3.9%	3.9%	2.9%
Amount of Zinc Omadine	4.8%	4.8%	4.8%	4.12%	4.12%	0.00%
VOC Level	150g/l	320g/l	320g/l	330g/l	330g/l	330g/l
Offers Multi-Season Performance	YES	YES	YES	NO	YES?	NO

# Ultima Eco

## Copper-Free, Multi-Season Ablative

- Uses The world's first copper-free antifouling paint to offer true multi-season performance
- Contains organic ECONEA™ biocide along with a powerful slime fighting agent
- Self-polishing ablatives technology eliminates the need for sanding and paint build up Use on all substrates including aluminum
- Can be used on almost any previously painted surfaces



1108 Ivory (Gallons Only)



1208 Blue (Gallons Only)



1608 Red (Gallons Only)



1808 Black (Gallons and Pints)

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



## Technical Information



**Finish:** Eggshell

**Solids by Weight:** 80%

**Coverage:** 500 ft<sup>2</sup>/gal.

**VOC:** 320 grams/liter (as supplied)

**Biocide:** ECONEA™...6.0%

Zinc Pyrithione...4.80%

**Flash Point:** 105°F (SETA)

**Application Method:** Brush, roller, airless or conventional spray

**Maximum Roller Thickness:** 3/16"

**Number of Coats:** 1 minimum per season with additional coats for extended service

**Wet Film Thickness:** 2.6 mils

**Dry Film Thickness:** 1.5 mils

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

**Thinner:** 120 Brushing Thinner, 121 Spraying Thinner, or 120VOC Thinner

**Dry Time\*:** (hours)

	To Recoat	To Launch
90°F	2	2
70°F	3	4
50°F	6	8

\*The above dry times are minimums. Ultima Eco may be recoated after the minimum time shown. There is no maximum dry time before launching.

Ultima Eco combines the breakthrough, metal-free ECONEA™ biocide with a powerful slime-fighting agent for dual-biocide, multi-season protection. This copper-free formula can be safely used on all substrates, including aluminum. It provides excellent antifouling protection, with an ablatives surface that makes it the perfect choice for both power and sailboats. Ultima Eco's surface wears away over time, eliminating paint film build up and the need for sanding. It can be used on almost all previously painted surfaces in good condition. Ultima Eco contains 50% more ECONEA™ biocide than the competition, providing true multi-season performance.

## Application Systems and Tips

Ultima Eco 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, dry and properly prepared prior to painting.

### Previously Painted Surfaces:

Ultima Eco may be applied over most aged hard and abrasive antifouling coatings. Consult the Pettit Antifouling Compatibility Chart for specific recommendations. Old tin copolymers must be removed completely or sealed with Pettit 6627 Tie-Coat Primer before applying this product. 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 thin finish coats of Ultima Eco. 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.

### 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, two 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 Ultima Eco.

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 Ultima Eco. See Pettit Protect User Manual for complete detailed instructions.

### 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 thin coats of Pettit Protect High Build Epoxy Primer (4700/4701 or 4100/4101), per label directions. Apply two thin coats of Ultima Eco. 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 two thin coats of Ultima Eco.

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 Ultima Eco.

### 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 Ultima Eco. 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 Ultima Eco.

### Bare Aluminum:

**Basic Method** - If the surface to be painted is smooth aluminum, apply one thin coat of Pettit 6455/044 Metal Primer and allow to dry for two hours. Read and follow carefully the instructions for application and top-coating on the Pettit 6455/044 primer label. For fresh water applications, apply two thin finish coats of Ultima Eco. For added corrosion resistance in salt water applications - follow above directions and apply two coats of Pettit 6627 Tie-Coat Primer, per label directions, prior to applying the two thin finish coats of Ultima Eco.

**Best Method** - For maximum corrosion resistance, sandblast to clean, bright metal and remove blasting residue with clean, dry compressed air or a clean brush. Immediately apply two coats of Pettit 4400/4401 Alumina Protect Epoxy Primer, followed by two coats of Pettit Protect High Build Epoxy Primer (4700/4701 or 4100/4101), per label directions. Apply two thin finish coats of Ultima Eco.

\*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.

# Ultima Eco

## Application Information



The active ingredients in Ultima Eco can settle over time, 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 of 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 Ultima Eco more than 5% (6 ounces per gallon) or inadequate paint film thickness will occur and premature erosion of the finish will be likely. Do not apply Ultima Eco in thick films or in more than two coats, as poor adhesion may result. When applying by roller, use a short nap (3/16" maximum) roller cover.

### 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. The surface to be painted should be dry, clean and free of any contaminants. It should be properly prepared by following the recommended systems below. When sanding old antifouling paint, always wear Personal Protective Equipment (PPE) to prevent the inhalation of sanding dust.

### 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.



# Pettit Technical Bulletin

## Pontoon Boat Antifouling

Pettit Paint offers three systems for applying antifouling paint to aluminum hulled vessels such as pontoon boats. System I is a basic four-step system described below that combines ease of application with a high level of protection from fouling and salt water environments, making it our most popular system. This process is designed for application to bare aluminum only. Following each step closely will lead to successful application. For the highest level of antifouling and corrosion protection follow the directions for System II *Advanced System for Higher Corrosion Protection*. For hulls previously damaged by electrolysis and/or corrosion refer to System III *Advanced System for Hulls Damaged By Electrolysis/Corrosion*. Always read and follow all product label directions.

### Systems

#### I. Basic System

#### II. Advanced System for Higher Corrosion Protection

#### III. Advanced System for Hulls Damaged By Electrolysis/Corrosion

### I. Basic System

#### Wax Removal

Many pontoon boat manufacturers apply a wax coating to the pontoons before they leave the factory in order to better preserve the aluminum finish. This wax MUST be removed prior to painting. Use D-95 Dewaxer using a wet/dry method to remove this wax. Apply D-95 Dewaxer to a small area using a wetted rag. Wipe to remove D-95 with a clean dry cloth. Continually change cloths in order to reduce contamination. A typical 20' to 26' pontoon boat will require at least 12-15 rags to properly remove wax.

#### 6455/044 Metal Primer Kit

A typical 20' to 24' pontoon boat will require about one 6455/044 Metal Primer quart size kit. In a separate container, mix together 6455 Metal Primer with included packet of 044 Reactor. HELPFUL TIP - For roller application thin 10 to 15% with denatured alcohol, this will make application easier. Add 20 to 25% denatured alcohol for spray application. Once completely mixed, apply primer to boat in ONE VERY THIN COAT. A 1/8" roller works well for this application. These rollers can be found in mohair type (usually called "adhesive applicators") or solvent resistant foam type. Let product dry 2 hours at 65 degrees or higher, or 4 hours at 50 to 65 degrees. Do not apply under 50 degrees as crystallizing of the product can result. Note that the aluminum substrate should be at least 50 degrees as well. When checking the temperature of the aluminum substrate, always check the inside of the pontoons as this will be the coldest.

#### 6627 Tie-Coat Primer

Mix 6627 Tie-Coat Primer well and apply one coat using a 1/4" or 3/8" nap roller. Additional coats may be applied to offer additional hull protection but are not necessary for good adhesion. If applying Vivid antifouling paint, two coats of 6627 Tie-Coat Primer are recommended. Follow overcoat times listed on the product label or technical data sheet. Please note that you may skip the Tie-Coat Primer step when using Hydrocoat Eco, Ultima Eco, Vivid Free, or Pontoon Pro however, you will significantly reduce the hull protection offered by this system.

#### Antifouling Paint

Apply two coats of either Hydrocoat Eco, Ultima Eco, Vivid Free, Vivid or Pontoon Pro antifouling paint following directions and dry times listed on the product label. When using Vivid antifouling, two coats of 6627 Tie-Coat Primer



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## Pontoon Boat Antifouling

are recommended. Remember not to paint areas directly under where zincs will be installed to assure proper contact with the hull.

### II. Advanced System for Higher Corrosion Protection

#### Paint and/or Wax Removal

If the hull has not been painted, use D-95 Dewaxer using a wet/dry method to remove any waxes and/or contaminants. Apply D-95 Dewaxer to a small area using a wetted rag. Wipe to remove D-95 with a clean dry cloth. Continually change cloths in order to reduce contamination. A typical 20' to 26' pontoon boat will require at least 12-15 rags to properly remove all waxes and contaminants. Sandblast, grind, or heavily sand the hull to create an adequate profile for the epoxy in the next step to attach. If the hull has been painted, sandblast or grind off current antifouling paint and primers and wipe down hull with Pettit #120 Brushing Thinner. Be sure there is an adequate profile for the epoxy in the next step to attach.

#### Aluma-Protect Aluminum Epoxy Primer 4400/4401

Stir both components thoroughly. Mix the two components together in the ratio of 1 part of Component A to 1 part of Component B by volume. Allow to stand 15 minutes at approximately 70° before using. (Allow to stand at least 30 minutes if temperature is between 50° and 65°F) May be applied by brush, roller, conventional or airless spray. Thinning is not normally required for application, however, small amounts of 97 Epoxy Thinner may be used if necessary to facilitate application. Wet film thickness should be 3.6 mils per coat, which yields 1.0 mil dry film thickness. A wet film thickness gauge should be used to monitor paint application. Apply one coat of Aluma-Protect Aluminum Epoxy Primer 4400/4401. At 70°F let dry 4 hours minimum, 96 hours maximum, and apply an additional coat followed by two coats of Pettit Protect High Build Epoxy Primer 4700/4701 following application and recoat instructions.

#### Pettit-Protect High-Build Epoxy Primer 4700/4701

Mix both components of the Pettit Protect 4700/4701 Gray or 4100/4101 White High Build Epoxy Primer thoroughly. Then mix the two components together in the ratio of 3 parts of Component A to 1 part of Component B by volume. Allow to stand 15 minutes at approximately 70° before using. (Allow to stand at least 30 minutes if temperature is between 50° and 65°F). Do not mix more material than can be used within the specified pot life shown. Apply two coats of Pettit Protect 4700/4701 High Build Epoxy Primer. Wet film thickness should be 7 mils per coat, which yields 4 mils dry film thickness. Avoid applying more than 10 wet mils per coat as this may result in solvent entrapment. A wet film thickness gauge should be used to monitor paint application.

#### Antifouling Paint

Apply two coats of either Hydrocoat Eco, Ultima Eco, Vivid Free, Vivid or Pontoon Pro antifouling paint following directions and dry times listed on the product label. Remember not to paint areas directly under where zincs will be installed to assure proper contact with the hull.

### III. Advanced System for Hulls Damaged By Electrolysis/Corrosion

#### Paint Removal

Sandblast or grind off current antifouling paint and primers paying particular attention to cleaning up the pitted areas. Raise the waterline if necessary to cover unpainted areas where pitting has occurred include areas such as inside the motor well. If pin-holes have formed in the pontoons and/or welds, use Splash-Zone A-788 two-part epoxy repair compound to make the necessary repairs. Sand all repair areas smooth by grinding or using 36 or 60 grit sandpaper



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prior to proceeding. Do not apply 6455/044 Metal Primer to areas repaired using Splash-Zone A-788 two-part epoxy repair compound.

### 6455/044 Metal Primer Kit

A typical 20' to 24' pontoon boat will require about one 6455/044 Metal Primer quart size kit. In a separate container, mix together 6455 Metal Primer with included small bottle of 044 Reactor. HELPFUL TIP - For roller application thin 10 to 15% with denatured alcohol. Add 20 to 25% denatured alcohol for spray application, this will make application easier. Once completely mixed, apply primer to boat in ONE VERY THIN COAT. A ½" roller works well for this application. These rollers can be found in mohair type (usually called "adhesive applicators") or solvent resistant foam type. Allow an overnight dry before proceeding to next step. Do not apply under 50 degrees as crystallizing of the product can result. Note that the aluminum substrate should be at least 50 degrees as well. When checking the temperature of the aluminum substrate, always check the inside of the pontoons as this will be the coldest.

### Aluma-Protect Aluminum Epoxy Primer 4400/4401

Stir both components thoroughly. Mix the two components together in the ratio of 1 part of Component A to 1 part of Component B by volume. Allow to stand 15 minutes at approximately 70° before using. (Allow to stand at least 30 minutes if temperature is between 50° and 65°F) May be applied by brush, roller, conventional or airless spray. Thinning is not normally required for application, however, small amounts of 97 Epoxy Thinner may be used if necessary to facilitate application. Wet film thickness should be 3.6 mils per coat, which yields 1.0 mil dry film thickness. A wet film thickness gauge should be used to monitor paint application. Apply one coat of Aluma-Protect Aluminum Epoxy Primer 4400/4401. At 70°F let dry 4 hours minimum, 96 hours maximum, and apply an additional coat followed by two coats of Pettit Protect High Build Epoxy Primer 4700/4701 following application and recoat instructions.

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Mix both components of the Pettit Protect 4700/4701 Gray or 4100/4101 White High Build Epoxy Primer thoroughly. Then mix the two components together in the ratio of 3 parts of Component A to 1 part of Component B by volume. Allow to stand 15 minutes at approximately 70° before using. (Allow to stand at least 30 minutes if temperature is between 50° and 65°F). Do not mix more material than can be used within the specified pot life shown. Apply two coats of Pettit Protect 4700/4701 High Build Epoxy Primer. Wet film thickness should be 7 mils per coat, which yields 4 mils dry film thickness. Avoid applying more than 10 wet mils per coat as this may result in solvent entrapment. A wet film thickness gauge should be used to monitor paint application.

### Antifouling Paint

Apply two coats of either Hydrocoat Eco, Ultima Eco, Vivid Free, Vivid or Pontoon Pro antifouling paint following directions and dry times listed on the product label. Remember not to paint areas directly under where zincs will be installed to assure proper contact with the hull.