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85698-1 2.2.2010



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

EPA Reg. Number:  
85698-1

Date of Issuance:  
FEB 2 2010

Term of Issuance:

Conditional

Name of Pesticide Product:

Eco-Clad Part A

NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Natural Science Technologies, Inc.  
7181 Chagrin Road  
Chagrin Falls, Ohio 44023

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.
2. Make the labeling changes listed below before you release the product for shipment:
  - a. Revise the "EPA Registration Number to read, "EPA Reg. No. 85698-1".

Signature of Approving Official:

Marshall Swindell  
Product Manager Team-33  
Regulatory Management Branch I  
Antimicrobials Division (7510P)

Date:

FEB 2 2010

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b. Under the "Hazard to Humans and Domestic Animals" section of the product label, change "Mining Enforcement and Safety Administration" to read "Mine Safety and Health Administration (MSHA)."

c. In the "Storage and Disposal" section, change the container disposal to comply with the "Container Rule" per PR Notice 2007-4.

d. Include the following statement to fall directly below the last paragraph in the Storage and Disposal section.

"HOT LINE NUMBER: Have the product container or label with you when calling a poison control cent or doctor or going for treatment. You may also contact [insert phone number] for emergency medical treatment information."

e. In the Precautionary Statement section, include the statement "Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco or using the toilet."

f. Under the Directions for Use heading, the sentence "It is a violation of Federal Law..." must be the first sentence directly below it

3. Please note that the one year room temperature storage stability (830.6317) and corrosion characteristics (830.6320) are upgradeable upon submission of the results of these studies within one (1) year from the date of this Notice of Registration.

4. Submit two (2) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the "accepted" label is enclosed for your records.

Sincerely,



Marshall Swindell  
Product Manager 33  
Regulatory Management Branch I  
Antimicrobials Division (7510P)

Enclosure

### Eco-Clad® PART A

Eco-Clad is a Stenoprophiluric Coating (Patent No.6,613, 435; & Patent No.6,555,228)  
Eco-Clad® is supplied as a two part (Part A + Part B) epoxy/copper metal coating which supports natural biofilm formation for the control of fouling organisms when applied as instructed. For use on commercial and or noncommercial (pleasure craft) marine vessels by qualified applicator.

This product can not be used alone and requires mixing with Eco-Clad Part B in the proper ratio as supplied with instructions in the original packaging. For further instructions and information see side panel and instruction sheet supplied with each package.

**Keep Out of Reach of Children**  
**Warning**  
(See side Panel for Precautionary Statements)

**Active Ingredient:**

Copper Powder\*.....59.3%  
Inert Ingredients.....40.7%  
Total.....100.00%

\* Percentage of copper in final Part A + Part B mixture is 52.0%.

**Batch #** \_\_\_\_\_  
**EPA Reg. No. 85698**  
**EPA Est. No. 85698-OH-1**

Natural Science Technologies, Inc.  
7181 Chagrin Road  
Chagrin Falls, Ohio 44023  
Tel. 440-247-0674

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**SIDE PANEL**

**PRECAUTIONARY STATEMENTS**

**WARNING**

**KEEP OUT OF REACH OF CHILDREN**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**WARNING.** May cause eye irritation. May be harmful if absorbed through skin. May cause nose and throat irritation. May cause allergic skin reaction. Avoid contact with skin, eyes or clothing. Wear protective clothing such as gloves, long sleeved cotton shirt, long pants and hat. Do not breathe dust, vapor or spray mist. Wash contaminated clothing before reuse. Never give anything by mouth to an unconscious person. Call a physician immediately. Avoid storage and usage near food and feed products. When used in confined areas or while spraying and/or sanding boat surface, wear a mask or a respirator jointly approved by Mining Enforcement and Health, under provisions of CFR 11. Skin and eye irritation may occur on exposure. Use protective clothing during wash down and/or application on marine vessels. Wash thoroughly after use.

**First Aid.**

**IF SWALLOWED:** Avoid alcohol. Do not induce vomiting. Get medical attention immediately.

**IF IN EYES:** flush with plenty of water. Get medical attention.

**IF INHALED:** remove victim to fresh air area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention immediately.

**ENVIRONMENTAL HAZARDS:** Do not contaminate waters by cleaning of equipment or disposal of waste. Do not allow chips and dust generated during paint removal to enter waters. Dispose of waste debris in an approved landfill. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System(NPDES) Permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your local State Water Board or Regional office of EPA.

**Directions for Use:**

To be used by qualified applicators. For use on boat bottoms/ ship hulls; (fiberglass), (wood), (primed steel), not to be used for any use not described. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Complete instructions are enclosed with each package and additionally listed at [www.eco-clad.com](http://www.eco-clad.com) for detailed instructions and MSDS sheets. Mix entire contents of both Part A and Part B, mix thoroughly with a paint mixer or by hand with a clean stirrer.

**STORAGE AND DISPOSAL:** Do not contaminate water, food, feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE DISPOSAL:** Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, state or local procedures.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

See *Mixing & Handling and Instruction* sheets for further information.

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**END SIDE PANEL**

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## DO

- DO use a paint mixing "propeller" attached to an electric drill to thoroughly stir Part A to be certain that all the copper particles are fully mixed.
- Do wear safety glasses
- DO add the entire amount of Part B to Part A and mix thoroughly using the "propeller" and electric drill.
- DO use a thermometer to follow the gradual increase in temperature of the paint to reach the induction temperature, stirring the paint occasionally with a spatula. When the temperature reaches 110°F (43°C), move quickly to the next step.
- Do thin the paint and to make it easier to apply, add Xylene thinner (sometimes labeled Xylol) and mix well with a propeller & electric drill.
- Do immediately begin to paint and not stop until all paint is applied. Use a foam roller or brush intended specifically for oil-based paints. The working time for painting is approximately 25 minutes when the air temperature is 85°F (29°C). This time will be shorter the higher the air temperature.

## DON'T

- DON'T paint your boat when the air temperature is less than 70°F (21°C). Lower temperatures lengthen cure time significantly.
- DON'T paint your boat if rain is forecast within 24 hours. Water marking will result if the paint is not fully cured.
- DON'T use Eco-Clad® paint on aluminum as it will cause galvanic corrosion of the aluminum.
- DON'T use any other thinner than Xylene, and DON'T use more than the recommended amount.
- DON'T use a roller with fabric nap to apply the paint. Use ONLY a foam roller made for solvent-based paints or a suitable brush.
- DON'T skimp on paint thickness; apply at least a 7-mil thickness.
- DON'T slow down or stop painting until all the paint has been used, or until the job is finished. After about 25 minutes, the paint will begin to "set up" making it unusable, and additional Xylene cannot "rescue" the paint.
- DON'T smoke while mixing or applying.

# Eco-Clad®

Paints

## Mixing & Handling Instructions

### Quick Start Guide

This guide offers the quickest way to start painting with Eco-Clad® paints. However, it is recommended that prior to painting, you read all instructions, precautionary labels and provided technical information.

1. Clean and prepare surface for epoxy paint
2. Stir Part A to re-suspend copper particles
3. Mix Parts A & B thoroughly
4. Allow temperature to reach 110°F (43°C)
5. Add 8oz. (240ml) Xylene for LargePak or 2oz. (60ml) for MiniPak
6. Paint the boat without stopping
7. Next day relocate jack stands and prepare surface
8. Paint primed jack stand areas with fresh Eco-Clad® paint
9. Re-launch boat after paint no longer feels tacky

### ABOUT LURITEK

Luritek, Inc. is a truly green company providing environmentally-friendly coatings for the marine and aquatic industries.

Luritek holds the exclusive license rights to the NSTI patents for use in the Marine Coatings Industry.

[www.luritek.com](http://www.luritek.com)



For more information, call 888-878-8130 or email us at [sales@luritek.com](mailto:sales@luritek.com)

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# Eco-Clad®

Paints

## Mixing & Handling Instructions



Read Instructions First Before Using

**IMPORTANT FOR USE**  
It is a violation of Federal law to use this product in a manner inconsistent with its labeling and intended use.



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# Eco-Clad®

Paints

## Mixing & Handling Instructions

## Breakthrough Antifouling Bottom Paint

Congratulations on your investment in Eco-Clad® anti-fouling paint. It will provide you with years of superior performance, reducing or eliminating hull maintenance, hard fouling, blistering and at the same time will help promote a "Greener" and more healthy ocean and planet.

### Product Description

Eco-Clad® paint is a 2-part epoxy coating that works by copying nature's own mechanism for repelling hard fouling - that is, creating and supporting a living bio-film (slime) on underwater surfaces. Eco-Clad® in essence is a very specialized food source for a preferred set of local and naturally occurring marine organisms that form the slime layer (biofilm). Much like the slime on fish, it is the bio-film that prevents hard fouling (e.g. have you ever seen a barnacle on a fish?). Eco-Clad® paint is consumed as a nutritious food source over time by the bio-film, therefore you should not skimp on paint thickness. The goal is a wet film thickness (WFT) of 7 mils which could last five years or more, whereas a thinner coating may not last as long. Because of the thick consistency of Eco-Clad® paint, only one coat is normally required to achieve the 7 mil thickness. Unlike other paints, Eco-Clad® paint is a tough and durable paint that is also a water barrier, improving blister protection.

### Importance of Induction Temperature on Cure Time

Eco-Clad® paint must be cured completely before re-launching your boat. To ensure the paint is fully cured within 24 hours after application, you MUST follow the instructions that describe how to reach the Induction Temperature of 110°F (43°C) before painting. Failure to do this may result in longer curing times of up to 80 hours if the induction temperature is not achieved.

### Degree of Cure - The "Finger Tack" Test

Generally speaking; if the induction temperature is reached as per the instructions (temperature rise to 110°F (43°C)), and the air temperature is above 70°F (21°C), Eco-Clad® paint will cure within 24 hours. Even shorter times have been observed with air temperatures of 80-85°F (26-29°C). The simple test for degree of cure is the extent of tackiness to the finger. When fully cured, the paint should feel dry or only slightly tacky to the finger.

### Boat Hull Preparation

NOTE: Do not paint aluminum boats with Eco-Clad® 1000 because it will most likely result in galvanic corrosion of the aluminum. The non-aluminum boat hull should be clean, dry and properly prepared for an epoxy paint. Remove old paint if necessary, sand, repair any blisters under your boat manufacturers instructions, and then prepare the surface by painting with a suitable epoxy primer such as Interlux 2000e or equivalent.

### Metal Running Gear Preparation

NOTE: Do not paint aluminum components with Eco-Clad® 1000 because it will result in galvanic corrosion of the aluminum. Do not paint zinc electrodes or their electrical contact points with Eco-Clad® 1000. is appropriate for stainless steel, bronze, or brass. Painting metal running gear with Eco-Clad® 1000 requires special preparation:

1. Remove any old paint to achieve a suitable solid and clean surface.
2. Sand with 80 grit sandpaper or equivalent to provide for good adhesion.
3. Wipe with solvent; suitable solvents include non-residue producing solvents such as xylene to remove any grease or oily residue
4. Apply 1 coat of epoxy primer, i.e. Interlux Vinylux Prime Wash
5. Wait typically one hour minimum or until slightly tacky; in no event more than 24 hours
6. Apply 3 coats of epoxy tie coat i.e. Interlux® 2000e, drying between coats for 1 hour or until slightly tacky given current weather conditions.
7. Apply one coat of Eco-Clad® 1000
8. Re-attach metal fittings to the boat after the paint is cured.

### Storage Out Of Water

Eco-Clad® paint retains its ability to re-establish the bio-film very quickly even after being out of the water for extended periods of time. Storage on land over the winter is acceptable. It is best to insure that the Eco-Clad® paint is clean prior to relaunch. After the initial painting, you may take as long as you wish to re-launch your boat, so long as the paint is fully cured (completely non-tacky to the touch) and once again clear of dirt or debris.

### Expected Color Changes

Bio-films developing on Eco-Clad® paint are generally very dark green or gray or even occasionally black due to current local water conditions. Therefore, Eco-Clad® painted surfaces below the water line will quickly darken (1-2 days), which is an indication that the paint is functioning well and doing its job. Above the water line Eco-Clad® paint will exhibit other colors, including lighter shades of green/blue. This change of color is normal and expected, and is routine in most applications.

### Application Instructions

(1) Completely stir Part A (the entire contents of the larger can) to be certain that all the copper particles that may have settled to the bottom are fully mixed. (Leaving copper particulate in the bottom of the can prevents best results). This is best done using a paint mixing "propeller" attached to an electric drill. This may require several minutes of thorough stirring. Check the bottom of the can with a stick or wooden paint stirrer to be certain all particulate is suspended in the paint.

(2) Add the entire amount of the smaller can of EcoClad® 1000B hardner to EcoClad 1000A and mix thoroughly using the "propeller" and electric drill.

(3) Allow the paint to reach the recommended Induction Temperature of 110°F (43°C). Use the thermometer supplied to follow the gradual increase in temperature of the mixture, stirring the paint occasionally with a spatula. When the temperature reaches 110°F (43°C) the Induction Temperature has been reached and you should move quickly to step #4 below.

During this induction period, Part A combines with Part B and creates its own heat. This temperature rise can take 15 - 30 minutes, depending on the starting temperature of the two components, batch size, and ambient air temperature. Higher Part A and Part B starting temperatures, larger batch sizes, and higher air temperatures shorten the time to reach the Induction Temperature. Conversely, lower Part A and Part B starting temperatures, smaller batch sizes, and lower air temperatures increase the time to reach the Induction Temperature.

NOTE: If the Induction Temperature is not reached within 30 minutes (usually because of lower air temperature), proceed to step #4 anyway. The required combination has taken place, but the cold air temperature has dissipated away the heat, keeping the measured temperature low. This may increase the curing time.

(4) For the Eco-Clad® LARGE-PAK: When the paint temperature reaches the recommended 110°F (43°C), add up to 1 cup (8 oz or 240ml) of Xylene thinner (sometimes labeled Xylol) and mix well with a "propeller" and electric drill. Immediately begin painting with a foam roller or brush. Use ONLY a foam roller made for solvent-based paints or a suitable brush. The working time for painting is approximately 25 minutes when the air temperature is 85°F (29°C). With the LARGE-PAK it's a good idea to have more than one person painting at the same time so that the paint will be used before the working time is up. Go to step 6.

(5) For the Eco-Clad® MINI-PAK: When the paint temperature reaches the recommended 110°F (43°C), use a measuring cup and add up to 1/4 cup (2 oz or 60ml) of Xylene thinner (sometimes labeled Xylol) and mix well with a spatula and immediately begin painting with a foam roller or brush. Use ONLY a foam roller made for solvent-based paints or a suitable brush. The working time for painting is approximately 25 minutes when the air temperature is 85°F (29°C).

(6) The following day, relocate the jack stands revealing the as-yet unpainted areas. Paint those areas with a suitable primer as previously directed (i.e. Interlux® 2000e primer or equivalent). Using an Eco-Clad® MINI-PAK, paint those areas with Eco-Clad® 1000.

(7) Relaunch the boat when all surfaces no longer feel tacky or slightly tacky.

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