ePaint
*The Environmental Paint Company*

# EP-2000
## ANTIFOULING PAINT
TECHNICAL DATA SHEET (2012-02)

- ***High performance antifouling paint***
- ***Rated "Excellent" by Practical Sailor Magazine After 18 Months in FL Waters (March, 2011 Issue)***
- ***Extremely hard, durable and mar-resistant***
- ***Easily burnish to a sleek racing finish***
- ***Perfect choice for boats in tropical waters***
- ***Features the most advanced slime control and proprietary photo-active technology***
- ***Long lasting multi-season performance***
- ***Advanced water-based formula! - Self-leveling, no harsh solvent smell, clean up with soap and water***
- ***Self-priming on bare aluminum†***

## GENERAL DESCRIPTION


ePaint EP-2000 is a high-performance copper-free antifouling paint recommended for all boats in fresh and salt water. EP-2000 provides excellent antifouling protection in even the harshest tropical environments. EP-2000 offers the hardest bottom paint finish available and is perfect for racing sailboats and powerboats frequently hauled and launched by trailer. EP-2000 is copper-free and will not promote corrosion on metal parts or aluminum hulls. EP-2000 is also self-priming on clean, non-abraded aluminum (†see details in following pages). EP-2000 is a green antifouling paint, preventing bio-fouling by combining a novel patented photo-active process and actives that do not persist in a water-based formula.

## APPLICATION INFORMATION

EP-2000 may be applied by traditional painting techniques. EP-2000 is not compatible over existing antifouling paints, should not be applied if temperatures will drop below 60°F during the drying process, should not be applied too thick, and consecutive coats should not be rushed. Follow instructions set forth in this technical data sheet for detailed information for your particular application.

## SURFACE PREPARATION

Proper surface preparation is an extremely important step for a coating system that performs properly and lasts. Follow recommendations set forth in following sections carefully. Inadequate surface preparation will result in poor coating performance.

## MAINTENANCE

No antifouling paint can be effective under all conditions of exposure. Pollution and natural occurrences can adversely affect antifouling paint. Extreme air and water temperatures, silt, dirt, oil, poor water clarity, and low oxygen levels can harm antifouling paint. Therefore, ePaint suggests that the bottom of the boat be checked regularly to make sure it is clean and that no growth is occurring. Lightly scrub the bottom with a cloth or soft brush to remove anything from the antifouling paint surface. Scrubbing is particularly important to boats that sit idle for extended periods of time in high fouling bodies of water. Antifouling paints are generally more effective when the boat is used periodically.

## PHYSICAL DATA

**COLORS:**

| | |
|---|---|
| 001 YELLOW** | |
| 101 BLUE | |
| 301 BLACK | |
| 401 BRIGHT WHITE* | |
| 701 LIGHT GRAY* | |
| 901 SAFETY ORANGE** | |

*Most photoactive, best choice for high fouling & tropical waters
**Custom tints, please call for price and availability

**PACKAGING:** Quart, gallon, 5 gallon pail
**SHELF LIFE:** 1 Year from DOM
**VEHICLE TYPE:** Water and co-solvent
**CURING MECHANISM:** Evaporation and oxidative cure
**SOLIDS BY VOLUME:** 44% ± 2%
**THEORETICAL COVERAGE:** Min 210 $ft^2$/gal
**VOC:** 100 g/L
**FLASH POINT:** 82°F (28°C) Setaflash
**STORAGE:** Between 38°F and 80°F
**ACTIVE INGREDIENT:** Zinc Omadine®, 4.8%

## APPLICATION DATA

**METHOD:** Brush, conventional spray, roller
**NUMBER OF COATS:** 3 full coats with 2 additional coats at waterline and leading edges (e.g. bow, keel, rudder, chines)
**DRY FILM THICKNESS:** 3-4 mils per coat
**WET FILM THICKNESS:** 5-8 mils per coat, do not exceed 8 mils wet per coat
**APPLICATION TEMP:** 60°F to 90°F
**MAX DRY TIME (Hours):** at 50% R.H.

| Temp | To Re-coat | To Launch |
|---|---|---|
| 90°F | 5 | 20 |
| 70°F | 8 | 24 |
| 65°F | 16 | 30 |
| <60°F | Do not apply | |

The above dry times are minimums. Increased humidity will increase re-coat and launch times. Re-coat EP-2000 within 7 days to avoid additional surface prep (sanding).
**MIN DRY TO LAUNCH TIME:** not critical
**THINNER:** mineral-free bottled water
**CLEAN-UP:** soap and water

## COMPANION PRODUCTS

- EP-PRIME 1000 multi-purpose epoxy primer

- EP-STRIP, water-based, non-caustic paint/varnish remover
- ePROP & EP-21 Aerosol Kit for props & running gear



- Wet film thickness gage

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# APPLICATION DETAILS

Visit www.ePaint.com or contact an ePaint Technical Representative for answers to questions regarding application of this product before painting. EP-2000 is an excellent antifouling paint but it is application sensitive and instructions set forth in this technical data sheet must be followed for your particular application.

EP-2000 may be applied by traditional painting techniques (e.g. brush, conventional spray, or roller). *Stir* paint thoroughly before use to ensure materials are uniformly dispersed throughout the can. Avoid shaking as this will introduce air and result in foaming which would require time to settle before use. All surfaces to be painted shall be clean prior to sanding and painting. Only apply EP-2000 when substrate and ambient air temperature are between 60°F and 90°F. Do not paint when substrate is wet from rain or dew, or when surfaces are less than 5°F above the dew point and holding or when relative humidity is greater than 85%. Do not apply EP-2000 if temperatures are expected to dip below 60°F within a 16 hour period. Follow Dry Times listed on the opposite page. Do not apply EP-2000 at a thickness above 8 mils wet (thin multiple coats are best). Do not polish or wet sand between coats; perform this step after final coat if desired.

**PREVIOUSLY PAINTED SURFACES:**

EP-2000 is not compatible over any other antifouling paint system. EP-2000 may be applied over itself and existing epoxy type primers and barrier coatings.

Traditional Antifouling Paints: EP-2000 is not compatible over any other antifouling paint. Remove existing antifouling paint with ePaint EP-Strip non-caustic paint remover or an alternative method (e.g. soda blasting)

Existing EP-2000 Surface: Any old loose, cracking, peeling, and flaking paint should be removed. Thoroughly wash the existing surface with water, do not wipe down hull with any other solvent besides water. Abrade existing EP-2000 with 80 grit sandpaper, wipe away dust and debris with water soaked rag, and allow to air dry. Following instructions set forth in the Application Data section on the previous page, apply two or three full coats of EP-2000 with additional two or three coats around the waterline and leading edges. Do not polish or wet sand between coats.

Epoxy-type Primers and Barrier Coats: EP-2000 is compatible over most epoxy-type primers, such as ePaint EP-Prime 1000, that are in clean condition and thoroughly roughened with 80 grit sand paper. It is strongly recommended that a fresh tie-coat of epoxy primer be applied to eliminate the chance of surface contamination and for improved adhesion. If desired apply a fresh tie-coat of epoxy primer and follow one of these options:

Option 1: Apply the first coat of EP-2000 when the final tie-coat of epoxy has *dried-hard but before it is fully cured*; this condition is normally reached around 17 hours at 70°F and always within 24 hours. *(Note: chemically, all solvent must completely evaporate and the primer should feel hard although the epoxy and hardener have not fully reacted 100%; use your nose to smell for residual solvent and wait longer if detected. This phenomenon is dependant on temperature and humidity; in warm dry climates at temps above 80oF this condition may be reached same day.)* Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.

Option 2: Allow the tie-coat of epoxy primer to fully cure (minimum 24 hours), mechanically abrade surface with 80 grit sand paper, and remove all dust and debris. Following instructions set forth in the Application Data section on the previous page, apply three full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.

**FIBERGLASS:**

EP-2000 may be applied directly to bare fiberglass that is clean and free of contaminants. Optionally, ePaint EP-Prime 1000 epoxy primer may be used for improved adhesion and to reduce the potential for water migration on boats that are in service year round. Take care to thoroughly clean and remove all mold release agents and boat finishing wax residue prior to sanding; mechanically abrade fiberglass hull with 80 grit sandpaper to create a dull matte finish and wipe away all dust and debris.

GOOD: Apply EP-2000 directly to clean bare fiberglass. Following instructions set forth in the Application Data section on the opposite page apply three full coats with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.
BETTER: Apply one tie-coat of EP-Prime 1000 epoxy primer for improved adhesion. Apply the first coat of EP-2000 when the final tie-coat of epoxy has *dried-hard but before it is fully cured*; this condition is normally reached around 17 hours at 70°F and always within 24 hours. Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.
BEST: Fiberglass boat bottoms are potentially susceptible to water migration and can potentially form osmotic blisters within the gelcoat and into the laminate. To render the bottom as water impermeable as possible, apply three full coats of ePaint EP-Prime 1000 multi-purpose epoxy primer. Apply the first coat of EP-2000 when the final tie-coat of epoxy has *dried-hard but before it is fully cured*; this condition is normally reached around 17 hours at 70°F and always within 24 hours. Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.

**ALUMINUM:**
**ePaint EP-2000 is safe for direct application to aluminum and metal parts as it will not promote galvanic corrosion.** EP-2000 may be applied to new bare clean aluminum and for all other applications only one tie-coat of ePaint EP-Prime 1000 epoxy needs to be applied for ultimate adhesion. All aluminum surfaces should be thoroughly clean to remove all contaminants such as oil, grease, flux, salts, dirt, debris, etc. before abrading and painting.

New, Smooth Aluminum: EP-2000 may be applied directly to new, smooth aluminum surfaces without the use of an epoxy-type primer. **This option is perfect for aluminum pontoon and small power boats.** Do not apply EP-2000 over abraded or worn aluminum or welded areas, prime first with ePaint EP-Prime 1000 (see next step). Following instructions set forth in the Application Data section on the opposite page apply three full coats with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.
Abraded, Worn Aluminum and Welded Areas: Abraded and worn aluminum surfaces and welded areas should be primed with EP-Prime 1000 for ultimate adhesion. All direct to metal coatings provide maximum performance over blasted surfaces. Metal surfaces should be prepared to no less than a near-white metal cleanliness in accordance with NACE 2/SSPC-SP-5/SA 2.5 specifications. Abrasive blast or mechanically abrade with 80 grit aluminum oxide sandpaper to achieve a 1.5 - 2.5 mil (38 - 63 micron) depth profile in a sharp, jagged pattern as opposed to a peen pattern from shot-blasting; *immediately* prime with EP-Prime 1000 corrosion inhibiting epoxy primer. Apply the first coat of EP-2000 when the final tie-coat of epoxy has *dried-hard but before it is fully cured*; this condition is normally reached around 17 hours at 70°F and always within 24 hours. Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.

**STEEL:**
All steel surfaces must be primed with a minimum of two coats of ePaint EP-Prime 1000 corrosion inhibiting epoxy primer. All direct to metal coatings provide maximum performance over blasted surfaces. Metal surfaces should be prepared to no less than a near-white metal cleanliness in accordance with NACE 2/SSPC-SP-5/SA 2.5 specifications. Abrasive blast or mechanically abrade with 80 grit aluminum oxide sandpaper to achieve a 1.5 - 2.5 mil (38 - 63 micron) depth profile in a sharp, jagged pattern as opposed to a peen pattern from shot-blasting; *immediately* prime with EP-Prime 1000 corrosion inhibiting epoxy primer. Apply final coat of EP-Prime 1000 next day to within one week. Apply the first coat of EP-2000 when the final tie-coat of epoxy has *dried-hard but before it is fully cured*; this condition is normally reached around 17 hours at 70°F and always within 24 hours. Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats.

**WOOD (BARE)**:
Clean and abrade surface with 80 grit sandpaper and wipe away all dust and debris. Reduce first coat of EP-2000 about 20% by volume with mineral-free bottled water and allow to dry overnight. Following instructions set forth in the Application Data section on the previous page, apply two more full coats of EP-2000 with additional two coats around the waterline and leading edges. Do not polish or wet sand between coats. Not compatible over silicone-based fillers.

**TIPS & CONSIDERATIONS**:
- Stir EP-2000 before use, do not shake as this will cause paint to foam requiring additional time to settle before use; pinholes can form applying foamy paint
- Continually stir EP-2000 during application and cover can with lid to prevent skinning of paint in can
- Due to the photo-active nature of ePaints, additional coat(s) around the waterline are strongly recommended to extend coating service life.
- Stripe coating high wash areas and leading edges such as the bow, keel, rudder, chines and sterngear is also recommended to extend coating service life.
- Lighter colors of EP-2000 like white or gray will offer excellent antifouling performance in high-fouling tropical waters. Darker colors of EP-2000 such as blue or black will offer longer service-life and is a good option for low to moderate fouling conditions and on boats that will be occasionally maintenance wiped.
- EP-2000 does not need to be thinned under most conditions but for spray application or application in warm climates, reduce only with mineral-free bottled water.
- EP-2000 is slightly translucent by design and first coat may show through underlying paint of a sharp contrasting color; consecutive coats will hide.
- Do not apply EP-2000 above 8 mils wet or co-solvent entrapment will occur with blistering and adhesion failure the result; thin multiple coats are best; the use of a Wet Film Thickness Gage is strongly recommended (available from www.epaint.com or paint store for a nominal fee.)
- Make sure to follow Dry Times at given temperatures when re-coating; rushing application of consecutive coats will result in co-solvent entrapment and lead to blistering and adhesion failure.
- Cool temperatures will inhibit co-solvent evaporation; remember temperatures may fluctuate throughout the day and generally decrease at night; allow for extra time between coats and/or launch for cooler temperatures
- High relative humidity will slow down evaporation of co-solvent and additional dry time will be required before applying consecutive coats or launching boat
- EP-2000 may feel hard and cured even though co-solvent is still present; make sure to follow the Dry Times at your particular temperature so co-solvent has the chance to evaporate before re-coating or launching boat
- EP-2000 is a very hard photo-active coating and as a result may wear differently than traditional ablative type paints; in some situations EP-2000 may wear away as micro-thin sheets rather than an ablative cloud plume, typically this is not noticeable unless the boat has not been used for some time and layers have built up; wiping away degraded layers will normally regenerate the surface.
- If wet sanding and polishing is desired, do this step after applying the final coat, not between coats, as a polished surface will inhibit adhesion of consecutive coats.
- During reapplication of EP-2000 in following seasons, make sure to only use water when prepping the surface; do not use solvents that contain ketones such acetone, MAK, MEK as these chemicals can jeopardize the coating

**SAFETY**:
See individual label for health and safety data. MSDS may be requested by contacting ePaint Company.

**NOTES**:
Information in this technical data sheet is not intended to be exhaustive and is subject to modification from time to time in the light of experience and our policy of continuous product development. Please visit www.epaint.com for the most recent product information and updates.