



The Environmental Paint Company

EP-Prime 1000
Multi-Purpose Epoxy Primer
TECHNICAL DATA SHEET (2010-03)

FEATURES **RECOMMENDED USES**

- Excellent corrosion protection for boats in both salt and fresh water environments
- Lower cost of surface preparation
 - Surface tolerant and robust
 - Self-priming on prepared metals, no other chemical treatments required
- Fast dry-to-recoat times
- Cures at low temperatures, 40°F (4.4°C)
- Provides an exceptional base coat and improved adhesion for any ePaint coating
- Low VOC and high solids formula

- Corrosion protection on all underwater metals
- To improve adhesion of any ePaint antifouling or foul-release coating on fiberglass, aluminum and wood hulls
- Minimizes water absorption and an excellent choice for osmotic blister prevention on fiberglass hulls

SPECIFICATION DATA

Coating Type: 2-Part epoxy primer

Packaging: 1 Gallon (3.79 Liter) Kit (0.80 gal base, 0.20 gal hardener)

Colors: **ePaint Number**
 Oxide Red P1000-505
 Haze Gray P1000-705
 White P1000-405

Mixing Ratio: 4:1 Part A to Part B by Volume

Solids By Volume: 68% ± 2%

VOC: 2.40 lb/gal (290 g/l)

Flash Point: 100°F (38°C) when catalyzed

Density: 11 lb/gal (1.3kg/l)

Thinner: ePaint EP-10 thinner

Induction Time: 15 min at 75°F (24°C) & 50% R.H.

Pot Life: 4 hours at 75°F (24°C) & 50% R.H.

Application: Traditional painting techniques (spray, brush, or roller); spray for smoothest possible finish

Shelf Life: 2 years unopened

Recommended Number of Coats:

- Metal corrosion protection: two coats
- Adhesion promotion (tie-coat): one mist coat
- Barrier protection: three coats

Recommended Film Thickness:

- Tie-coat: 1 coat, applied at 3 to 5 mils wet for 2 to 3 mils dry (total dry film thickness at 2 to 3 mils)
- Corrosion Protection: 2 coats, each coat applied at 6 to 8 mils wet for 4 to 5 mils dry (total dry film thickness at 8 to 10 mils)
- Barrier Protection: 3 coats, each coat applied at 6 to 8 mils wet for 4 to 5 mils dry (total dry film thickness at 12 to 15 mils)

Theoretical Spreading Rate:

- 1,090 ft²/gal at 1 mil dry film thickness
- 311 ft²/gal when applied at 3.5 mils dry
- 242 ft²/gal when applied at 4.5 mils dry

Recoat Intervals:

Surface Temperature	40°F (4.4°C)	60°F (15.6°C)	80°F (26.7°C)
Min. Recoat Over Self	11 hr	6 hr	3 hr
Max. Recoat Over Self	7 days	7 days	7 days
First Coat of Standard ePaints (e.g. ZO, SN-1, EP-21, Ecominder®, Sunwave®)	Apply when final primer epoxy coat is tack-free but soft-to-finger pressure		
First Coat of Specialty ePaints (i.e. EP-2000)	Apply when final primer epoxy coat has dried hard, always within 24 hrs (17 hrs at 70°F)		

ePaint Company • 25 Research Road, East Falmouth, MA 02536 • 508-540-4412 • www.epaint.com

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.

OVERVIEW

General Description:

EP-Prime 1000 is a technologically advanced, multi-purpose epoxy primer recommended for use with any ePaint antifouling or foul-release coating.

Recommended Uses:

For salt and fresh water immersion service; as a corrosion inhibiting primer for metal surfaces; as a primer for any ePaint antifouling coating; as a tie-coat over previously epoxy primed surfaces and fiberglass to promote adhesion of ePaint antifouling coatings; to minimize water absorption and minimize the chances for osmotic blistering of fiberglass laminate.

Not Recommended For:

Application over existing antifouling paints, remove first.

APPLICATION DETAILS

CLIMATE:

Only apply EP-Prime 1000 if the substrate temperature and ambient air temperature are above 40°F (4.4°C). Do not paint when substrate is wet from rain or dew, or when surfaces are <5°F (3°C) above dew point or when relative humidity is >85%.

SURFACE PREPARATION:

Adhesion of any coating depends on proper surface preparation. Substrate shall be free of oil, grease, water, dust, dirt, salt/chloride, antifouling coatings, foul-release coatings, oxides, loose rust, all rust scale, and all foreign matter *before* blasting or abrading. Cleanliness is the most important step to achieve a coating system that will perform and last. After abrading any surface, remove all dust and debris.

EXISTING BOTTOM PAINT:

Remove all existing bottom paints using ePaint EP-STRIP or alternative paint removal technique. No epoxy-type primer should ever be applied over existing bottom paints.

METAL:

All direct to metal coatings provide maximum performance over blasted surfaces. Metal surfaces should be prepared to no less than a near-white metal blast cleanliness in accordance with NACE 2, SSPC-SP-10, SA 2.5 specifications. Abrasive blast or mechanically abrade with 80 grit aluminum oxide paper to achieve a 1.5 to 2.5 mil (38 to 63 micron) depth profile and be a sharp, jagged pattern as opposed to a "peen" pattern from shot-blasting. After preparing metal surface, *immediately* apply a full coat of ePaint EP-Prime 1000 primer (see instructions in *APPLICATION* section below).

FIBERGLASS HULL:

Mechanically abrade gel-coat with 80 grit sand paper to achieve a dull matte finish.

EXISTING EPOXY PRIMED/BARRIER COATED SURFACES:

Mechanically abrade existing epoxy coating with 80 grit sand paper to achieve a roughened surface profile.

ePaint Company • 25 Research Road, East Falmouth, MA 02536 • 508-540-4412 • www.epaint.com

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.

MIXING:

EP-Prime 1000 is packaged in two containers, Part A (resin) and Part B (curing agent). Power mix or stir Part A to obtain a smooth homogenous mixture. Slowly add the Part B into the Part A with continued agitation. Continue to mix the components until a smooth homogenous mixture results. The entire contents of each container must be mixed completely together. Allow material to stand for 15 minutes at 75°F (24°C) prior to use or reduction with ePaint EP-10 thinner. Always stir prior to use.

POT LIFE:

Pot life for EP-Prime 1000 at 70°F (21°C) is approximately 4 hours. Colder temperatures will increase the pot life and warmer temperatures will decrease the pot life. If material thickens, do not thin, discard and use fresh material. Keep cans out of direct sunlight.

THINNING:

Not generally required. If thinning is necessary for viscosity reduction or to obtain a smoother finish, use only ePaint EP-10 thinner. Only reduce after induction time (15 minute after mixing components together). Do not thin EP-Prime 1000 more than 10% by volume. Do not thin more than your local VOC and air quality regulations allow.

APPLICATION:

EP-Prime 1000 may be applied by traditional painting techniques (spray, roller, and brush); spray is preferred for the smoothest finish and film build control. For metal surfaces, the first coat of EP-Prime 1000 must be applied *immediately* after preparing surface. Apply number of coats for your particular application and follow recoat times as listed in the *SPECIFICATION DATA* section of this technical data sheet. Be aware that temperature gradients may exist on boat hull (e.g. sun vs. shade) and the job should be planned out accordingly before painting. Read relevant antifouling or foul-release coating technical data sheet instructions before painting. It is important for the safety of the applicator and proper cure of EP-Prime 1000 that good ventilation be provided and dry, fresh air is brought into area to remove all solvent vapors during the entire cure process and to ensure all solvents are removed from the coating.

AIR SPRAY:

Use a "mastic" gun, fluid tip of 0.070" or larger and an air cap with good break-up. The fluid pressure should be kept low at about 15 PSI to get good paint break-up and prevent overspray problems which can happen with excessive air pressure. The compressed air source must be dry and should be outfitted with air dryers for moisture-free air.

AIRLESS SPRAY:

Use an airless pump capable of 3000 psi (207 bar) and 0.021" to 0.025" tip size to provide a good spray pattern. Fluid hoses should be 3/8" ID or larger and not longer than 50'. Longer hose length may require increased pump capacity, pressure and/or thinning with ePaint EP-10 thinner.

ROLLER:

Use a clean synthetic roller with 1/4' to 1/2" nap. Rollers should be thoroughly wet with ePaint EP-10 thinner and spun to remove loose fibers. Keep replacement rollers on hand. Rolling may require multiple coats to achieve correct film build.

BRUSH:

Use a high quality china bristle brush.

ANTIFOULING AND FOUL-RELEASE COATING APPLICATION:

Read relevant antifouling or foul-release coating technical data sheet instructions before painting, available at www.epaint.com.

ANTIFOULING & FOUL-RELEASE COATINGS: (e.g. ePaint SN-1, SN-1^{HP}, ZO, ZO^{HP}, EP-21, ECOMINDER[®], SUNWAVE[®])

Apply first coat of antifouling or foul-release coating when the last coat of EP-Prime 1000 has reached the “tack-free but soft-to-finger pressure” curing stage, usually 2 to 4 hours at 70°F. If rolling, avoid excess pressure and back-rolling as epoxy primer is still soft. If primer has cured too hard and recoat window has passed, see *REPAIRS* section below.

SPECIALTY ANTIFOULING COATINGS: (i.e. EP-2000)

Apply first coat of antifouling paint when the last coat of EP-Prime 1000 has dried hard and solvent has evaporated (~17 hours @ 70°F) but before it has fully chemically cured and always within 24 hours. If outside 24 hours and recoat window has passed, see *REPAIRS* section below.

REPAIRS:

For unpainted areas, such as under blocks and stands, prepare surface as noted in *SURFACE PREPARATION* section, feather out bottom painted surfaces 1” to 2” around bare area, and follow instructions in relevant *APPLICATION* section. If window for application of antifouling or foul-release coating has passed and the primer application is less than 7 days, apply a tie-coat of EP-Prime 1000 and recoat according to relevant *APPLICATION* section instructions. If primer application has exceeded 7 days, mechanically abrade surface with 80 grit sandpaper, remove all dust and debris, and apply another coat of EP-Prime 1000; apply desired antifouling or foul-release coating as noted in above *ANTIFOULING AND FOUL-RELEASE COATING APPLICATION* section.

CLEANUP:

Purge and clean spray equipment immediately after the final spray. Flush equipment with EP-10 thinner until solvent sprays clear. Dispose of any unused materials according to Federal, state and local laws.

SAFETY:

Make sure to work only in well ventilated areas. See individual product label for safety and health data. A Material Safety Data Sheet may be requested by contacting ePaint Company or downloading at www.epaint.com.