

TotalBoat TotalProtect Epoxy Primer & Barrier Coat - Tech Data Sheet

SUPPORT PRODUCTS:

- Reducer:** TotalBoat Epoxy Primer Thinner 200 (Brush, Roll, or Spray application)
Cleanup: TotalBoat Epoxy Primer Thinner 200 or TotalBoat Dewaxer & Surface Prep
Surface Prep Solvents: TotalBoat Dewaxer & Surface Prep (Fiberglass, Wood, Bare Steel, Aluminum); TotalBoat Special Brushing Thinner 100 (Wood)
Osmotic Blister Repair: TotalBoat TotalFair Epoxy Fairing Compound
Aluminum (Optional): Aluminum Boat Etch Wash

COMPATIBLE SUBSTRATES:

- Wood:** Yes
Fiberglass: Yes
Metals: Yes
Previously Painted Surfaces: Yes (not over 1-part paints). **Always test the previous paint to verify it is not a 1-component paint.**

SURFACE PREPARATION:

Fiberglass or Wood * Remove all surface contaminants, including water, dust, wax, grease, oil, surface blush, etc.

- * Wipe clean with a lint-free cheesecloth or rag dampened with TotalBoat Dewaxer & Surface Prep.
- * Abrade the surface lightly with 80-grit sandpaper until the surface has a uniform, dull, frosty finish.
- * Wipe clean with a lint-free cheesecloth or rag dampened with TotalBoat Dewaxer & Surface Prep.
- * Apply TotalProtect, as directed.

Fiberglass Blister Repair: * Remove all paint from the area by sanding to expose all gelcoat blisters.

- * Puncture all osmotic blisters, and grind out only the affected laminate at each blister. Rinse the opened up blisters with water to remove any contaminants and allow to dry completely - a moisture meter may be needed to ensure that the inner fiberglass is completely dry and ready for the next steps.
- * To remove any remaining contaminants, a solvent wipe with denatured alcohol or acetone can be done prior to applying epoxy.
- * Apply TotalBoat TotalFair to each blister, as directed, ensuring that it is smooth with the rest of the hull's contour. Allow to cure until it is sandable, then sand with 80-grit sandpaper. Remove any sanding residue.
- * Apply TotalProtect, as directed.

Bare Steel: * Sandblast to SSPC-SP 6 Commercial blast or grind the surface until it is bare, shiny metal.

- * Remove all sanding or blasting residue (sweep, brush, or vacuum, compressed air).
- * Wipe clean with a lint-free cheesecloth or clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep, and follow with a clean, dry, cotton rag.
- * Apply TotalProtect within 1 hour of metal preparation. For proper adhesion, metals must be shiny and clean.

Bare Lead: * Disc sand or otherwise abrade the surface to bright metal. Ensure that a 3-4 mil anchor profile is achieved. Remove all sanding residue.

- * When applying on lead, TotalProtect must be applied immediately after grinding to shiny metal, before the surface oxidizes and turns dull. Immediately apply 1 coat of TotalBoat TotalProtect thinned 20% with TotalBoat Epoxy Primer Thinner 200 (Yes - this percentage is higher than the normal recommended percentage for thinning).

Bare Iron: * Sand, grind or abrade the surface to bright metal and remove any residue.

- * For any areas that have red rust, use TotalBoat Rust Primer, as directed on the label. Apply 1 coat of TotalBoat TotalProtect within 1 hour of completing all surface preparation to ensure the best bond.

Aluminum * Sandblast (using non-metallic media) or disc sand the aluminum to clean, bright metal.

- * Remove all sanding or blasting residue (sweep, brush, or vacuum).
- * Wipe clean with a clean, lint-free cotton rag dampened with TotalBoat Dewaxer & Surface Prep. Allow the solvent to evaporate.
- * TotalBoat Aluminum Boat Etch Wash is not required, but can be used, as directed, immediately after sanding/grinding to maximize the bond to the aluminum.
- * Dry the metal completely.
- * Apply TotalProtect within 1 hour of completing the metal preparation. If the metal has time to oxidize to a dull finish, TotalProtect will not adhere properly.

Previously Painted Surfaces: * Always verify that you are not attempting to overcoat a 1-component paint.

- * Always ensure that the previous coating has cured completely.
- * Wipe clean with a lint-free cheesecloth or rag dampened with TotalBoat Dewaxer & Surface Prep.
- * Sand the surface with 80-grit sandpaper. Remove all sanding residue.
- * Wipe clean with a lint-free cheesecloth or rag dampened with TotalBoat Special Brushing Thinner 100.
- * Apply TotalProtect, as directed.

TotalProtect over TotalProtect (more * Wash with soap and water.

than 60 days from last application of * Rinse with fresh water and allow to dry.

TotalProtect): * Sand the surface with 80-grit sandpaper.

- * Wipe clean with a lint-free cheesecloth or rag dampened with TotalBoat Dewaxer & Surface Prep.
- * Apply TotalProtect, as directed.

Antifouling over TotalProtect: * WATER-BASED ANTIFOULING PAINT: TotalProtect must be fully cured and sanded before applying any water-based antifouling paint (including, but not limited to, TotalBoat JD Select, Pettit Hydrocoat, Interlux Bottomkote Aqua).

- * SOLVENT-BASED ANTIFOULING PAINT: The "Thumbprint" method is the best test for adhesion, and saves time. After applying the last layer of TotalProtect, wait until it does not stick to your thumb, but you can make a thumbprint, or within the "overcoat window"— and apply antifouling paint. If this window is missed, the surface must be sanded before applying paint.

* TEFLON™ OR VINYL PAINTS: When using Teflon or vinyl-based racing antifouling paints, TotalProtect must be fully cured for 24 hours and sanded before applying antifouling paint.

► WHAT IS THE THUMBPRINT METHOD?

- * Touch the TotalProtect film with your thumb. If it does not stick to your thumb, but you can make a thumbprint, you are within the "overcoat window". Apply antifouling paint.
- * If TotalProtect sticks to your thumb, it is too soon to apply antifouling paint.
- * If you can't leave a thumbprint, you have missed the overcoat window. Sand with 80-grit sandpaper or apply another coat of TotalProtect. Use the "Thumbprint" method again.

APPLICATION:

MIXING: 1. The Base and Curing Agent must each be shaken or stirred **thoroughly** prior to mixing.

- Mix TotalProtect properly in a 3:1 mix ratio, by volume. If the whole container will be mixed at one time, simply pour the full can of Curing Agent into the Base can and stir until both components are mixed thoroughly. DO NOT ADD ANY THINNER until the induction period has been completed.
- Stir thoroughly for at least five minutes, ensuring that both components are completely mixed together. Be sure to scrape the bottom and sides of the mixing container while mixing to ensure proper cure and application properties.

Induction Period: After mixing thoroughly, allow a 15-minute induction period before any reduction and application.

- Apply only when rain, dew, and temperature conditions will not affect application or cure of TotalProtect. Ensure all surface preparation has been completed thoroughly and properly prior to applying TotalProtect.

BRUSH/ROLLER APPLICATION

* Thinning is not required for brush/roll applications, but TotalProtect can be thinned with TotalBoat Epoxy Primer Thinner 200, as needed (10% maximum) to improve flow and workability.

* Apply TotalProtect. Use a high-quality natural bristle, solvent-safe brush for the best results when brushing. When rolling, use a 3/16" - 3/8" solvent-safe nap or solvent-safe foam roller cover. The number of coats required is explained below.

SPRAY APPLICATION:

* TotalBoat TotalProtect can be easily applied by spray. Mix part A with part B in the appropriate ratio.

* Allow the mixture to induct for 10-15 minutes.

* After the induction process, the mixture can be thinned up to 10%, using TotalBoat Epoxy Primer Thinner 200.

PRESSURE POT SYSTEM: The pressure pot gauge should be set 15-25 PSI. A test stream should be performed with no air pressure to achieve 16-20 oz. of product per minute or 2-3 ft. stream.

CONVENTIONAL GUN SETUP: Binks or equivalent: Gun Pressure: 40-55 PSI, Fluid Needle/ Nozzle: 1.6-2.0 mm (.065"-.80")

HVLP SETUP: SATAjet 1000B HVLP or equivalent: Gun Pressure: 25-32 PSI, Fluid Needle/ Nozzle: 1.8-2.2 mm (.072"-.090")

Not recommended to be sprayed using conventional gravity feed cup guns.

AIRLESS/AIR ASSISTED: Binks or equivalent: 40-1 Pump: 50-60 PSI pump gauge pressure; 25-1 Pump: 70-80 PSI pump gauge pressure. Orifice Size: .015"-.024". If using airless/air-assisted equipment, introduce 20-40 PSI of air to allow for uniform pattern and particle size.

FOR ALL SUBSTRATES: The minimum application of TotalProtect dry film thickness is at least 8-12 mils to ensure a proper barrier coat. Failure to apply proper mil thickness may result in coating failure, or potential water permeation. The number of coats required for rolling is explained below.

Overcoating with TotalProtect: TotalBoat TotalProtect can be recoated over itself for up to 60 days. If that time window is missed, sand with 80-grit sandpaper, and wipe the surface clean with a clean, lint-free cotton rag wetted with TotalBoat Dewaxer & Surface Prep, and allow the solvent to evaporate completely. Recoat with TotalProtect.

Overcoating with Antifouling Paint: For best adhesion, use the "Thumbprint" method, as mentioned above. Overcoat with antifouling paint within the specified time window posted below. If the specified overcoat window for antifouling paint is missed, wait 24 hours and sand with 80-grit sandpaper, then wipe the surface clean with TotalBoat Dewaxer & Surface Prep. Allow the solvent wipe to evaporate completely before applying any paint.

Overcoating with Topside Paints or Other Coatings: TotalBoat TotalProtect can be used as a great foundation for topside paints and coatings other than antifouling paints. For these coatings, it is very important to allow the TotalProtect to cure enough to be sanded (24 hours @ 50°F, 16 hours @ 70°F, or 12 hours @ 90°F. Sand the TotalProtect smooth to the required grit for the coating. Remove any sanding residue and apply paint.

IMPORTANT: Application of antifouling paint or topside paint over TotalProtect is critical.

APPLICATION DATA:	
Application Method:	Brush: (natural bristle, solvent safe) Roll: (3/16" - 3/8" nap or foam solvent-safe roller cover) Spray: Conventional, airless, HVLP
Number of Coats:	2-3 coats (minimum), when using a 3/8" roller cover 3-4 coats, when using a 1/4" roller cover 4-5 coats, when using a 3/16" roller cover **It is more important to ensure 8-12 mils of dry film thickness than a certain number of coats. More than three coats may be required based upon the application thickness.
Induction Time:	15 minutes @ 70°F
Film Thickness (per Coat):	4 mils dry (7 mils wet, when using a 3/8" roller cover) 3 mils dry (5.5-6 mils wet, when using a 1/4" roller cover) 2.5 mils dry (4-5 mils wet, when using 3/16" roller cover)
Pot Life:	2.5 hrs @ 90°F 5 hrs @ 70°F 10 hrs @ 50°F
Application Temperature:	50-90°F (0-85% RH)
Dry Time to Recoat with more TotalProtect:	2 hrs - 60 days @ 90°F 3 hrs - 60 days @ 70°F 6 hrs - 60 days @ 50°F
Dry Time to Overcoat with Antifouling Paint:	3-6 hrs @ 90°F 5-8 hrs @ 70°F 7-10 hrs @ 50°F
Dry time to Launch (Minimum):	12 hrs @ 90°F 24 hrs @ 70°F 5 days @ 50°F
Recommended Finish Coating:	Ablative antifouling paint

PHYSICAL DATA:	
Vehicle Type:	Epoxy resin
Components:	2 - Base and Curing Agent
Mix Ratio by Volume:	3:1 (3 Parts Base to 1 Part Curing Agent)
Reducer (Optional - Brush, Roll, or Spray):	TotalBoat Epoxy Primer Thinner 200 ** A maximum of 10% reducer can be added **
Finish:	Matte
Colors Available:	Gray or White
Solids (by Weight) +/- 2%:	71%
Units of Measure:	Quart Kit: 3/4 quart of Base, 1/2 pint Curing Agent Gallon Kit: 3/4 gallon of Base, 1 quart Curing Agent
Theoretical Coverage (sq ft/gal):	225 sq. ft. (at 7 mils wet, not accounting for waste)
Viscosity @ 75°F (KU):	82
VOC Content (g/L):	337 (Part A), 347 (Part B), 340 (Parts A and B Admixed)

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