



TOTALBOAT TOTALPROTECT

- Two-Part, High-Build Epoxy Primer & Barrier Coat
- 3:1 mix ratio
- Prevents gelcoat blisters
- Maximum corrosion resistance for metals
- Available gray or white

TotalBoat TotalProtect is a two-part, high-build epoxy primer and barrier coat for gelcoat blister prevention and repair. TotalProtect is compatible with all anti-fouling paints, and this universal primer may be used above and below the waterline. It also provides superior corrosion protection on underwater metals.

CLEANER/SURFACE PREPARATION SOLVENTS:

- TotalBoat Epoxy Primer Thinner 200
- TotalBoat Dewaxer & Surface Prep
- Acetone (bare substrates only, but specifically recommended for use on oily hardwoods or bare white oak)

CLEANUP SOLVENTS:

- TotalBoat Epoxy Primer Thinner 200
- TotalBoat Dewaxer & Surface Prep

THINNER/REDUCER SOLVENTS:

- TotalBoat Epoxy Primer Thinner 200 (for brushing, rolling, or spraying applications)

PRIMER/PRECOAT: TotalBoat Rust Primer (surface converter for bare, ferrous metals), TotalBoat Aluminum Boat Etch Wash (bare aluminum substrates)

ACCEPTABLE SUBSTRATES: Fiberglass, wood, previously primed/painted (must be 2-part paints or primers) surfaces, epoxy, properly prepared metal substrates

AVAILABLE COLORS: White, Gray

WARNING!

RAGS, STEEL WOOL, OR WASTE SOAKED WITH SURFACE PREPARATION SOLVENTS FOR THIS PRODUCT MAY SPONTANEOUSLY CATCH FIRE IF DISCARDED IMPROPERLY. IMMEDIATELY AFTER USE, PLACE RAGS, STEEL WOOL, OR WASTE IN A SEALED, WATER-FILLED METAL CONTAINER.

PERSONAL SAFETY:

Always use proper Personal Protective Equipment when handling this product. Refer to the TotalBoat TotalProtect Safety Data Sheets for more info. Each component has a different composition and SDS, so make certain to reference the appropriate one. Only apply TotalProtect with good ventilation.

SURFACE PREPARATION

ALL SUBSTRATES: All substrates must be clean, dry, and free from oil, grease, wax, or other contaminants before sanding or abrading. After abrading, wipe the surface clean with a clean cotton rag wetted with TotalBoat Dewaxer & Surface Prep or TotalBoat Epoxy Primer Thinner 200, and allow the surface to dry completely before applying TotalProtect.

BARE FIBERGLASS (or GELCOAT):

- All bare fiberglass substrates need to be fully cured for at least 5-7 days prior to any surface preparation or applying TotalProtect.
- Ensure that any fiberglass substrates that have recently been submerged in water have a maximum moisture content of 2-3%.
- The surface must be properly dewaxed, and any amine blush removed prior to any further surface preparation.
- Dewax the surface using the two-rag method: Start with a clean, lint-free cotton rag wetted with TotalBoat Dewaxer & Surface Prep. Follow the wetted rag with a dry, clean cotton rag to help remove any contaminants remaining on the surface. Perform this two-rag method 2-3 times to ensure all wax and potential contaminants have been removed.
- Sand the gelcoat thoroughly with 80-grit sandpaper.
- Remove all sanding residue and wipe again with a clean, lint-free cotton rag wetted with TotalBoat Dewaxer & Surface Prep, then follow with a clean, dry rag.
- The entire surface to be barrier coated should have a uniform dull, frosty finish. Inadequate sanding and removal of wax/contaminants on the surface will result in the eventual bond failure of TotalProtect.
- Ensure that the surface has dried completely prior to applying TotalProtect.
- Continue applying TotalProtect following application and recoat instructions until the required dry film thickness has been achieved.

BARE WOOD:

- Wood should be in good condition and free of any grease, oils, tar, dust, water, wax, or other potential contaminants prior to sanding.
- The ideal wood moisture content to apply paint is 6-8% but being less than 10% is still acceptable. Applying this product



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to wood with a higher moisture content is not advised, as it has a significantly higher chance for coating failure such as delamination or blistering.

- Sand the wood with 80-grit sandpaper.
- Vacuum away any sanding dust.
- Wipe the surface with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep.
- Allow the surface to dry completely.
- Apply the first coat of TotalBoat TotalProtect thinned 10%.
- Continue applying TotalProtect following application and recoat instructions until the required dry film thickness has been achieved.

PREVIOUSLY PAINTED SURFACES:

- Only apply TotalProtect to previously painted substrates if they are 2-component paints and in good serviceable condition.
- Previously painted surfaces in poor condition with signs of cracking, peeling, or delamination should be removed completely back to the bare substrate.
- Wash the surface with a mild soap and water, and rinse thoroughly.
- Once dry, wipe the surface with one of the specified cleaner/surface preparation solvents using a clean, lint-free cotton rag.
- Allow any solvents to evaporate.
- Sand the surface with 80-grit sandpaper.
- Remove any sanding residue by wiping the surface clean with a clean, lint-free cotton rag wetted with one of the specified cleaner/surface preparation solvents.
- Allow the surface to dry completely before applying TotalProtect.
- Continue applying TotalProtect following application and recoat instructions until the required dry film thickness has been achieved.

EPOXY SURFACES:

- Epoxy substrates need to be fully cured for at least 5-7 days prior to any surface preparation or applying TotalProtect.
- Once cured, the epoxy must be washed with a mild soap and warm water, then rinsed well to remove any possible amine blush, whether noticeable or not. This must be performed, even if the epoxy is considered non-blushing or does not appear to have an amine blush on the surface.
- Dry the surface completely.
- Sand the surface with 80-grit sandpaper.
- Remove any sanding residue by wiping the surface clean with a clean, cotton rag dampened with TotalBoat Dewaxer & Surface Prep.
- Allow the surface to dry completely before applying TotalProtect.

BARE STEEL:

- Sandblast to SSPC-SP 6 Commercial blast, or sand with 80-grit sandpaper if sandblasting is not an option.
- Remove all sanding residue. This can be done by blowing off residue with clean, compressed air or by vacuuming.
- For any areas that have red rust, apply TotalBoat Rust Primer, as directed on the label.
- Allow the surface to dry completely.
- If no rust is present, wipe the surface with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep.
- Allow the surface to dry completely.
- Immediately apply TotalProtect following application and recoat instructions below.

BARE ALUMINUM:

- Sandblast using non-metallic media, or disc sand the aluminum to clean, bright metal.
- Remove all sanding/blasting residue and wipe the surface with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep.
- Allow the surface to dry completely.
- Etch the surface with TotalBoat Aluminum Boat Etch Wash, as directed on the label. Rinse the surface with fresh water and dry the surface completely.
- Apply the first coat of TotalProtect within 1 hour of performing the surface preparation.
- Continue applying TotalProtect following application and recoat instructions until the required dry film thickness has been achieved.

KEELS (LEAD):

- Disc sand, grind, or otherwise abrade the surface to bright metal.
- Ensure that a 3-4 mil anchor profile is achieved. Remove all sanding residue.
- Immediately apply 1 coat of TotalBoat TotalProtect thinned 10%.
- Let dry completely before recoating.
- If any fairing is required, apply TotalBoat TotalFair as directed, and allow the TotalFair to cure until it is sandable.
- Sand the surface smooth with 80-grit sandpaper, remove residue by wiping with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep, and allow the surface to dry completely.
- Continue applying TotalProtect following application and recoat instructions until the required dry film thickness has been achieved.

KEELS (STEEL or CAST IRON):

- Sand or abrade the surface to bright metal and remove any residue.
- For any areas that have red rust, start by using TotalBoat Rust Primer, as directed on the label.



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- Allow the surface to dry completely.
- Apply 1 coat of TotalBoat TotalProtect. Allow the TotalProtect to dry to the recoat time.
- If fairing is required, apply TotalBoat TotalFair as directed, and allow it to cure until it is sandable.
- Sand the TotalFair smooth, remove sanding residue, and continue applying TotalProtect following application and recoat instructions below.

OTHER METALS:

- Sand or abrade the surface to bright metal.
- Remove all sanding/blasting residue and wipe the surface with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep.
- Allow the surface to dry completely.
- Immediately apply TotalProtect following application and recoat instructions below.

FIBERGLASS BLISTER REPAIR:

- Allow the hull to dry out completely.
- Locate all blisters.
- Grind out the bad, compromised layers of laminate at each blister with a grinder or rotary tool. Blisters should be ground out at a low angle of 5-10° at most – this will allow the repair materials to have a good bond and flex with the hull through normal stresses. Once you reach good laminate, stop abrading.
- Once all blisters have been cleaned out, strip any antifouling paint from the remainder of the hull.
- Using a screwdriver handle or plastic mallet, lightly tap the remainder of the hull to find delaminated or otherwise damaged areas and address them as necessary.
- Wash the hull to remove any residual material and contaminants.
- Protect the stripped hull surface from precipitation, and allow the hull and exposed blisters to dry out completely until it reaches 2-3% moisture content. This may take weeks or months depending on the severity of the damage and water penetration.
- Clean the individual blisters out with 80-grit sandpaper or a rotary tool, ensuring a 5-10° bevel.
- Vacuum up any sanding residue and wipe the surface clean with acetone or denatured alcohol.
- Allow the solvent to evaporate completely.
- Mix up and apply TotalBoat Traditional Epoxy (select the appropriate hardener for the ambient conditions and required working time) to each of the cavities. If the epoxy gets absorbed, apply more as needed to form a coating that seals all the fiberglass.
- Allow the epoxy to cure for a minimum of 6 hours until it is hard.

- Wash the epoxy surface with a mild soap and warm water, scrubbing with an abrasive pad. Rinse and dry the surfaces completely.
- Lightly abrade the surface of the cavities using 80-grit sandpaper or a rotary tool with coarse sandpaper.
- Remove any sanding residue.
- Fill the cavities TotalBoat TotalFair as directed on the label. Use a spreader to ensure the cavities are filled, but not overfilled. If the application is greater than ½” thick, apply TotalFair in layers.
- Allow the TotalFair to cure until it is ready to be sanded, and sand the surface smooth with 80-grit sandpaper.
- Remove all sanding residue.
- Apply TotalProtect as directed.

APPLICATION

VERY IMPORTANT — READ BEFORE DISPENSING OR APPLYING THIS PRODUCT!

ALL APPLICATIONS: To maximize the coating's performance, carefully follow the surface preparation that is specific to each substrate, avoiding any shortcuts.

- It is strongly recommended to perform all fairing directly to the substrate prior to applying TotalProtect unless otherwise specified in the surface preparation instructions.
- Follow the DRY TIME TO RECOAT in the chart below. If the maximum recoat or overcoat times are exceeded, sand the TotalProtect with 80-grit sandpaper and remove any sanding residue to ensure adhesion of subsequent coats of TotalProtect or paint.
- Always vacuum up sanding residue and wipe the surface with a clean cotton rag dampened with TotalBoat Dewaxer & Surface Prep or TotalBoat Epoxy Primer Thinner 200, then allow the solvent to evaporate completely prior to applying the next coating.

APPLICATION CONDITIONS:

- 50-90°F (the product, air, and substrate must all be within this range), 0-85% relative humidity.
- Do not apply this product when dew, precipitation, or other potential contaminants may affect the cure or performance of this coating.
- Avoid applying in direct sunlight to ensure consistent working and recoat times.
- Warmer temperatures will shorten the pot life, working time, and cure rates, while cooler temperatures will extend them.

DISPENSING AND MIXING

- Prior to dispensing, thoroughly stir or shake each component for 2-3 minutes until an even consistency has



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been achieved and there is no settled material on the bottom of the can.

- A precise mix ratio of the 2 components is required for this product to cure and perform properly.
- The mix ratio of this product is 3:1 (3 parts Part A to 1 part of Part B) by volume. Do not deviate from this ratio. Adding more or less of either component will reduce the product's performance once cured.
- The blending of the two components initiates the chemical reaction and the cure of this product.
- Dispense as much material as needed that can be used within the product's pot life (see in the chart below).
- HINT: When mixing the entire unit of this product, simply dump all of Part B into the Part A container and shake or stir.
- Stir the two components together thoroughly for 3-5 minutes, until it forms a uniform, consistent liquid.
- Once mixed, allow this product to sit for 15 minutes. DO NOT ADD ANY THINNER AT THIS TIME. This is the induction period where the two components will begin to react, allowing for the proper cross-linking prior to being applied.
- After the induction period, this product can be thinned as necessary, up to 10% by volume with TotalBoat Epoxy Primer Thinner 200 for all application methods.

NUMBER OF COATS and RECOATING

- Total dry film thickness (DFT) is more important than the actual number of coats applied. Apply as many coats as needed to achieve the required 8-12 mils total DFT for a proper barrier coat, regardless of application method.
- Follow the dry time to recoat details for TotalProtect in the chart below.
- Recoating TotalProtect before the indicated recoat times may lead to solvent entrapment in the previous film, which could lead to delamination or other coating failures.
- If this window has been missed, the TotalProtect should be sanded with 80-grit sandpaper, and all sanding residue must be removed prior to the next coat.

BRUSH/ROLL APPLICATION

- TotalBoat TotalProtect can be easily applied by brush, roller, or spray.
- When brushing, use a high-quality natural bristle brush.
- When rolling, use a solvent-safe 3/16" foam or nap roller cover
- HINT: It is recommended to have a few extra roller covers on hand. This product tends to break down solvent-safe roller covers after a little while.
- Thinning is generally not required, but TotalProtect may be thinned up to 10% with TotalBoat Epoxy Primer Thinner 200 to improve application properties.

○ NUMBER OF COATS

- 4-5 coats when using a 3/16" roller cover (leaves the smoothest finish)
- 3-4 coats when using a 1/4" roller cover
- 2-3 coats when using a 3/8" roller cover (leaves the roughest finish)

SPRAY APPLICATION:

- TotalBoat TotalProtect can be easily applied by spray. Thin as needed with TotalBoat Epoxy Primer Thinner 200 up to 10%. See below for some initial starting points. Adjust as needed for proper spray properties.
 - PRESSURE POT SYSTEM: Set the pressure pot gauge to 15-25 PSI. A test stream should be performed with no air pressure to achieve 16-20 oz. of material per minute (a 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")
 - 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.
 - CONVENTIONAL GRAVITY FEED GUNS: This application method is not recommended.

APPLYING ANTIFOULING PAINT OVER TOTALPROTECT

NOTE: Take extra caution when the antifouling paint is water-based. If it is not clarified on the antifouling paint's label, it is advised to wait for the TotalProtect to cure for a minimum of 48 hours, then sand the surface with 80-grit sandpaper and remove sanding residue prior to applying the antifouling paint.

- Antifouling bottom paints should only be applied according to the directions and surface preparation on the antifouling paint's label.
- Apply when the previously applied TotalProtect is thumbprint tacky (does not come off when touched, but still has a tacky feel), or see the APPLICATION MINIMUM/MAXIMUM TIMES BY TEMPERATURE chart below.
- If this window has been missed, the TotalProtect should be sanded with 80-grit sandpaper. All sanding residue must be removed prior to applying the antifouling paint.

APPLYING OTHER COATINGS OR PAINTS TO TOTALPROTECT

- TotalProtect cures to form an excellent primer and foundation to apply other topcoats, enamels, or finishes.



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- When applying other paints or coatings to TotalProtect, it is strongly recommended to allow the TotalProtect to cure completely for 5-7 days under normal conditions.
- Sand the surface smooth according to the directions of the product that is being applied to the TotalProtect.

NOTE: TotalProtect is not designed as a UV-resistant coating and should be topcoated with a UV-resistant material if it will be subject to continuous exposure.

PRODUCT STORAGE

Store this product in the original containers, locked up, in a well-ventilated place. Keep cool. Keep the containers tightly closed. Store between 60-90°F.

The shelf life of TotalProtect is 36 months from the date of manufacture if stored properly.

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 Required (Minimum):	2-3 coats, 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 Note: 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.
Film Thickness (per Coat):	3/8" roller cover: 4 mils dry (7 mils wet) 1/4" roller cover: 3 mils dry (5.5-6 mils wet) 3/16" roller cover: 2.5 mils dry (4-5 mils wet)
Application Temperature/Relative Humidity:	50-90°F (0-85% relative humidity)
Recommended Finish Coating:	Ablative antifouling paint (below the waterline)
Product Shelf Life:	36 months from date of manufacturer, under proper storage conditions

APPLICATION MINIMUM/MAXIMUM TIMES BY TEMPERATURE			
Ambient Temperature	50°F	70°F	90°F
Induction Period	15 minutes	15 minutes	15 minutes
Pot Life	7-10 hours	4-6 hours	1-3 hours
Dry Time to Recoat with TotalProtect	6 hours (minimum) to 60 days (maximum)*	3 hours (minimum) to 60 days (maximum)*	2 hours (minimum) to 60 days (maximum)*
Dry Time to Recoat with Antifouling Paint	7 hours (minimum) to 10 hours (maximum)*	5 hours (minimum) to 8 hours (maximum)*	3 hours (minimum) to 6 hours (maximum)*
Minimum Dry Time to Sand	16 hours	12 hours	10 hours
Minimum Dry Time to Launch	6 days	24 hours	12 hours

* If this window is missed, the surface must be cleaned, sanded with 80-grit sandpaper, all sanding residue removed, and cleaned with a rag wetted with TotalBoat Dewaxer & Surface Prep before applying any products.



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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)
Mix Ratio by Weight:	Gray: 5.61:1 (5.61 Parts Base to 1 Part Curing Agent, or 85.01% Base to 14.99% Curing Agent) White: 6.01:1 (6.01 Parts Base to 1 Part Curing Agent, or 85.74% Base to 14.26% Curing Agent)
Thinner/Reducer:	TotalBoat Epoxy Primer Thinner 200 — can be used for brushing, rolling, or spray applications, as well as cleanup ** A maximum of 10% reducer can be added **
Colors Available:	Gray, White
Finish:	Matte
Solids (by Weight):	71% (+/- 2%)
Units of Measure:	Quart Kit: 3/4 quart of Base, 1/2 pint Curing Agent Totaling 1 Quart of TotalProtect Gallon Kit: 3/4 gallon of Base, 1 quart Curing Agent Totaling 1 Gallon of TotalProtect
Theoretical Coverage:	Quart Kit: 56 sq. ft. (applied at 7 mils wet, not accounting for waste) Gallon Kit: 225 sq. ft. (applied at 7 mils wet, not accounting for waste)
Activator Viscosity:	63-67 KU (at 75°F)
Base Viscosity:	105-115 KU (at 75°F)
Initial Mixed Viscosity:	82 KU (at 75°F)
Density:	Activator: 7.68 (+/- .2) lbs./gallon Base: 14.65 (+/- .3) lbs./gallon
VOC Content (g/L):	Part A: 337 Part B: 347 Parts A and B Admixed: 340