



# TOTALFAIR

- Lightweight, 2-part marine epoxy fairing compound for use above or below the waterline for reshaping, filling, fairing, and repairing
- Easy 1:1 mix ratio by volume
- Works on horizontal, vertical, inclined, and overhead surfaces without sagging
- Fast-cure formula reduces curing times; sandable within hours
- Boldly colored resin and hardener help ensure thorough mixing of components

TotalBoat TotalFair is a lightweight, 2-part marine epoxy fairing compound perfect for reshaping, filling, and fairing. TotalFair fairing putty is ideal for boat building and repairs above and below the waterline on fiberglass, gelcoat, wood, and properly prepared metals. TotalFair dries fast and sands smooth. Color-coded components for easy 1:1 mix ratio.

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**CLEANER/SURFACE PREPARATION:** Acetone, denatured alcohol

**CLEANUP:** Denatured alcohol or acetone. Once cured, it must be removed mechanically.

**THINNER/REDUCER:** Do not thin TotalFair.

**MOLD RELEASE AGENTS:** Mold release paste wax, aerosol mold release agents.

**PRIMER:** No primers are necessary; etching with TotalBoat Aluminum Boat Etch Wash is highly recommended on bare aluminum substrates, and TotalBoat Rust Primer is recommended on ferrous steel applications.

**APPLICATIONS:** Fairing – for applications above or below the waterline

**ACCEPTABLE SUBSTRATES:** Fiberglass, gelcoat, wood (pressure treated wood is not advised), properly prepared metals.

**UNITS OF MEASURE AVAILABLE:** 2-Pint, 2-Quart, 2-Half-Gallon sizes

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**SAFETY AND PERSONAL PROTECTIVE EQUIPMENT:**

Always use proper safety equipment, clothing, and PPE in accordance with the Safety Data Sheet for each product.

**EXOTHERMIC REACTION!**

The cure of TotalBoat TotalFair is an exothermic reaction and will generate heat. Though TotalFair is generally applied in thin, small applications, it is not uncommon

for larger mixed masses to reach 200°F or higher during the cure cycle.

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## SURFACE PREPARATION:

All surfaces need to be free of any potential contaminants. Surface contamination will reduce or compromise TotalFair's bond strength to any substrate. If any surfaces are to be sanded before applying TotalFair, always remove all surface contaminants prior to sanding or abrading the surface. Contaminants can include amine blush, dust, dirt, grease, moisture/water, oil, or wax.

- **IMPORTANT!** Only use clean cotton rags for surface preparation. Synthetic rags can leave a film of contamination if they come in contact with some solvents.
- The minimum width-to-depth ratio for TotalFair is 6:1. Ensure that the sides are beveled/ground to meet this ratio. A greater width-to-depth ratio is encouraged when possible.

### FIBERGLASS/GELCOAT:

- Fiberglass substrates may have wax or amine blush on the surface, depending on the adhesive system they're constructed with. DO NOT try to remove blush or waxes by sanding. Follow the procedures below to remove these substances.
- Any amine blush needs to be removed with fresh, warm water and a mild soap.
- Dry the surface completely. Any waxes need to be completely removed with a dewaxing product.
- After the surface has been cleaned of all potential surface contamination, grind the surface or abrade it with 80-grit (or coarser) sandpaper and remove all sanding residue. Then wipe with a clean cotton rag dampened with one of the specified surface preparation solvents. This will provide a rough surface for TotalFair to achieve the best mechanical bond.
- Allow the surface to dry completely before applying TotalFair.

### EPOXY:

- The cure of epoxy materials can create an amine blush on the surface of the cured material, even if the epoxy being used is considered 'non-blushing'.
- Remove any potential amine blush by washing the surface with fresh, warm water and a mild soap. Dry the surface completely.
- Wipe the surface with a clean, dry cotton rag dampened with one of the specified surface preparation solvents.
- After the surface has been cleaned of all potential surface contamination, grind the surface, or abrade it with 80-grit (or coarser) sandpaper, and remove all sanding residue.
- Then wipe with a clean cotton rag dampened with one of the specified surface preparation solvents. This will provide a



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rough surface for TotalFair to achieve the best mechanical bond.

- Allow the surface to dry completely before applying TotalFair.

## WOOD:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Oily hardwoods and white oak should be wiped with acetone, if possible, during the surface preparation steps.
- Allow any solvents to evaporate completely.
- Abrade the area of the wood that is to be bonded with 80-grit (or coarser) sandpaper.
- Remove all sanding residue and wipe the surface clean using one of the specified solvent wipes.
- Allow the surface to dry completely before applying TotalFair.

## METALS:

### Steel/Iron:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough. Remove all sanding residue and wipe the surface again with a clean cotton rag dampened with the surface preparation solvent.
- Applying TotalBoat Rust Primer, as directed, is highly recommended, but not required. Applying Rust Primer will help to prevent further development of rust and optimize TotalFair's bond strength.
- Before applying TotalFair, ensure that the substrate is completely dry after performing any solvent wipes or Rust Primer application.

### Stainless Steel:

- Remove all surface contamination by wiping the surface with a clean cotton rag dampened with one of the surface preparation solvents. Allow the surface to dry completely.
- Grind or sand the surface (with 80-grit or coarser) that TotalFair will be applied to. Remove all sanding residue and wipe the surface with a clean cotton rag dampened with the surface preparation solvent.
- Allow the surface to dry completely before applying TotalFair.

### Aluminum:

- Remove all surface contamination by wiping the surface with a clean cotton rag dampened with one of the surface preparation solvents. Allow the surface to dry completely.
- The aluminum surface should either be abraded with 80-grit sandpaper or a grinder immediately before bonding,

or etched with TotalBoat Aluminum Boat Etch Wash, as directed.

- If the surface is abraded, remove all sanding residue and wipe the surface clean with one of the specified solvent wipes, then allow to dry before bonding.
- If the surface is to be etched, ensure that the surface has dried completely before applying TotalFair.
- Apply TotalFair within 1 hour of the surface preparation.

**Lead: SAFETY ALERT! Always take extreme care and use the required Personal Protective Equipment when working with lead.**

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough.
- Work quickly and only do a small area at a time because lead oxidizes very quickly and will turn dull in just minutes, leaving a poor surface for bonding. Remove any sanding residue and wipe the surface clean again with the surface prep solvent.
- Allow the solvent to evaporate and apply TotalFair immediately. If TotalFair is not applied within a few minutes, repeat the surface preparation.

### ALTERNATIVE METHOD:

- Due to the hazardous nature and extremely fast oxidation time, it may be desirable to grind the lead bare and immediately coat the surface with TotalBoat TotalProtect, then apply TotalFair once the TotalProtect has cured. This will encapsulate the lead, preventing oxidation.
- Apply as many coats of TotalProtect, as directed, directly to shiny, bare lead.
- Allow the TotalProtect to cure for 24-48 hours, wash the surface with warm water and a mild soap, then rinse and allow to dry.
- Sand the TotalProtect with 80-grit sandpaper (or coarser), taking extra care not to sand through the TotalProtect. Apply TotalBoat TotalFair to the sanded TotalProtect.

### Other Metals:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough. Remove all sanding residue and wipe the surface again with a clean cotton rag dampened with the surface preparation solvent.
- Allow the surface to dry completely.
- Within 1 hour, apply TotalFair to the prepared surface.



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## APPLICATIONS:

- TotalBoat TotalFair is designed as an epoxy-based fairing compound that creates a durable, resistant, dimensionally stable surface for a multitude of topcoats.
- TotalFair is a waterproof fairing material that can be used above or below the waterline.
- Once cured, TotalFair can be primed and painted – see instructions below for applying paints or primers.
- Gelcoat should never be applied directly over TotalFair – see instructions below for applying gelcoat over TotalFair.
- TotalFair is not designed as a finish material and is not UV stable.
- TotalFair should never be used in place of proper structural repairs.
- TotalFair is not designed as an adhesive material and should never be used for bonding.

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## DISPENSING & MIXING:

**Application Conditions:** TotalBoat TotalFair should only be dispensed when the ambient temperature, temperature of the epoxy itself, and the temperature of the substrate being bonded are above 50°F, and the relative humidity does not exceed 90% for the first 24 hours of the cure process. Curing TotalFair outside of these conditions may dramatically slow the rate of cure or compromise some physical properties of the cured material. In cooler ambient conditions, it is recommended to warm the individual epoxy components to 70-80°F before use, for ease of dispensing, and better workability.

### Mix Ratio:

- The mix ratio of TotalBoat TotalFair is 1A:1B by volume (resin:hardener). It is imperative to get the mix ratio of the two components correct to achieve the desired work and cured properties.
- TotalFair can be dispensed by weight, the mix ratio is 100A:71B (100 parts resin (yellow):71 parts hardener (blue)).

### Mixing:

- Always start with clean tools and clean working surfaces that are free of any potential contaminants.
- Only dispense or mix TotalFair when the environmental conditions are within the specified range, for best results.
- Only dispense and mix as much TotalFair as can be applied in a 15- to 20-minute period. This will avoid wasted product and shortened working time.
- Mixing more of either component will not have a positive effect on the cured material – it may compromise the working or cured properties of the product.

- Mix the two components together on a palate, non-porous substrate, or in a mixing cup.
- Mix the two components together for 3-5 minutes to form an even, green color. Ensure that there are no streaks or striations of yellow or blue.
- Do not vigorously whip the two components while mixing to avoid inducing air bubbles – induced air bubbles are not able to escape and may show up as pinholes in the cured TotalFair.

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## APPLICATION:

- Apply TotalFair to properly prepared substrates as soon as it has been mixed, to maximize the product's working time.
- Spreaders, trowels, mixing sticks, or other tools can be used to spread and apply TotalFair.
- The maximum thickness that TotalFair can be applied is  $\frac{3}{4}$ ".
- The minimum width-to-depth ratio for TotalFair is 6:1. A greater width-to-depth is encouraged when possible.
- For applications deeper than  $\frac{3}{4}$ ", TotalFair should be applied in layers, waiting until the previous layer has become mostly tack-free. If the next layer has not been applied by the time the previous layer has become sandable, sand the surface with 80-grit sandpaper (or coarser) and remove any sanding residue prior to applying another layer.
- It is strongly recommended to sand TotalFair within two days, as it will become harder and more laborious to sand after that.
- More TotalFair can be reapplied, as needed, after it has been sanded with 80-grit (or coarser) sandpaper, and all sanding residue has been removed.
- If pinholes appear while sanding (from air induced while mixing), more TotalFair can be worked into the small cavities with a spreader or other small tool.

### Curing:

- Cure rates are dictated by the ambient temperature, the temperature of the substrate, and the mass of epoxy that was applied.
- Thicker applications will cure more rapidly, while thin applications may require more time to cure. Full cure is roughly 5-7 days. Warmer conditions will shorten these cure times, while cooler conditions will extend them.

### Applying Primers, Topcoats to TotalFair:

- TotalBoat TotalFair is considered a non-blushing epoxy product, however like any epoxy product, it is still recommended to take precautions against any amine blush by washing the cured surface with a mild soap and warm water, rinse thoroughly, and dry prior to sanding or applying any topcoats.
- TotalFair is not designed as a finish material.



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- Sanded TotalFair is designed to receive primers and other topcoats once it has been sanded.
  - Epoxy-based products can be applied to sanded TotalFair in as little as 24 hours after it was applied and sanded.
  - Non-epoxy-based primers and paints should wait a minimum of 48 hours before being applied to sanded TotalFair.
- DO NOT apply gelcoat products directly to TotalFair – follow the directions below with extreme care and attention to detail.

### Applying Gelcoat to TotalBoat TotalFair:

**IMPORTANT! Failure to follow any of these steps, substituting solvents, or performing steps out of order may compromise the application of the gelcoat material.**

- After TotalBoat TotalFair has cured enough to be sanded, wash the surface with a mild soap and warm water. Rinse thoroughly and allow it to dry completely.
- Sand the surface with 80-grit sandpaper and remove all sanding residue. Wipe the surface with one of the approved surface preparation solvents.
- Apply TotalBoat TotalProtect, as directed.
- Allow the TotalProtect to cure for 5-7 days under normal curing conditions.
- Before sanding the TotalProtect, wash the surface of the TotalProtect with a mild soap and warm water. Rinse thoroughly and allow it to dry completely.
- Sand the surface with 80-grit sandpaper, remove all sanding residue and wipe the surface clean with one of the approved surface prep solvents.
- Apply the gelcoat product, as directed.

## PRODUCT STORAGE:

- Store TotalBoat TotalFair between 60-90°F, sealed tightly, in a dry place, before and after use.
- Do not store TotalFair on the floor or near windows/doors that may expose the epoxy material to cooler conditions.
- When storing TotalFair for longer than 30 consecutive days, it is strongly recommended to cover the product in the containers with poly sheeting or plastic wrap prior to putting the lid on. This will prevent air or other contaminants from coming in contact with the product and reacting with the product while it is in storage.

### SHELF LIFE:

- The shelf life of TotalBoat TotalFair that has been stored properly is a minimum of 2 years.

## APPLICATION DATA:

<b>Application Method:</b>	Spreader, Trowel, Putty Knife,
<b>Application Temperature/RH:</b>	50-100°F, 0-90% Relative Humidity
<b>Mix Ratio by Volume:</b>	1A:1B (1 part resin (yellow):1 part hardener (blue))
<b>Mix Ratio by Weight:</b>	100A:71B (100 parts resin (yellow):70 parts hardener (blue))
<b>Maximum application thickness:</b>	3/4"
<b>Minimum Width to Depth When Applying:</b>	6:1 (width:depth)
<b>Working Time, 150g mass, minimum:</b>	15-20 minutes @ 90°F 30 minutes @ 70°F 45-60 minutes @ 50°F
<b>Tack-Free Time (at Normal Application Thickness):</b>	1 hour @ 90°F 2 hours @ 70°F 4 hours @ 50°F
<b>Time to Sand (at Normal Application Thickness):</b>	3 hours @ 90°F 6-8 hours @ 70°F 12 hours @ 50°F
<b>Full Cure Time:</b>	5-7 days

## PHYSICAL DATA:

<b>Material Type:</b>	Epoxy
<b>Components:</b>	Two — Resin and Hardener
<b>Resin Color:</b>	Yellow
<b>Hardener Color:</b>	Blue
<b>Mixed Color, Consistency:</b>	Green, paste
<b>Sag Resistance:</b>	>1" on vertical surface
<b>Resin Density:</b>	.77 g/cm <sup>3</sup>
<b>Hardener Density:</b>	.56 g/cm <sup>3</sup>
<b>Shelf Life:</b>	2 years if stored properly
<b>Storage Conditions:</b>	59-77°F ambient temperature, sealed tightly