



TOTALBOAT POLYESTER STRUCTURAL REPAIR PUTTY

- For High-Strength Bonding & Repairs
- Easy to Spread, Sag-Resistant Formula
- Fast-Setting, Resists Shrinkage & Cracking

TotalBoat Polyester Structural Repair Putty is a 2-part, high-strength, fibrous polyester structural bonding and marine repair putty that contains long strand milled glass fibers for strength and dimensional stability. This product can be used above or below the waterline. The required MEKP catalyst is included.

SURFACE PREPARATION SOLVENT: Acetone

CLEANUP: Acetone. Once cured, it must be removed mechanically.

CATALYST: MEKP (methyl ethyl ketone peroxide), 9% active (included with purchase of TotalBoat Polyester Structural Repair Putty)

THINNER/REDUCER: Do not thin this product.

COLORANTS/TINTS: Colorants and tints are not commonly added but can be added at a small percentage if they are compatible with polyester resin.

CURE METHODS (not included): Paraffin wax, polyvinyl alcohol, vacuum bagging

Exothermic Reaction!

The cure of TotalBoat Polyester Structural Repair Putty is an exothermic reaction and will generate heat. It is not uncommon for a mass of catalyzed polyester resin left in a mixing cup to reach 200-300°F during the cure cycle.

SAFETY AND PERSONAL PROTECTIVE EQUIPMENT:

Always use proper safety equipment, clothing, and PPE in accordance with the Safety Data Sheet for this product, and any surface preparation materials. Only use polyester resin-based products with adequate ventilation.

SURFACE PREPARATION

Acceptable Substrates: Polyester resin,* gelcoat surfaces,* TotalBoat Polyester Structural Repair Putty,* cured epoxy surfaces where any amine blush has been removed, other fully cured FRP substrates, wood substrates

Unacceptable Substrates: Uncured epoxy substrates, epoxy fairing materials, plastics, glass, uncured vinyl ester resins, ceramics, masonry, concrete.

* TotalBoat Polyester Structural Repair Putty can be applied directly to any catalyzed, uncured polyester resin-based products. Any cured polyester resin-based products must be dewaxed, all other surface

contaminants removed, then sanded before applying Polyester Structural Repair Putty.

General Surface Preparation for All Substrates:

- All amine blush, dirt, dust, grease, oil, water, and wax must be removed from the substrate before performing any further surface preparation. Abrading the surface with any of these substances present will only grind the contamination in, leading to a potential adhesion failure.
- Grind or abrade with 36-grit sandpaper.
- Remove all sanding residue with a vacuum and/or an air hose.
- Wipe the surface clean with a clean, lint-free cotton rag dampened with acetone.

Application over laminating polyester resin, or other tacky, catalyzed polyester resin-based materials:

- Polyester Structural Repair Putty can be applied directly to previously catalyzed polyester resin-based substrates such as laminating resin without any other surface preparation.
- For best results, apply within 24 hours of catalyzing the substrate material, and it has cured to a firm but tacky material.
- Finish curing the entire part by one of the specified methods.
- Applying in this method will form a chemical bond with the substrate material.

APPLICATION CONDITIONS

- The recommended application conditions for this product are 60-90°F and 0-90% relative humidity.
- Do not apply this product when dew, rain, or other contaminants may be present, as they may affect the cure of this product.

CATALYZATION

- Polyester Structural Repair Putty requires MEKP (methyl ethyl ketone peroxide) as a catalyst to cure. This is not to be confused with the solvent MEK (methyl ethyl ketone), as they are different materials, and serve different purposes.
- The ideal percentage of catalyst is 1%, but may vary from 1-2% by weight, based upon ambient temperature and the desired working time.
- For small, quick repairs, the maximum 2% can be added—this will provide less working time, and a quicker cure. For most applications, it is strongly recommended to use the minimal percentage of catalyst to ensure sufficient working time.
- 14 drops of MEKP catalyst per ounce of Polyester Structural Repair Putty will provide a working time of 15-20 minutes



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(at 77°F, 100g (just over 3 fluid ounces) mass of Polyester Structural Repair Putty).

- Applying less than 1% or more than 2% catalyst may yield undesirable working or cured properties.
- Applying too much catalyst may lead to cracking and a brittle product once it has cured.
- Under-catalyzation can lead to a much longer cure time than desired or an insufficient cure with poor sanding/structural properties.
- Immediately mix the catalyst into the putty with a stir stick. Mix thoroughly, as areas that are not exposed to catalyst will not cure. The working time of this product starts when the catalyst has been introduced. Mixing can take 2-5 minutes depending on the mass that is being catalyzed.
- Cooling the catalyzed putty compound will help extend the pot life and working time, while warming the material will shorten the working time dramatically. Once the catalyst has been added to this product it cannot be undone.
- Tinting/coloring: Though it is not common, Polyester Structural Repair Putty can be tinted with TotalBoat Pigment Dispersions, or other polyester resin-safe colorants before it has been catalyzed. To ensure optimal working and cured properties, avoid using more than 1% of any tints by weight or volume. Always perform a test sample with any desired tints before using it on the final project. This includes the catalyzation of Polyester Structural Repair Putty and then sanding it smooth to ensure the desired result.

- It is not considered a finish product, and should be primed, painted, or gelcoated after it is sanded.
- This material should not be considered waterproof. For underwater applications where this product may be exposed to water, always apply a barrier coat such as TotalBoat TotalProtect over the top, as directed on the label, to prevent water intrusion, blistering, or other material failures.

STORAGE & DISPOSAL

Storage: Keep container tightly closed. Keep in a cool place under 70°F. Keep container in a well-ventilated place. Keep away from food, drink, and animal food. Keep away from sources of ignition.

Disposal of Empty Bottles: Do not empty remaining contents into drains. Dispose of contents and containers in accordance with local, regional, national, and international regulations.

Shelf Life:

- Polyester Structural Repair Putty has a limited shelf life and will, over time, gel in the container without the addition of catalyst.
- The shelf life is dependent on several factors such as product formulation and storage conditions. As a rule, however, the shelf life for uncatalyzed polyester resin should be up to 6 months when stored in dry, cool conditions below 70°F. It is recommended to warm this product above 60°F before use.

APPLICATION

- Immediately after TotalBoat Polyester Structural Repair Putty has been catalyzed and mixed, spread the product to the desired substrate with a putty knife, spreader, or trowel.
- Work quickly to maximize the working time.
- Once cured, sand the product with the desired sandpaper grit.
- Polyester Structural Repair Putty cures to a firm, tacky material.

FOR AIR DRY APPLICATIONS (when curing to a firm, tack-free state):

- For applications where another polyester resin-based product will not be applied directly over this product to form a chemical bond, a polyester resin air dry solution such as paraffin wax can be added at the rate of 1 ounce per quart of putty before catalyzing.
- Other methods include vacuum bagging this product during its cure, or spraying PVA (polyvinyl alcohol) over the exposed surface while it is curing.

APPLICATION DATA:	
Material Consistency:	Smooth, Putty
Application Method:	Spreader/Trowel
Working Time:	10-15 minutes (100g mass catalyzed with 1% MEKP at 77°F) — Dependent on temperature, catalyst amount, and mass of Polyester Structural Repair Putty
Cure Time:	20-30 minutes (100g mass catalyzed with 1% MEKP @ 77°F) — Dependent on temperature, catalyst amount and mass of Polyester Structural Repair Putty
Application Temperature:	50-95°F, 0-90% RH
Cleanup:	Acetone. Once cured, it must be removed mechanically
Cure Methods (not included with purchase):	Air Dry: Paraffin wax (4 oz. of wax per gallon of putty); polyvinyl alcohol applied to the surface after Vacuum Method: Vacuum bag



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PHYSICAL DATA:

Components:	Two - Resin and Catalyst
Flash Point:	88°F
Units:	Quart, Gallon
Weight Per Gallon:	8.9-9.1lbs.
VOC Content:	41-46%
Smell/Scent:	Styrene
Viscosity:	450,000-650,000 cps
Storage:	Cool, dry, well-ventilated area away from oxidizing materials. Keep container closed tightly.
Heat Deflection Temperature:	155°F
Color:	Blue — cures to a hazy, buff color
Shelf Life/Stability:	6 months (can be longer, depending on storage conditions)
Filler Materials:	Milled glass fibers — contain TiO ₂ , CaCo ₃ , or Talc**