



**Document Library**  
**TS Data Sheet 46012**  
**46013**  
**46014**

Rev:2

Status: Active

Effective: 01/11/2002

## **3M™ Marine High Strength Repair Filler**



| 3M Part No.(s) | 3M Part Descriptor(s) |
|----------------|-----------------------|
| 46012          | Pint                  |
| 46013          | Quart                 |
| 46014          | Gallon                |

---

### **Description**

3M™ Marine High Strength Repair Filler is a unique vinyl ester formulation designed with short strand fiberglass for semistructural repairs, above and below the waterline.

---

### **Features**

- Excellent bond strength
- Easy spreading
- Fast curing
- Premixed
- Short strand glass reinforced fibers
- Blue creme hardener

---

### **Typical Physical Properties**

|                        |                       |
|------------------------|-----------------------|
| Base                   | Vinyl Ester           |
| Color                  | Cream                 |
| Flash Point - °F       | 88 F                  |
| Solids Content (Appx.) | 100% By Weight (App.) |
| Consistency            | Thick Liquid          |
| Reactive Diluent       | Styrene               |
| Net Weight             | 88F                   |

---

### **Performance Properties**

- A. Cure Rate With 2 % 3M™ Creme Hardener and at 70°F/50% RH.
- Working time 15 minutes
  - Handling strength in 3-4 hours

B. Shear Strength: Recorded in pounds per square inch

|        |            |
|--------|------------|
| wood   | fiberglass |
| 423PSI | 682*PSI    |

Shear strength retained after 2 week salt water soak = 98 %

\* substrate failure

- C. Tensile Strength: 3128PSI

## Application Information

### Directions for Use

Important usage recommendations:

- Surface and product temperatures must remain above 60F from application to full cure.
- All epoxy resins must be removed prior to application of 3M Marine Fiberglass Fillers. Epoxy will inhibit cure and adhesion.
- Laminates must be dry.

Failure to follow these recommendations will yield unsatisfactory results.

### Surface Preparation:

Clean surface free of dust, grease, wax, oil and moisture using a cloth and good cleaning solvent such as 3M™ General Purpose Adhesive Cleaner P.N. 08984, or acetone.

When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe proper precautionary measures for handling such materials. Refer to product label and MSDS for further precautions.

Local and Federal air quality regulations may regulate or prohibit the use of surface preparation and cleanup materials based on VOC content. Consult your Local and Federal air quality regulation.

Remove damaged fiberglass or wood from the repair area.  
Scuff repair area with a 3M 80 grit abrasive. Wipe clean.

### Mixing:

Apply the desired amount of filler on a clean non-porous mixing surface. Do not use cardboard, as styrene or hardener may soak in and effect performance.

Add 2% 3M™ Marine Creme Hardener (1 ½ inch strip\* of cream hardener to a golf ball sized amount of filler). Mix filler and hardener to a uniform color making sure to break any air bubbles that may have been introduced. Mix only what you will use in 15 minutes.

| High Strength Repair | Creme Hardener |
|----------------------|----------------|
| ¼ pint               | 5 inch strip*  |
| ½ pint               | 10 inch strip* |
| pint                 | 20 inch strip* |
| quart                | 40 inch strip* |
|                      |                |

2 % creme hardener\*

Apply one strip of hardener across the diameter of the filler. Amounts of filler larger than a baseball will require additional hardener.

\* Diameter of bead strip should be equal to the opening in the tube.

#### Application:

**Do not proceed with the repair if the air, High Strength Repair Filler, or the area to be repaired is below 60°F.**

##### A. Filling

Wet surface by applying a thin coat of mixed 3M™ Marine High Strength Repair Filler to the clean repair surface. Spreading in one direction and then smoothing in the opposite direction will reduce the possibility of leaving voids. Apply 3M™ Marine High Strength Repair Filler in layers (each layer not to exceed 3/8"). The final layer of 3M™ Marine High Strength Repair Filler should be as close to the "finished shape" as possible. Do not apply the 3M™ Marine High Strength Repair Filler above the contour of the repair area. Use 3M™ Marine Premium Filler for the desired finish and follow label directions.

##### B. Bonding

Apply 3M™ Marine High Strength Repair Filler on surfaces to be bonded. Total filler thickness should be between 1/8 inch and 3/8 inch. Position surfaces to be bonded and if necessary fasten with screws or temporary clamps.

Bonding Fillets For additional strength, increase bond area by using 3M™ Marine High Strength Repair Filler to form "fillets". Fillets are added by filling the corner between the two surfaces that are being bonded. Increasing the amount of filler increases the bonded area and the structural strength. To improve appearance smooth fillet with finger or rounded stick.

#### Cleanup:

For cleaning 3M™ Marine High Strength Repair Filler before it is cured, use a dry cloth to remove the majority, followed by a cloth

damp with 3M™ General Purpose Adhesive Cleaner P.N. 08984 or acetone.

Cured Filler can be removed by sanding.

---

## Applications

For filling and bonding fiberglass. Can be applied up to 3/8" thick per application. Can be used for boat repairs above or below the waterline.

- Filling scratches, cracks, and gouges above and below the waterline
- Building and shaping
- Fairing hulls, decks, keels, rudders, etc.
- Bonding e.g. stringers and other structural supports

---

## Storage and Handling

**Recommended Storage Temperature Range :** 60F or 15C to 80F or 26C

**Expected Shelf Life at Recommended Storage Temperature :** 12 months

---

## Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

## Country

US

**This document is public. It may be distributed.**

---

## Important Notice to Purchaser

**Technical Data:** All physical properties, statements and recommendations are either based on tests we believe to be reliable or our experience, but they are not guaranteed. 3M recommends each user determine the suitability of the products for the intended use.

\* If 'Directions for Use' reference P.N.'s 08984, 08986, or 08987, please read. Federal and local air quality regulations may regulate or prohibit the use of surface preparation and cleanup solvents based on VOC content. Consult your local and Federal air quality regulations for information. When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe precautionary measures for handling these materials. Refer to product label and MSDS for P.N. 8984, 8986, or 8987 for detailed precautionary information.

**Warranty and Limited Remedy:** 3M warrants this product will be free from defects in materials and manufacture. **3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE** . If the product is proved to be defective your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

**Limitation of Liability:** 3M and seller will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

---

## For Additional Health and Safety Information

3M Marine  
3M Center, Building 223-6S-06  
Saint Paul, MN 55144-1000  
1-877-366-2746 ( 1-877-3M MARINE)

