

QUICK GLAZE SYSTEM COSMETIC FRACTURE REPAIR FOR BATHTUBS & SHOWERS

DESCRIPTION

The **QUICK-GLAZE** repair system has been designed for repairing standard color acrylic baths and showers, and as a “spray and go” system to meet the requirements of professional repair people. Therefore, it needs to be used in a clean environment to avoid airborne contaminants, which can affect the appearance of the repair. However, it can be sanded, buffed, and polished if sufficient time is allowed for drying. Two topcoats are available to protect the base from the harmful effects of water, UV exposure, and chemicals. The materials and procedures can be easily adapted to other materials and products.

Multi-Tech Products also provides a “MMA” system for repair. It was designed for sanding, buffing and polishing to provide maximum surface gloss and smoothness in dusty production environments. However, it must be fully cured before attempting to sand or buff. Visit www.multitechproducts.com for more information on this system, as well as procedures for other types of surface or structural damage.

Cosmetic fracture repairs to bath and shower surfaces start with a special filler, designed to avoid failure problems seen with standard polyester body fillers and putties due to the effects of hot water, chemicals, and sunlight. Two versions of the filler are available. Substitution of alternate products can have a severe detrimental effect on the performance and durability of the repair.

- 1) The high performance acrylic resin filler should be used when the repair is exposed for long periods to water and chemicals.
- 2) An easy-to-use poly-filler can be used when the repair will not be exposed to these conditions. Since most bathtubs and showers are not in constant contact with water, the easier-to-use poly-filler is normally the product of choice.

The filled repair is then spray-coated (using an air brush) with a color matched basecoat. The Quick Glaze basecoats are a polyurethane coating with outstanding performance. Toners allow adjustment of the basecoat color to be lighter or darker. A toner kit, containing primary color pigments, can be purchased to facilitate base color adjustment. The repair is finished by applying a protective, clear topcoat. Two choices for a clear topcoats are available, the Quick Glaze and K2000. The K2000 products provide maximum protection from chemicals. This Quick Glaze repair system allows the damaged surface to be repaired to an appearance like new.

While there is no implied warranty, the materials and techniques described in these procedures have been designed to withstand the normal operating conditions of bathtubs and showers. However, success of the final repair also is dependent on the experience and skill of the individual repair technician.

MATERIALS

- One of two choices for a filler
 - 1) Poly-filler (a modified polyester resin) with a white cream hardener
 - 2) Acrylic resin with hardener – recommended when repair is in harsh environment
- A polyurethane enamel basecoat matched to the bath or shower color
- A polyurethane enamel clear topcoat
 - 1) Quick Glaze topcoat
 - 2) K2000 Topcoat

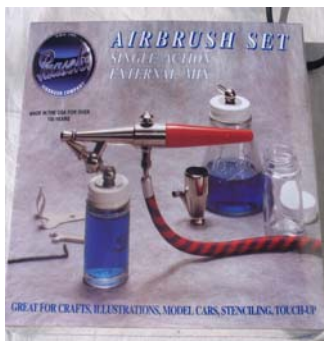
- A hardener for both basecoat and clear topcoat hardener, which is supplied in three options, a general purpose hardener and two rapid-cure hardeners, one for interior and one for exterior use
- A reducer for adjusting the spray viscosity of the basecoat and topcoat, supplied in three application temperature ranges (low, medium, and high)
- Toners for adjusting color for a better match (lighter or darker)
- A finishing solvent to assist in the “feathering” of the coatings and minimize the “halo” effect of over spray (optional)
- Hand glaze, a non-silicone/non-wax cleaner, to minimize static and film from the surface and assist in better spray distribution
- Isopropyl alcohol



EQUIPMENT

The equipment listed below is needed to use the **QUICK-GLAZE** repair system. Most of this equipment is available from Multi-Tech Products. Other equipment can be purchased from paint supply stores. A working knowledge of the equipment and application techniques is assumed for these repair procedures.

- A ¼” Die Grinder (electrical or pneumatic) with cylinder grinding points (Dremel-type tools typically are not robust enough for this job)
- Industrial Heat Gun (a home hair blow dryer is not sufficient)
- A ⅜” Variable Speed Drill (electrical or pneumatic)
- A rubber disc assembly for the drill (similar to the Roloc Disc pad)
- 3” Sanding Discs - 50, 36, 24 grit. (50 grit is optimum.)
- An Airbrush like Paasche #H with a “3” or “5” tip (kits include a 2½ oz. and a ½ oz. spray cup, a cloth braided hose). Extra cups for mixing may be necessary.
- For large (> 1 sq.ft.) repair areas, a Touch Up Spray Gun with siphon or gravity cup is useful.
- High pressure (> 65psi) and flow (1 CFM) air source – A compressor needs to be a tank-type, to provide adequate CFM. The pump alone is inadequate without a tank reservoir.
- High Speed, Heavy Duty Polisher/Buffer - at least 2500 – 3500 rpm is recommended (variable speed is optimum). Refer to our training DVD.
- Buffer Pad (industrial grade)- purchase the pad first and then match it up to the appropriate buffer.
- Rubbing Compound or Buffing Bar.
- Vapor/Particulate Respirator - NIOSH/MSHA TC-23C.



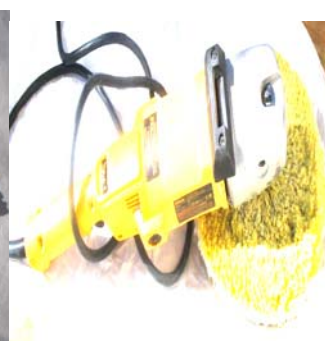
Airbrush



Heat Gun



Drill & Grinder



Buffer

SAFETY PRECAUTIONS

Bath repairs require personal contact with a variety of components, each having its own unique characteristics. When handling these materials, read and follow the safe handling procedures on the labels and the applicable MSDS. During grinding, drilling, sanding, etc., eye and hand protection is required. Do not breathe vapors or mists. Individuals with a history of lung or breathing problems should not use or be exposed to this product. Keep away from heat, sparks and flame. Vapors may cause a flash fire. Close containers after each use. Dispose of properly.

The polyurethane coatings require precautions to avoid the effects of isocyanates. Wear a vapor/particulate respirator (NIOSH/MSHA TC-23C) while mixing hardener with coatings, during application and until all vapors and mists are exhausted. Individuals with a history of lung or breathing problems or prior reaction to isocyanate should not use or be exposed to this product. Do not permit anyone without protection in the painting area. Follow the respirator manufacturer's directions for respirator use.

PROCEDURE

Before a repair can be started, the bath must be drained of water, and be dry and clean. Clean with a soft cloth or paper towel moistened with isopropyl alcohol.


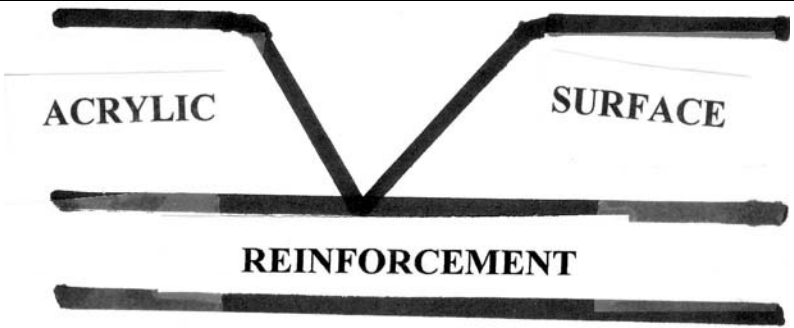


The steps used to repair a surface crack are:

- 1) Crack preparation (grinding and sanding)
- 2) Filling the crack
- 3) Applying the bath or shower color coating
- 4) Applying a protective clear topcoat

It is recommended that the surface be allowed to fully cure for 12 hours or overnight before water is re-introduced to the surface.

Cool temperatures will lengthen the cure time.



<p>Preparing the crack and filling</p> <p>Acrylic bathtubs and showers are produced using a vacuum formed sheet that is reinforced from the back using a fiberglass composite or other strong polymer.</p> <p>Refer to the website for information on the type of bath ware that can be repaired with these products and procedures.</p>	
<p>The steps for preparing the crack for filling are:</p> <p>Fracture (crack) preparation:</p> <p>1) Terminate the crack by routing it out from one end to the other using the rotary grinder. Material should be removed so that a “V”-shape groove about 1/8” deep is created. The grinding should extend ¼” beyond each end of the crack, and yield a groove with a 30 to 45 degree angle on the edges.</p>	
<p>Unless the original fracture extends into and/or through the entire wall structure, the grinding depth should stop when the reinforcement material is exposed. Avoid creating a hole in the wall. Refer to the website for procedures when a hole is present or when structural damage requires repair.</p>	
<p>2) Remove all loose fragments from the edge by sanding with 100 grit wet or dry sandpaper. Control the sanding to the immediate area of the defect to minimize the size of the repair.</p> <p>3) Clean the area with a soft cloth or paper towel, dampened with isopropyl (rubbing) alcohol.</p> <p>4) Chemical components should be at room temperature.</p>	
<p>Filling preparation & application:</p> <p>There are two filler choices, a modified polyester resin, and an acrylic resin having similar properties to the acrylic bath or shower.</p>	

The acrylic filler should be used when there is regular exposure to water and chemicals such as around the drain, in a soap dish, or where bottles are stored. It is also recommended for steam units.



However, the poly-filler is satisfactory for most bath applications.



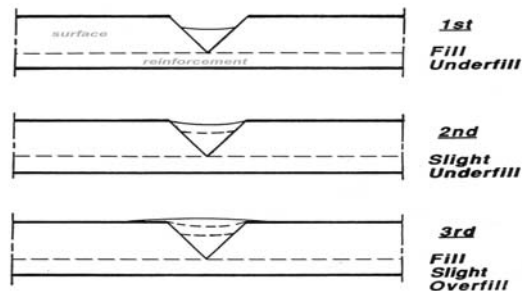
Poly-Filler process





5a) To prepare the poly-filler, which needs to be used within 5 minutes after mixing with hardener, use the wood mixer to place 3 small piles of filler on a piece of cardboard (or substitute). The total quantity of material should be enough to fill the required void space from grinding.
Squeeze out enough cream hardener to represent 1/20th of the filler and place alongside each pile of filler.



6) Mix one pile of filler and hardener with the wood mixer, and apply to the ground out crack. Do not completely fill the space. Repeat this process with each of the 3 piles. Allow each layer to set before the next layer application. Indirect heat can be used to accelerate the drying. Too much heat can cause air bubbles. The final fill will be slightly higher than the surrounding surface.

It is best to use at least three thin layers to complete the fill.
See diagram.



Acrylic Filler process	
<p>5b) Prepare the acrylic filler by dispensing the desired amount of component “A” into a plastic graduated mixing cup. Add 30 drops of component “B” per each ½ ounce of “A”. Mix thoroughly with the wood stirrer. Since the material will harden within 15 minutes, only about 1/3rd of the required material should be prepared at once. The material is applied in layers just like the poly- filler.</p>	
<p>6) After final filling and curing, grind or sand the area so that it is even with the surface. The acrylic filler normally requires grinding with the 3” diameter wheel since it is harder. However, grind at slower speeds to avoid overheating. Sanding with 100 grit paper is normally adequate for the softer poly-filler.</p>	
<p>7) If pinholes or other imperfections exist, a thin layer of the same filler can be filled over the area. This thin layer will cure rapidly. Do not use any other type of filler. This is referred to as a skim coat (1 mil thick)</p>	
<p>8) Apply heat, if necessary, to complete curing, and begin sanding with a progression from 220 to 320 to 400 grit wet sandpaper.</p>	
<p>Now the repair is ready for application of the color coating.</p>	

Color finishing the filled area

The materials needed to complete this repair include a basecoat that matches the bath or shower, and a clear topcoat. These coatings require the use of a hardener and a reducer to facilitate spraying. The standard hardener provides outstanding durability to the coating. A rapid-cure hardener is available; one for interior use and one for exterior. The reducer is supplied for use at three different temperature ranges.
 Low = <70°F, Medium = 70° to 90°F, High = >90°F



A finishing solvent is provided to allow “feathering” to minimize the paint “halo” effect.
 A hand glaze cleaner minimizes static and film from the surface.



Basecoat preparation:

After you have completed a filled and smooth crack, the next step is to apply the basecoat. The following procedure is for the standard Quick Glaze system.

Start by pouring the desired amount of the basecoat into a mixing cup or airbrush bottle. Dab a small amount on the surface of the bath or shower in the repair area and check for color match. If adjustment is necessary, add appropriate toner(s), and repeat until satisfactory color match is achieved. See our website for color adjusting guide and toners.



Add the chosen hardener (general purpose or rapid cure), using one part hardener to 8 parts basecoat. Mix thoroughly.

Now add the chosen basecoat reducer (low, medium, or high temperature) in the same ratio, 1 part reducer to 8 parts basecoat mix. Mix thoroughly and perform a test spray on a test surface.

If additional thinning is required for proper airbrush atomization, you may add reducer up to the level of 4 parts basecoat/hardener to 1 part reducer.

Be sure to set airbrush pressure to 45 to 55psi.



The topcoat can also be prepared prior to application of the basecoat to avoid excessive time between coats. Pour the desired amount of the Quick Glaze topcoat in a mixing cup or separate airbrush bottle. Add the Quick Glaze hardener in the ratio of 1 part hardener to 4 parts topcoat. Mix thoroughly. Add the same amount of the reducer used for the basecoat as you added hardener.

Mix again. Test spray. Additional reducer, similar to the basecoat, can be added to increase thinning, if needed.



Pour some Quick Glaze finishing solvent into a separate airbrush bottle, and set aside.



Clean the repair area and a sizeable surrounding area with a cloth or paper towel moistened with isopropyl alcohol.

Apply a generous amount of Hand Glaze. Work it in with a dry cloth or paper towel. Wipe with a tack cloth to remove dust and foreign particles.



Begin spraying the basecoat by holding the air brush 2 to 3 inches from the surface. Feather the basecoat from the center. Typically, two passes are required for total coverage. Thick coats will increase drying time. Be sure to achieve a gloss over the filled area.



The finishing solvent can and should be used throughout the spraying operation to assist in wetting out the coating and minimizing any "halo" effect. Allow the finishing solvent to flash dry before applying the clear topcoat.

Clear topcoat application:

The final clear, topcoat should be applied immediately after the basecoat flashes and no later than 30 minutes from completing the basecoat.

The topcoat is applied identical to the basecoat. Two passes are generally sufficient, but be sure to cover the complete basecoat area and feather the edge. Again, the finishing solvent should be

used to assist in wetting out the coating. The topcoat should be tack-free in ½ hour. If applied correctly and in a clean environment, the end result should be a smooth, high gloss finish similar to the original. If sanding, buffing and polishing are desired, wait 12 hours before starting.

The rapid hardener will decrease the time before sanding and polishing significantly. Generally, it can be performed within one hour. A lighter film application should be used with the rapid hardener.

The airbrush should be disassembled and cleaned with lacquer thinner thoroughly before storing for the next use.

K2000 Clear Topcoat

If the K2000 topcoat is substituted for the Quick Glaze topcoat, the procedure is changed as follows:

- 1) Use the K2000 retarder instead of the reducers in the basecoat starting at 8 to 1 ratio mixture.
- 2) K2000 hardener is used instead of the Quick Glaze hardener at 8 to 1 ratio mixture.
- 3) The Quick Glaze finishing solvent is still used for wetting out the halo.
- 4) Add K2000 hardener to to K2000 topcoat in the ratio of 1 part hardener to 3 parts topcoat.
- 5) The K2000 thinner/reducer is used for the finishing solvent.



MULTI-TECH assumes no obligation or liability for any advice furnished or for any results obtained with respect to this information. All such advice is given and accepted at the buyer's risk. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patent of MULTI-TECH or others. MULTI-TECH warrants that the use or sales of any material, which is described herein, and if offered for sale by MULTI-TECH does not infringe any patent covering the material itself, but does not warrant against infringement by reason of the use thereof in combination with other materials or in the operation of any process.

FOR ORDERS AND INQUIRIES CONTACT:

MULTI-TECH PRODUCTS
TOLL FREE 800-218-2066
www.multitechproducts.com

January 09