

ACRYLIC SPA GRANITE/QUARITE REPAIR

DESCRIPTION

The **Granite** repair system has been developed to be an easy product for anyone to use to make repairs in granite acrylic sheet as commonly used in portable spas. We even offer a do-it-yourself kit for real easy application. See our website for availability.

Multi-Tech Products offers granite repair materials that match all popular colors commonly sold in the industry. Refer to our website for more specific information on colors that are available. Repairs to spa surfaces start with a special filler, designed to avoid failure problems seen with polyester automotive body fillers and putties due to the effects of hot water, spa chemicals, and sunlight. A high performance acrylic resin is the recommended filler for spas. It should always be used when there is long exposure to water and spa chemicals. We also offer an improved polyester filler, primarily for bathtubs, but it can be used for spa repairs that are not exposed to these conditions. Visit our website for use instructions. A special filler, which is produced from the same products used to make the original sheet, is used for the final layer of filler in the repair. This creates a very good color match to the original surface. The repair is finished by applying a protective, polyurethane, clear topcoat. These repair coatings allow the damaged surface to be repaired to an appearance almost 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 spas.

MATERIALS

- MTP white acrylic filler (component "A")
- MTP granite filler matching original product color
- Hardener for fillers (component "B")
- K2000 Clear topcoat
- K2000 Hardener
- Texture additive, optional
- Isopropyl alcohol
- Mixing cups, stir sticks, and small paint disposable paint brush

EQUIPMENT

The equipment listed below is needed for best results with this repair system. It is available from Multi-Tech or local paint supply houses. 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® tools typically are not robust enough for this job)
- Industrial Heat Gun (Again, a 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.)
- Wet/dry sandpaper in 80, 100, 220, 320, & 400 grit
- Clean wiping cloths or paper towels



Industrial Heat Gun



Grinder & Drill

SAFETY PRECAUTIONS

Spa 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.

Wear a vapor/particulate respirator (NIOSH/MSHA TC-23C) while mixing hardener with coatings, during application (especially when overall refinishing) 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

<p>Before a repair can be started, the spa must be drained of water, and be dry and clean. The steps used to repair a granite surface crack are:</p>	<p>Spa surfaces clean and dry</p>
<ol style="list-style-type: none"> 1) Crack preparation (grinding and sanding) 2) Filling the crack 3) Applying a protective clear topcoat. This is very important to avoid future discoloring of the repair by the water and chemicals. 	
<p>After being repaired, it is recommended that the surface be allowed to fully cure for at least 7 days before water is re-introduced to the spa. Place the spa cover in a position to allow air ventilation during the drying process. Cool temperatures will lengthen the cure time. If condensation occurs on the repair coatings during curing, it will affect the quality and time to cure.</p>	<p style="text-align: center;">LET CURE FOR 7 DAYS BEFORE FILLING WITH WATER</p>
<p>Before starting a spa repair, the jets and other areas that should be protected from overspray should be masked.</p>	

Preparing the crack and filling

Spas are produced using a plastic (normally an acrylic) sheet that is reinforced from the back using a fiberglass composite or other strong plastic.

Preparation and filling of the crack are the same regardless of the color or texture of the spa. As a general rule, we recommend using only the acrylic filler on spas. This provides a very hard, non-porous surface that resists the spa environment.

It is a two-part resin.

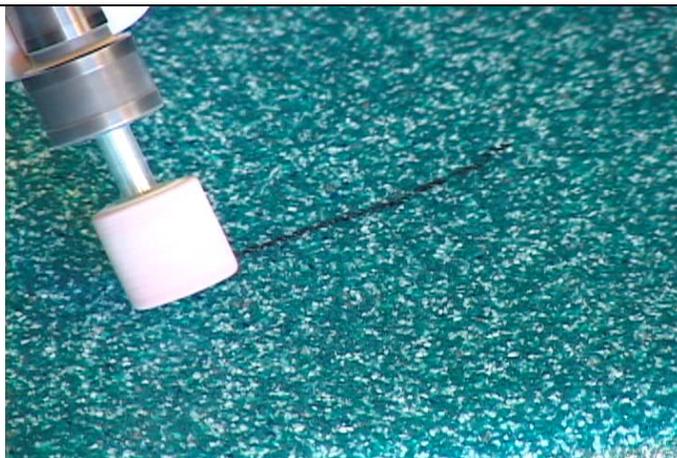


A poly-filler is available for jobs where the repair will not be constantly exposed to water & chemicals. It uses a cream hardener, and is easier to grind and sand.



The steps for preparing the crack for filling are:

- 1) Terminate the crack by routing it out from one end to the other using the rotary grinder.



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.



3) Clean the area with a soft cloth or paper towel slightly dampened with isopropyl (rubbing) alcohol.

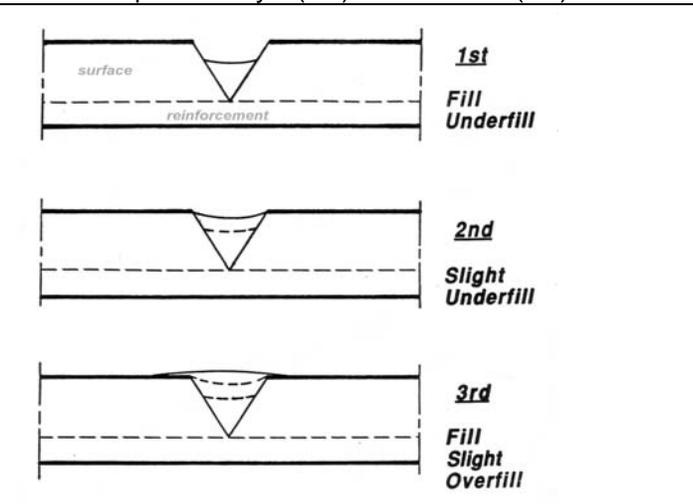
4) Chemical components should be at room temperature.

5) 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 1/2 ounce of "A". Mix thoroughly with the wooden stirrer. Use immediately, since it will harden within 15 minutes.



30 drops of catalyst ("B") to 1/2 oz. filler ("A")

6) Fill the crack with the acrylic resin to slightly below the spa surface. Use gentle continuous heat with the heat gun around the edge of the crack, without pointing the gun directly on the crack. This will accelerate the curing process. Allow to cure for 5 to 10 minutes. Now, immediately, fill again. Filling should still be below the spa surface.

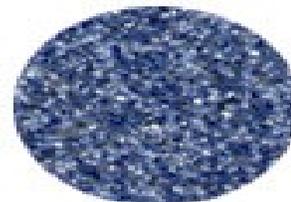


<p>7) Grind any excess white acrylic filler from around the crack to avoid bleed-through in the final repair. Repeat the curing process.</p> <p>Use 36 to 50 grit sanding discs.</p>	
<p>8) Immediately, fill again (3rd time) so that the fill is slightly above the spa surface. Sand with 100 grit wet or dry sandpaper if more than 15 minutes expire between applications. The filler should be soft to the fingernail. This promotes adhesion of the separate coatings. Using too much filler in a single coat can result in excessive heat, which may result in air bubble formation.</p>	
<p>9) After final filling and curing, grind the filled area with the grinder. Use a slow speed to prevent excessive heat buildup. Continue until the surface is flat and even with the spa surface.</p>	
<p>10) Sand slightly with 100 grit wet or dry sandpaper.</p>	
<p>11) Now you may wipe the surface with a very thin coat of a new batch of the acrylic filler to fill in imperfections such as pin holes or grinder marks. Do not use anything other than the acrylic filler for this purpose.</p>	
<p>12) Allow a few minutes for curing, and then begin sanding with a progression from 220 to 320 to 400 grit wet sandpaper. Now the surface is ready for application of the spa color matching system.</p>	

An acrylic resin, with colored particles like the sheet, is used to match the appearance and texture of the surface. These particles are acquired from the sheet manufacturer. Multiple particle size ingredients can be ordered from Multi-Tech to better match the particles in the spa, which have been deformed in the manufacturing process.



Aristech Teal



caribbean
GS7016

1) Starting from a crack filled with the white acrylic resin, grind a depression that is about 1/16" below the spa surface.

This void will be filled with the colored filler. In fact, the colored filler can be used for the entire filling process for small cracks, etc.



2) Using the mixing cups, combine component "A" with component "B" in the ratio of 30 drops of "B" to each 1/2 oz. of "A". Mix well.



3) Apply this material in the depression and fill so that it is above the spa surface.



4) Allow it to cure for about ½ hour. The heat gun can be used to accelerate. Direct heat to the immediate surrounding area, and not directly on the filler.

5) Grind the area smooth with the drill and disc pad. Use a 50 to 36 grit disc.



6) Sand the surface to the desired smoothness using a progression from 100 to 320 grit sandpaper.



Now you are ready to apply the protective, clear topcoat. We recommend using only the K2000 product since it withstands the effects of spa water and chemicals. The required components include a hardener, thinner/reducer, and the topcoat.



1) Pour an ample amount of K2000 topcoat into a mixing cup or airbrush bottle. Add the hardener in the ratio of 1 part hardener to 3 parts topcoat.

1 part hardener to 3 parts topcoat

<p>If desired, a texture enhancer can be added. It is added in the ratio of 1 part enhancer to 32 parts topcoat.</p>	
<p>2) Apply this mixture to the repaired area by dabbing with a small paintbrush.</p>	
<p>The repair is finished, so allow it to dry before putting into use.</p>	

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