

Pool Construction

When having a swimming pool constructed, homeowners are given a plethora of construction options. Pools can be built in many shapes and sizes and in a variety of colors. They're also made from a broad range of materials, the most popular being concrete, fiberglass and vinyl.

Concrete is one of the most common materials used in pool construction (and is the material that benefits the most from pressure cleaning). Concrete pools come in a variety of forms, but two of the most popular forms are gunite and shotcrete.

Gunite pools are formed by spraying a "dry" concrete mixture under pressure over steel reinforcing rods. In this type of pool construction, the concrete mixture is not premixed before application - water is added to the mixture in the nozzle of the Gunite gun as it is being applied. Shotcrete pools are created in the same manner. The differentiating factor is that Shotcrete pools are formed by spraying a "wet" concrete mixture as opposed to a dry one.

There are several interior finishes available for concrete pools. The interior surfaces of concrete pools are often made from plaster, ranging in colors from white to black. Or, instead of plastering, the concrete can be troweled smooth and painted, or it can also be tiled. Other types of interior finish include sprayed liquid vinyl, exposed aggregate and reinforced PVC membrane.

Fiberglass has been used for swimming pool construction since the 1950's. These types of pools have a smooth, non-porous surface that requires little maintenance. According to *Swimming Pools and Spas* by Sunset Publications, "The slick surface is difficult for algae to cling to and the material is easy to clean. Color is built right into the material, and usually no other surface finish is required." Pool manufacturers do not recommend that fiberglass pools be drained after set-up. Nor should they be acid washed or scoured with abrasive cleaners. Because of this, cleaning is often best accomplished through chemical treatment and non-abrasive cleaning methods.

Vinyl-lined pools. Once this pool's durable vinyl liner is put into place, the pool should not be drained. Doing so can ruin the liner when it is refilled, as it folds and puckers from the weight of the water. Therefore, the owner needs only to add a little fresh water each year. This type of pool is best maintained by being regularly cleaned with a concentrated amount of chemicals and a water vacuum.

How do I prepare the surface for painting?

The most important aspect of pool painting is surface preparation. Paint will not adhere to even the slightest oily residue such as suntan lotion, body oils, hair spray, algae or anything that comes between the pool surface and the paint. The best method for preparing your pool is described in the following steps:

Pool washing:

The best pool washing solution is tri-sodium phosphate mixed with warm water. Olympic #910 Pool Washing Compound is ideal for this purpose. **NEVER** use a soap-type detergent. Soap products leave a soapy film on the surface which will result in poor paint adhesion.

How to wash your pool:

Mix eight ounces of pool washing compound or tri-sodium phosphate to each gallon of warm water. One gallon of this solution will wash approximately 200 square feet. Dip a long handled brush in this solution and firmly scrub the pool surface. Rinse off the residue with clear water right after you scrub. Be careful not to allow the pool washing solution to dry on the surface. Always scrub the walls first and the floor last. The next step is acid etching.

Acid etching:

Acid etching is required on bare masonry surfaces like concrete or plaster. It is also effective for removing chalky residue and hard mineral deposits on a previously painted pool. Acid washing opens millions of tiny pores which allow the subsequent coating to penetrate, thus creating a secure cohesive bond. Even on previously painted pools, we heartily recommend an acid wash. **NOTE:** To prevent eye injury, **NEVER** pour water into acid. **ALWAYS** pour acid into water and wear protective eyewear.

Mixing the acid:

Mix in a plastic bucket a ten percent solution of muriatic acid in water. Most muriatic acid is packaged at 20% or 30% strength. One gallon of 30% muriatic acid mixed with two gallons of water will yield three gallons of ten percent solution. Likewise, one gallon of 20% muriatic acid mixed with one gallon of water will yield two gallons of ten percent solution. One gallon of the ten percent solution is sufficient for etching 100 square feet of pool surface.

The etching procedure:

Liberal brush the acid solution on the surface. The acid will bubble on the surface when applied. As soon as this effervescence ceases, rinse the solution off with clear water. The surface should feel like fine sandpaper when properly etched. Splash a small amount of water on the surface to see if it is sufficiently etched. If the water soaks in fairly quickly, the surface is properly etched. If the water stands on the surface, another etching will be

required or switch to a stronger acid solution. It is of utmost importance that you wash the pool again after etching. The trisodium phosphate in the pool washing solution will neutralize all traces of acid left on the surface after etching. After this second washing, allow the pool to dry before painting. *Caution: Do not mix in a galvanized container.*

Fiberglass pools:

To prepare a fiberglass pool for painting, sand the surface in straight lines with coarse sandpaper. Do not use an orbital sander. This sanding will create a mechanical bond for the epoxy paint. Once the fiberglass has been properly sanded, perform the pool washing procedure as described before. No acid washing is needed. Allow the surface to dry and you are ready to paint.