



Aquatic Consulting Services

1220 Rosecrans Street #915 • San Diego • California • 92106

Pool Tip #11: Metal Stains & Water Discoloration

Metals that cause pool stains, leave deposits on pool surfaces, or result in water discoloration are often introduced as components of the source water used to fill the pool. Depending on where you live, dissolved mineral concentrations in your source water may be very high. In addition, metals can be added to pools by ionizers, or metal based algaecides or sanitizers; from maintaining aggressive water conditions that eat away at metal pool components, by incorrectly adding too much acid to pool water, or from adding acidic products prior to the pump, filter or heater; and by running water through pipes at too high a velocity and stripping metals from the pipes.

Correcting design errors, rigorously following proper chemical maintenance procedures, and use of negatively charged polymers, or sequestering and chelating agents such as EDTA (ethylenediamine-tetracetic acid), or HEDP (hydroxyethylidene) may be useful in preventing stains.

Sequestering agents are used as a preventative treatment to increase the ability of water to hold metals in solution. This keeps metals from precipitating or coming out of solution, discoloring or clouding the water, oxidizing and staining, attaching to and discoloring swimmers' hair, or from depositing and building up on pool surfaces.

Chelating agents (pronounced "key-la-ting"), bond and react with metal ions to keep them from combining with other substances and precipitating, help prevent crystal formation, and may actually aid in removing metals from the water.

Once metals have been allowed to stain and deposits have built-up on pool surfaces, it may be necessary to acid wash using drain or non-drain procedures, mechanically grind away the stains using pumice stones or sandpaper, or in some cases, resurface the pool.