



Aquatic Consulting Services

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Pool Tip #7: Calcium Scale

The unsightly white stains visible on your pool waterline tile are probably calcium stains. Excess calcium deposits out on the pool walls, damages pool equipment -- especially heater elements, and restricts water flow through the recirculation lines. The stains can be removed by scrubbing with tri sodium phosphate (TSP), or with a non abrasive chlorine bleach based liquid cleanser, or with a fine grit sandpaper. Don't use muriatic acid to scrub off the stains--the acid will damage the grout and may etch the ceramic tile. If you ignore the calcium build-up for long, you may wind up needing to power grind it off.

To prevent the calcium stains from forming in the first place, pay close attention to the mineral saturation or water balance. Since water is the universal solvent, all things will inevitably dissolve in water until the water becomes saturated. Eventually, water will become unbalanced or oversaturated, and excess products will precipitate. If the water is oversaturated, calcium carbonate will begin to settle out of the water. Water may become cloudy. Scale will build up on solid surfaces, making the surfaces rough, and discoloring dark surfaces like colored tiles or black bottom pools. Calcium carbonate scale will also build up on the interior surfaces of the pool recirculation pipes causing a condition similar to "hardening of the arteries". Water flow will be restricted and pressure will increase. Sanitizer effectiveness will be reduced, and algae growth may increase.

If the saturation index formula indicates that the pool water is not balanced, make the appropriate chemical corrections, starting with total alkalinity, then followed by pH, temperature, calcium hardness, and TDS. Well balanced water will increase bather comfort and will dramatically extend the life expectancy of the pool and its components.