

Understanding Swimming Pool Water Chemistry

Understanding swimming pool water chemistry is an essential part of caring for and maintaining your swimming pool. Knowing how different factors such as pH, Total Alkalinity, Calcium Hardness, and Stain Producing Metals affect your pool water and pool equipment will save you a lot of time, money, and frustration. Knowing more will leave you better prepared to get your swimming pool water properly balanced the first time, saving you money by adding just what is needed at the right time, instead of heavy doses to fix any previous oversight. Now let's talk about the 1st and MOST IMPORTANT factor controlling your pool water balance.

How pH Affects Pool Water Chemistry

Simply stated, pH is the measure of the relative acid or base of the pool water. The ideal level for swimming pool water is between 7.2 and 7.8, is recommended to be tested daily, and can be tested for with any pool water testing kit. A pH level above 7.8, referred to as being "to high" will lead to cloudy water, staining, scale deposits, filtration problems, and reduced chlorine efficiency. This means you can save money on chlorine by making sure your swimming pool's pH is in the appropriate range. If pH falls below 7.2, called being "to low", it could lead to corrosion of metallic pipes, etched plaster, rapid loss of chlorine residual, and possible irritation to swimmers. To maintain an ideal pH level in your swimming pool water, use a pH Increaser when the pH drops below 7.2 and a pH Reducer when the pH rises above 7.8. Now that your pH is perfect lets move on to the next factor in achieving good water balance in your swimming pool.

Calcium Hardness and How It Affects Water Balance

Calcium Hardness is the amount of dissolved calcium in your pool water. The ideal amount of dissolved calcium is between 100 and 500 PPM Calcium Hardness above 500 PPM (high Calcium Hardness) can cause calcium to precipitate from the water causing cloudy conditions and scale deposits. Low Calcium Hardness (below 100 PPM) can lead to corrosion. To maintain an Ideal Calcium Hardness level in your pool water and prevent cloudy water add a Rust and Scale Remover when the Calcium Hardness Level rises above 400 PPM A low calcium hardness level can be corrected by adding Water Hardness Increaser. Now that you know about pH, Total Alkalinity, and Calcium Hardness we will consider the fourth pool water balance factor.

Dealing With Stain Producing Metals in your Pool Water

Iron, copper, manganese, and cobalt are metals which commonly cause colored water or stains in pools. If you are fortunate enough to have the "ideal" fill water, and a properly constructed and maintained pool, these would not be a problem. Since ideal conditions rarely exist, we recommend the regular use of a good sequestering agent to continually protect the pool against stain producing metals.

Sanitizing Your Pool Water

Making sure all the preceding factors of pool water balance are within their appropriate levels will allow you to sanitize your pool with fewer headaches, and pounds of chlorine, than ever before! Disinfecting is an essential element of any pool water treatment program. Stabilized Chlorine is designed to disinfect your pool water by releasing "free chlorine" into the water to control germs and other microorganisms, algae and organic matter. Because water conditions change rapidly, it is very important to test the water every day for chlorine residual. The free available chlorine reading should be between 1-2 PPM

Protecting Your Chlorine From Sunlight

At the start of each season it may be necessary to add Stabilizer. Sunlight can rapidly destroy chlorine residual in outdoor pools unless the pool water is "stabilized". Stabilizer, which is sometimes referred to as "conditioner", will shield your chlorine from rapid destruction by sunlight. In effect it will make the chlorine you buy last longer, saving you money in the long run.

Recommended Ranges of Swimming Pool Water Chemistry:

pH -7.2 - 7.6

Total Alkalinity - 80 - 120 PPM

Calcium Hardness - 200 - 400 PPM

Free Available Chlorine - 1 - 3 PPM