

A photograph of a swimming pool with a fountain in the background. The pool is surrounded by a stone deck and a lawn. The text is overlaid on the water.

3 Steps to Great POOL CHEMISTRY Year Round



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Proper water balance is the single most important factor for maximizing the life and appearance of your interior swimming pool finish. Maintaining the right pool chemistry for each season of the year will make the overall maintenance of your pool easier, allowing you to spend more time enjoying your pool than tending to it.

1 The Basics

Below is a list of basic definitions of chemicals and ideal levels. You'll want to maintain this balance at all times, no matter what season it is.

Chemical	Ideal Level	Minimum Level
Free Chlorine	2-4 ppm	1 ppm
Combined Chlorine	0	0
Alkalinity	80-120 ppm	80 ppm
Calcium Hardness	200-400 ppm	200 ppm
pH	7.4-7.6	7.2
Cyanuric Acid (Stabilizer)	50 ppm	50 ppm (in Arizona)
ORP Reading if Installed	None	650 Millivolt
Total Dissolved Solids	N/A	1500 ppm over beginning water reading





Free Chlorine

Free chlorine kills bacteria and oxidizes contaminants. When you add chlorine to your pool, you're actually adding free chlorine. Pool owners add free chlorine to pools to ensure that it is always sanitized.

Combined Chlorine

Combined chlorine is when free chlorine combines with contaminants. In water, this type of chlorine is ineffective in sanitizing and has no oxidizing ability. Total chlorine is the sum of free and combined chlorine.

Total Alkalinity

Alkalinity is the measurement of alkaline materials dissolved in water. An ideal range is 80 to 120 ppm. Alkalinity helps pH to resist fluctuations. If alkalinity is low, it can cause a "pH bounce" – a major level fluctuation outside of the recommended range. If below the recommended levels, your water will become aggressive and result in damages to your interior finish.

Calcium Hardness

Calcium hardness is the measurement of dissolved minerals in water. A low hardness can lead to corrosion of the pool surface, filter, heater, ladder, and other pool and spa components. A calcium hardness level that is too high causes cloudy water (white chalky appearance). Plus, elevated calcium hardness results in mineral deposits building up on your interior finish causing it to feel rough.

pH Levels

pH is the measurement of acidity of water, measured on a scale from 1-14, 7 being neutral. A pH below 7 means the water is very acidic and a measurement reaching closer to 8 means the water is very basic (alkaline). pH levels are important to maintain in order for other chemicals to be effective. Chlorine is less effective in high pH levels. A pH level of 8.0 only gives chlorine 22% effectiveness. In addition, pH level affects the lifespan of the interior finish of your swimming pool. If the pH level is lower than 7.0, this can cause premature damage to the interior finish. If the pH level is high, a mineral deposit results and can cause a rough interior finish.





2 Seasonal Maintenance

As the seasons change, so do your pool's maintenance needs. Environmental changes around your pool have a direct effect on the environment inside your pool. Scorching sun, freezing temperatures, heavy rains and blustery winds are just a few of the seasonal weather changes that can disrupt the chemical balance of your pool and spa. We recommend adjusting your maintenance routine with the seasons to ensure your pool structure and equipment receive the care and protection they need year round.

Fall / Winter

When the swimming season comes to a close, you'll still need to perform regular water testing of your pool to ensure you protect your interior finish, tile, and ground. It is also extremely important to keep your pool water clear and free of algae.

Balance

It is important to make sure that your pool's pH, chlorine, alkalinity and calcium hardness levels are in balance to prevent corrosion or scale buildup that can occur while your pool is less frequently used over the winter. These adjustments should be made regularly (2-3 times a week). These are the levels we recommend for each.

pH level: 7.2-7.6

Alkalinity: 80-120 ppm

Calcium Hardness: 200-400 ppm

Chlorine: 1-3 ppm



Shock

Shock the water with chlorine to kill any existing bacteria and add a winterizing algaecide during cooler months to kill any existing algae and possible “bloom” algae. Make sure the chlorine level is 1-3 ppm before adding the algaecide. An extra-strength algaecide is recommended for an overwinter pool rather than an algaecide used on an ongoing basis during the summertime.

Check the Pool Regularly

Remove everything from the water including garbage and equipment, and skim for insects, leaves, and other small debris. Vacuum and brush the bottom and sides of the pool. Be sure to clean the pool regularly during the winter months to prevent any extra debris from falling into the pool and possibly staining the interior finish.

Don't Forget Water Features

Remember your water features too, which are tied into your swimming pool's main pump and filter system. Algae and scaling may be prevented with the proper pool chemistry for both pool and water features. Including these features in your fall/winter maintenance can prevent unnecessary time and money when spring and summer rolls around.



Your filter elements may differ

Spring / Summer

A thorough cleaning and maintenance routine during the winter months will help you start your swimming season off right.

Clean Filter, Test and Balance

Before spring and summer pool use begins, you'll need to clean the filter. Take the filter out and clean thoroughly with a hose. If you have a sand filter, backwash weekly. We recommend having

your water tested professionally to ensure optimal water chemistry. Have your local pool store test the mineral content of the water along with the total alkalinity, pH, and chlorine levels and let you know what needs to be adjusted and by how much.

If you notice any heavy calcium or mineral build up on your pool interior finish, let your Shasta pool professional know so they can give you an estimate to clean the interior surface.

Always add chemicals gradually, while the system is running to ensure an even distribution and dilution of chemicals. Always handle leftover chemicals carefully. Open outside and away from your face.

Shock

In addition, you'll probably need to shock. You should always shock your pool in the evening as sun burns off the chlorine, making it less effective. Before adding the chemicals to your pool, you'll need to dilute the chemicals. Fill a bucket and add the granular shock gradually, mixing well. Pour the mixture around the edge of the pool with the pump running.

Wait for the water to clear (this should take about a week) and keep the cover on to prevent any pollen or debris from entering.

Keep the pool balanced and clear for the rest of the season by maintaining a clean filter and proper water levels, vacuuming the pool each week, and testing chemical levels 2-3 times a week. Pool owners should add chlorine when levels begin dipping below 2 ppm. Remember the golden rule of adding chemicals: only add chemicals to a pool that is running.





3 Ongoing Care

Re-testing

As the seasons wear on, pool water should be tested for chlorine twice weekly at a minimum, and more often if the pool is exposed to regular rainfall, environmental debris, or the summer dust storms that are so common in Arizona. In addition to your testing at home, we recommend having a pool service professional test the water once a month. This helps validate the readings you get from your home tests, and the accuracy of your test kit.

Circulation

Once the water is balanced, set the pool's timer to run the pump during the day, when the sun's rays are the strongest. Since UV rays destroy chlorine, good water circulation is crucial in keeping the pool sanitized. If you have a variable speed pump motor, the cost of continuous circulation is very inexpensive.





Commitment to Service... That's the Shasta Difference

Just as you need a professional pool builder to install your pool or water feature, Shasta's Service Division has the professionals to maintain it. Shasta's pool service experts are ready to help you with your pool upkeep and repair needs. Our trained technicians are dedicated to keeping your pool operating year round so you can spend your free time enjoying it.

Contact us today and experience the Shasta Difference!

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