

# Swimming Pool Chemicals - Guide to Keeping Pool Water Safe and Healthy

Every swimming pool owner would like to enjoy crystal-clear water with minimal work. Fortunately, simply by using the right chemicals and following a structured pool maintenance plan, it's easy to keep swimming pool water sparkling clean and free of contaminants. This swimming pool chemical guide provides pool owners with step-by-step instructions on how to use pool chemicals to achieve and maintain clean water that will extend the life of pool equipment while providing a pleasant and healthy swimming environment.

Using swimming pool chemicals to properly maintain pool water involves five simple steps:

1. Balancing pool water.
2. Sanitizing.
3. Shocking.
4. Clarifying and algae control.
5. Periodic cleaning and maintenance.

## Step 1: Balancing Pool Water

Pool water balancing involves maintaining correct levels of the water's pH, calcium hardness and total alkalinity. This step is an important part of overall swimming pool maintenance as unbalanced water can reduce the effectiveness of pool sanitizers. When sanitizers are not performing properly, pathogens and other potentially harmful contaminants may remain in the water, posing a risk to the health of swimmers. Unbalanced pool water can also cause corrosion of pool equipment, staining and eye and skin irritation.

Swimming pool chemicals used to balance pool water include:

- pH increaser and pH reducer
- alkalinity increaser
- calcium hardness increaser

### pH Increaser/pH Reducer



The ideal pH range of swimming pool water is 7.4 ppm to 7.6 ppm. If your pool's pH level is below 7.4, then you will need to add pH increaser. The active ingredient in pH increaser is soda ash or sodium carbonate. By raising the pH of swimming pool water, [pH increaser](#) reduces the water's acidity. During ongoing pool maintenance, the required dosage of our pH increaser will depend on the water's current pH level. However, the recommended initial dosage of our pH increaser is 1 pound per 10,000 gallons.

If, on the other hand, your pool's pH level is above 7.6, then you will require the use of [pH reducer](#). Containing granular sodium bisulfate, our pH reducer will lower the pH level to correct water conditions and improve the effectiveness of other chemicals. The recommended initial dosage of our pH reducer is 6 ounces per 10,000 gallons.

## Alkalinity Increaser



Alkalinity Increaser

The alkalinity level of swimming pool water indicates the amount of alkaline material present in the water. Low total alkalinity can cause rapid and seemingly random changes of pH levels and can therefore decrease the effectiveness of sanitizing chemicals while also causing irritation to swimmers and metal corrosion. As a general rule, you will use alkalinity increaser when your pool's pH level drops below 7.4 or when the total alkalinity drops below 80 ppm. [Alkalinity increaser](#) is available in granular form and contains sodium bicarbonate as its active ingredient. As for the dosage, 1 1/2 pounds of our alkalinity increaser per 10,000 gallons will raise alkalinity

by approximately 10 ppm.

## Calcium Hardness Increaser



Calcium Hardness  
Increaser

The calcium hardness level of your pool water is an indication of how much dissolved calcium is present in the water. A low level of calcium hardness, which is anything below 150 ppm, results in corrosive water. [Calcium hardness increaser](#) contains granular calcium chloride and a dosage of 5 pounds per 10,000 gallons will increase your pool's calcium hardness level by approximately 40 ppm.

## Step 2: Sanitizing

Pool water sanitization is absolutely essential to maintaining healthy water as sanitizing chemicals will eradicate unwanted contaminants which could otherwise cause cloudy water or transmit illnesses to swimmers. The two swimming pool sanitizers most commonly used by pool owners are [chlorine](#) and [bromine](#). While both of these chemicals effectively kill bacteria, fungi, viruses and other contaminants, there are certain differences between the chemicals which will likely have an impact on which chemical pool owners choose to use.

3-Inch Premium  
Chlorine Tablets



To begin with, chlorine and bromine differ in the sense that bromine can function effectively over a wider pH range & is more effective than chlorine at higher water temperatures. While bromine breaks down much faster in sunlight than chlorine (more bromine than chlorine will need to be added to an outdoor pool), bromine tends to be less irritating to skin and eyes and is therefore the preferred choice for some pool owners. Bromine dissolves much more slowly than chlorine and must be added to the pool water through an automatic chemical feeder. Chlorine, on the other hand, can simply be added manually. The recommended level for bromine concentration in the water is 3.0 - 5.0 ppm, the recommended level for chlorine is 1.0 - 3.0 ppm.

### Step 3: Shocking



In The Swim Pool Shock

The purpose of pool water shocking is to remove organic debris such as swimmer waste and perspiration from the water. This can be achieved through the use of chlorine based shock or chlorine free shock. Either way, shocking provides pool water with a high dose of an oxidizing agent which will destroy bacteria and other organic contaminants to leave the water clean and clear. The amount of [pool shock](#) required will depend on the size of your pool and the type of shocking chemical you are using. It's important to always read the product instructions prior to use.

### Step 4: Clarifying and Algae Control



In The Swim Pool Algaecide

Algae blooms can be a troublesome problem for many pool owners. Some algae species float on the surface of pool water while others attach to pool walls or floors. In either case, algae can cause cloudy and unsightly water that nobody will want to swim in. Fortunately, there are a variety of [pool algaecides](#) available that are designed to effectively kill and prevent the growth of many different types of algae. Available algaecides include non-foaming products as well as natural and non-toxic formulas designed to enhance the oxidizing power of chlorine-based shock treatments.

Clarifying will also help to achieve clean, crystal-clear pool water by aiding the filtration of particles suspended in the water. By causing fine particles to attach to each other to form larger particles, [swimming pool clarifiers](#) allow the suspended particles to be trapped and filtered out of the water by the pool's filtration system. In this way, pool clarifiers transform cloudy water into sparkling clear water.



Pool Water Test Kits

### Step 5: Periodic Cleaning and Maintenance

Once you have completed all of the above steps, your pool water will be ready for swimming. However, it's important to continue with periodic cleaning and water balancing to ensure that your swimmers always have a healthy and clean aquatic environment. Dirt and debris can be removed through the use of a swimming pool vacuum while weekly use of a [pool water test kit](#) will tell you which chemicals need to be added to maintain balanced and sanitized pool water.