

# Pool Owners Guide to Water Care

A regular water care routine – correct sanitation, pool circulation and filter use – is the key to a sparkling pool. This section is intended to be a quick course in water care and chemical use and is not meant to be a comprehensive handbook in water chemistry and problem solving. If you have any questions or a situation you are unsure of contact Pinto's or your local pool professional.

## **Circulation and Filtration**

Your pool's circulation system contains a filter and pump. This system provides uniform distribution of sanitizing/balancing chemicals and removal of algae, dirt, dust and leaves to keep your pool water clean and healthy. You should run your filter **at least 8 hours** per day. In periods of high heat, and sun in the middle of the summer you may need to run it longer to maintain your clean, sparkling water. It is necessary for you to maintain the water level in the pool at least ½ way up the skimmer box and not over the skimmer box for your filter to work properly. If the water level drops below the skimmer box you will burn out your pump motor. If the water level is above the skimmer box the skimmers will not be able to clean the surface debris from the pool water.

## **Testing the Water**

The pool water should be tested daily during the swimming season for two reasons: 1. To protect bathers from bacteria, and 2. To protect the pool surfaces and equipment from the damage caused by unbalanced water. Test strips or kits can be purchased at Pinto's or your local pool store. Follow the instructions carefully on your test kit to get accurate readings. Chemicals should be added to maintain the water within ideal and healthy ranges for both swimmers and your equipment. Follow the instructions on each chemical package that will guide you to add the correct quantity to reach the ideal range for your pool water gallonage.

<b>TEST</b>	<b>IDEAL RANGE</b>	<b>REMEDY</b>
Chlorine, Free	1 – 3 ppm	If low, add chlorine
Chlorine, Combined	0 ppm	If high, shock treat
pH	7.2 – 7.8	If low, add pH+ If high, add pH-
Chlorine Stabilizer	30 – 100 ppm	If low, add Stabilizer. If high, bring water to pool professional for analysis.
Total Alkalinity	100 – 150 ppm	If low, add Total Alkalinity Powder. If high, add pH-.
Calcium Hardness	125 – 200 ppm	If low, add Basic Calcium Hardness. If high, bring water to pool professional for analysis.
Iron or Copper	0 – 0.3 ppm	If high, add chelator.

## **Balancing the Water**

Everything the water touches is affected by the water chemistry. Unbalanced water will corrode metal components of your pool equipment, stain and make brittle your pool liner, and deposit crusty coarse substances called scale on pool surfaces and equipment. Unbalanced pool water will lead to costly repairs and the premature demise of your pool equipment. The goal is to maintain balanced water to avoid unnecessary repairs and promote longevity of your pool, liner and equipment. The three water balance parameters to be primarily concerned with are pH, Total Alkalinity, and Total Hardness.

### **pH**

pH is measured on a scale of 0 – 14 with a pH of 7 being neutral. Below 7 the water is acidic and above 7 the water is basic (alkaline). The pH range recommended for pool water is slightly alkaline, which is the most comfortable for swimmers, since the pH of the human eye is about 7.5. Low pH creates corrosive water which pits and dissolves metals, stains/wrinkles liners, and causes skin/eye irritation. High pH creates scaling water which plugs filters, reduces circulation, clouds pool water, and causes skin/eye irritation. Any pH level outside of the ideal range results in chlorine inefficiency.

### **Calcium Hardness**

Calcium Hardness is the amount of dissolved calcium in your pool water. If the water is deficient/low in dissolved calcium it is corrosive. If the water contains too much calcium it will create scaling water. Corrosive or scaling water will damage pool and equipment as described above.

### **Total Alkalinity**

Total Alkalinity is the amount of sodium hydrogen carbonate dissolved in the pool water. Total Alkalinity buffers or stabilizes the pH from wide pH swings. When Total Alkalinity is within the ideal range pH bounce does not occur. Low Total Alkalinity causes corrosive water and high Total Alkalinity causes scaling water. Always adjust pH first then adjust Total Alkalinity.

## **Sanitation**

Sanitation is the reduction of the level of bacteria in the pool water. Sanitizers are chemicals or devices that kill the bacteria and micro-organisms present in the pool water. There are many different sanitizers and sanitizing devices available. The most common pool sanitizer is chlorine.

### **Chlorine**

Chlorine is an active sanitizer and an oxidizer. Chlorine tablets (stabilized chlorine) should be added to your automatic chlorinator. Your filter circulates pool water through the chlorinator and into the pool. Tablets should be added carefully through your chlorinator ONLY. If thrown into the pool they will bleach out your liner! If they lie on the ground they will kill your grass!

As a sanitizer, chlorine destroys micro-organisms. As an oxidizer it “burns up” organic contaminants such as hairspray, perspiration, body oils, etc. When the chlorine reacts with ammonia compounds in the water, which come from perspiration and urine, it becomes “combined chlorine”. It is in this form that causes the Chlorine odor and burning eye irritation. When the combined chlorine reading on your test strip exceeds the ideal range it is necessary to oxidize or destroy the combined chlorine. This is done by superchlorinating or “shocking” the pool. You should shock your pool every week to 10 days in accordance to the label directions for the gallonage of your pool. It is best to shock the pool in the early evening so that it can work overnight and be burned down overnight to normal levels the next day. Be sure to continue to run your filter during this period of time.

**CAUTION: NEVER MIX CHLORINE PRODUCTS OR ANY CHEMICALS TOGETHER OF ANY KIND. POOL CHEMICALS SHOULD BE ADDED SEPARATELY AND STORED SEPARATELY IN A COOL, DRY, WELL-VENTED LOCATION.**

If you have any questions be sure to call Pinto's or your local pool professional.

Chlorine consumption depends on several factors: Temperature, bathing load, rainfall and pH. Pool water of 80-85 degrees will require twice the chlorine of pool water at 60-65 degrees. Heavily used pools increase the amount of contaminants and bacteria in the water and will also use much more chlorine and will need to be shocked more frequently. Rain washes airborne contaminants back in the water as well. Daily testing of your pool water is necessary.

### **Cyanuric Acid**

Cyanuric Acid, also called conditioner/stabilizer, is used solely to protect chlorine dissipation from sunlight. You should have the level of cyanuric acid tested monthly by Pinto's or your local pool professional especially if you find that free chlorine is rapidly lost.

### **Pinto's Water Testing Lab**

Pinto's Retail Store, at 66 Montauk Highway in East Moriches has a complete Lab for testing your pool water open 7 days a week. Testing and advice is provided free of charge. It is suggested that pool water should be brought in monthly for analysis.

### **Common Pool Water Problems**

The most common water problems are Algae, Cloudy Water and Staining.

#### **Algae**

The best way to prevent algae growth is to maintain your chlorine between 1 – 3 ppm. When the sanitizer levels are allowed to drop algae spores will germinate. Within 12 hours a pool can be completely overrun with algae. Algae can make the floor and walls of your pool slippery and the water green and cloudy. To treat algae brush floor, walls and stairs thoroughly. Shock treat pool. Allow filter to run until pool water is clear. Backwash filter as needed. Retest pH and adjust if necessary. Vacuum then brush floor and walls. If algae persists consult Pinto's or your local pool professional to determine further treatment and the possible addition of an algaecide.

#### **Cloudy Water**

The usual causes of cloudy water are improper filtration and/or improperly balanced pool water. An algae condition or high chloramines condition can also cloud pool water. First test the pool water and make any necessary adjustments to be within ideal ranges. Then check the filter system. The filter may need to run longer and/or it may need to be backwashed. Be sure to backwash your DE filter in accordance to the manufacturer's instructions. If you have any questions please contact Pinto's.

#### **Stains**

Stains are the results of metal ions in your pool water. The metal is in your pool from either your source of water or from a corrosive water condition that is dissolving metal pool components. It is advised that you bring in a water sample to Pinto's lab or your local pool professional to test in their lab. If the stain is caused by metals a pool professional may recommend an appropriate sequestering agent so that your filter can remove the minerals from your pool water.