Accu-Tab® Tablet Chlorination System Pool Care Guide

Quick Guide to Water Balance

Balanced pool water preserves pool equipment, maintains water clarity, and protects the swimmer. For balanced water, monitor the following parameters through regular testing of pool water.

pH, Calcium Hardness, Total Alkalinity, Stabilizer (cyanuric acid)

The combination of these parameters determine the condition of the water. Desired ranges for them will vary somewhat depending on the type of primary sanitizer used. The table to the right give the recommended levels for a pool using the Accu-Tab® Tablet Chlorination System.

Recommended Pool Water Parameters

Parameter	Ideal Range
pH	7.2-7.4
Calcium Hardness	200-800ppm
Total Alkalinity	80-100ppm
Stabilizer	10-20
Free Available Chlorine	1-3ppm

pH

The pH scale measures the acidity of basicity of pool water on a 1 (most acidic) to 14 (most basic) scale. Because pH is a logarithmic scale even a 0.1 or 0.2 pH unit change can have a noticeable effect on water balance. Often a slightly cloudy pool can be made crystal clear by lowering the pH be 0.1 or 0.2 particularly if the water is above 7.4.

Calcium Hardness

Calcium hardness is a measure of the dissolved calcium in the water. It has a wide range of acceptability and will be very dependent on how much and what type of make-up water is used to maintain the level of water in the pool. For ease of control, calcium hardness is typically allowed to find its own level in a pool (as long as it is between 200 and 800), and then the alkalinity is adjusted to ensure balanced water. Only if the calcium falls outside of this range is any adjustment necessary on hardness.

Total Alkalinity

Total alkalinity acts as a “buffer” in the water to prevent large changes in pH. Higher than desired alkalinity can result in cloudy water, with the pH measuring more than 8. Low alkalinity can cause corrosion of piping and pitting of concrete or plaster surfaces as well as erratic pH swings. Generally maintain 80-100 ppm total alkalinity but if calcium levels climb above 700 ppm, alkalinity levels may need to be lowered below 80 in order to maintain overall water balance. Contact your pool specialist for recommendations.

Stabilizer

Cyanuric acid when added to pool water stabilizes the chlorine by converting most of it to a form that is resistant to sunlight. It significantly reduces chlorine consumption particularly on sunny days and in pools with large areas of shallow water. Maintaining a level of 10-20 ppm of stabilizer is recommended. Since *Accu-Tab* tablets do not contain cyanuric acid as do some other sanitizers, there is no risk of an uncontrolled increase in stabilizer concentrations above local health department standards.

Pool Water Adjustment Guidelines

pH

- Increase by adding approximately 2lb. Soda ash per 50,000 gallons to raise approximately 0.2 pH units.
- Decrease by adding approximately 1/2 of 32% gallon muriatic acid (HCl) per 50,000 gallons to lower approximately 0.2 pH units. *If a large pH adjustment is necessary, don't do it all at once. Never add more than 1 gallon of acid per 10,000 gallons. Retest after four hours and repeat if necessary. Otherwise, large pH swings may occur unexpectedly.*

Super Chlorinating/Shocking

- Recommend weekly addition of 1 pound of Zappit 73™ or equivalent 73% Available Chlorine Shock Treatment per 16,500 gallons to oxidize organic contaminants and keep pool water clear.

Calcium Hardness

- Increase by adding approximately 6-1/4lb. Calcium chloride ($CaCl^2$) per 50,000 gallons to raise 10ppm.
- Decrease by diluting (typically total alkalinity can be reduced to achieve balanced water instead of decreasing hardness level).

Total Alkalinity

- Increase by adding approximately 7lb. Sodium bicarbonate per 50,000 gallons to raise 10ppm
- Decrease by adding approximately 1 gallon 32% muriatic acid (HCl) per 50,000 gallons to lower 10 ppm.

Stabilizer

- Increase by adding cyanuraic acid about 4lb per 50,000 gallons to increase 10 ppm.

Chlorinator Troubleshooting Guide

Condition	Cause	Action
Low free chlorine <1.0	Chlorinator out of tablets	add tablets to unit
	low tablet delivery	increase water flow to unit
		check controller & Sample probes
	low stabilizer	increase to 10-20 ppm
	high demand	shock with granular cal hypo
High free chlorine >3.0	high tablet delivery	decrease water flow to unit
	chlorinator flooding	check outlet pipe for blockage
		check controller & sample probes
Heavy chlorine odor in water	High combined chlorine (total minus free > 0.5)	Increase chlorinator water flow or shock with granular
Cloudy water	poor filtration	back wash
	free chlorine < 1ppm	increase water flow to unit, shock
	water not balanced	adjust pH, total alkalinity
Scale	water not balanced	adjust to pH, total alkalinity
Air bubbles in pump strainer	Pool level too low	Add make-up water not sealing
	Chlorinator lid not sealing (pump suction return only)	Remove and reattach chlorinator lid– if still doesn't seal, apply silicon greast to O-ring in lid