

3 TECHNICAL TIPS AND INFORMATION

TEST KITS AND CHEMICALS

Chemical Dosage Table

Desired Change	Amount	Product	Dose per 50000 Gal.	Dose per 100000 Gal.
Raise Calcium Hardness	+10PPM	Calcium Chloride	5.5 pounds	11 pounds
Raise Alkalinity	+10PPM	Sodium Bicarbonate	7.5 pounds	15 pounds
Lower Alkalinity	-10PPM	Muriatic Acid	Approximately .8 Gallon	Approximately 1.6 Gallon
Lower Alkalinity	-10PPM	Sodium Bisulfate	Approximately 8 pounds	Approximately 16 pounds
Increase Chlorine	+1PPM	Gas Chlorine	.4 pound	.8 pound
Increase Chlorine	+1PPM	Sodium Hypochlorite	.4 Gallon	.8 Gallon
Increase Chlorine	+1PPM	Calcium Hypochlorite	.65 pound	1.3 pound
Decrease Chlorine	-1PPM	Sodium Thiosulfate	.4 pound	.8 pound
Decrease Chlorine	-1PPM	Sodium Bisulfite	.6 pound	1.2 pounds
Increase CYA	+10PPM	Cyanuric Acid	4 pounds	8 pounds
Increase Salt	1.0 GPL*/1000 PPM	Salt	417 pounds	833 pounds

*Grams per litre

Soda Ash System - a few steps can minimize clogging

Get The Solution Right

Total solubility of soda ash is 21% by weight. That is 175 pounds per 100 gallons of water. At high concentrations crystallizing and clogging of feed pumps, lines and injectors will occur.

Maximum recommended solution is 7% (40 pounds soda ash per 100 gallons of water). But solution strength of 30 pounds soda ash per 100 gallons of water will result in much more trouble free operation.

Preventative System Cleaning

A diluted solution of muriatic acid works well (4 parts water, 1 part acid) to dissolve soda ash formations inside feed line, injectors, etc. We recommend pumping this solution through the system before it is totally clogged to prevent the need for manual disassembly and cleaning. Adjust frequency as needed.

You may also "tune" the feed pump to minimize crystallization. Soda ash tends to drop out of solution when it is not moving; set speed/stroke to ensure pump works as much as possible without under feeding pool (that is maximize actual pumping time by turning down feed rate and or stroke).

Saturation Index Guideline

A professional facility manager will maintain a "Total Balance" in his pool water by periodically testing and adjusting pH, Calcium Hardness, Total Alkalinity and Temperature. The saturation index equation shows you whether these four water parameters are "In Balance" or causing damage to your facility through corrosion or scaling. Use the equation and chart below to determine your pool water saturation index.

Watertest	pH	CALC	ALK	TEMP
	7.5	300	100	84
Index Factors	PF	CF	AF	TF
	7.5	2.1	2.0	0.7

Index Equation: $7.5 + 2.1 + 2.0 + 0.7 - 12.1 = +2$

$$\text{Saturation Index} = \text{PF} + \text{CF} + \text{AF} + \text{TF} - (12.1)$$

pH Test	pH Factor	Calcium Hardness Test PPM	Calcium Factor	Total Alkalinity Test PPM	Alkalinity Factor	Temp. Factor	Temp. Factor
	PF	CF	AF	TF	F°	TF	
7.0	7.0	5	0.3	5	0.7	32	0.0
7.1	7.1	25	1.0	25	1.4	37	0.1
7.2	7.2	50	1.3	50	1.7	46	0.2
7.3	7.3	75	1.5	75	1.9	53	0.3
7.4	7.4	100	1.6	100	2.0	60	0.4
7.5	7.5	150	1.8	150	2.2	66	0.5
7.6	7.6	200	1.9	200	2.3	76	0.6
7.7	7.7	300	2.1	300	2.5	84	0.7
7.8	7.8	400	2.2	400	2.6	94	0.8
7.9	7.9	800	2.5	800	2.9	105	0.9
8.0	8.0	1000	2.6	1000	3.0	128	1.0

