

Total Alkalinity: the First Step Toward Balanced Pool Water



Low total alkalinity can cause rapid deterioration of plaster, paint and vinyl, as well as damage metal fittings and cause iron and copper stains.

TO RAISE TOTAL ALKALINITY (T.A.) USING SODIUM BICARBONATE

DESIRED INCREASE IN T.A.	GALLONS IN POOL						
	1,000	5,000	10,000	15,000	20,000	25,000	50,000
10 ppm	0.15 lbs.	0.75 lbs.	1.50 lbs.	2.25 lbs.	3.00 lbs.	3.75 lbs.	7.50 lbs.
20 ppm	0.30 lbs.	1.50 lbs.	3.00 lbs.	4.50 lbs.	6.00 lbs.	7.50 lbs.	15.00 lbs.
30 ppm	0.45 lbs.	2.25 lbs.	4.50 lbs.	6.75 lbs.	9.00 lbs.	11.25 lbs.	22.50 lbs.
40 ppm	0.60 lbs.	3.00 lbs.	6.00 lbs.	9.00 lbs.	12.00 lbs.	15.00 lbs.	30.00 lbs.
50 ppm	0.75 lbs.	3.75 lbs.	7.50 lbs.	11.25 lbs.	15.00 lbs.	18.75 lbs.	37.50 lbs.
60 ppm	0.90 lbs.	4.50 lbs.	9.00 lbs.	13.50 lbs.	18.00 lbs.	22.50 lbs.	45.00 lbs.
70 ppm	1.05 lbs.	5.25 lbs.	10.50 lbs.	15.75 lbs.	21.00 lbs.	26.25 lbs.	52.50 lbs.
80 ppm	1.20 lbs.	6.00 lbs.	12.00 lbs.	18.00 lbs.	24.00 lbs.	30.00 lbs.	60.00 lbs.
90 ppm	1.35 lbs.	6.75 lbs.	13.50 lbs.	20.25 lbs.	27.00 lbs.	33.75 lbs.	67.50 lbs.
100 ppm	1.50 lbs.	7.50 lbs.	15.00 lbs.	22.50 lbs.	30.00 lbs.	37.50 lbs.	75.00 lbs.

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Total Alkalinity and its Relationship to Pool pH

The acceptable range of total alkalinity is generally considered to be from 60 to 180 ppm. When alkalinity is adjusted to the range of 80 to 150 ppm, it maximizes the likelihood that the pool pH will hold in the range of 7.2 to 7.8.



	Pools	Spas		
Free Available Chlorine	1.0 - 4.0 ppm	2.0 - 5.0 ppm		
рН	7.2 - 7.8			
	60 – 180 ppm as CaCo ₃			
Total Alkalinity	$\rm 80-100~ppm~as~CaCO_{_3}$ Where the sanitizer is Calcium, Lithium or Sodium Hypochlorite.			
	100 – 120 ppm as $CaCO_3$ Where the sanitizer is Sodium dichlor, trichlor, chlorine gas or bromine compounds.			
Calcium Hardness	150 – 1,000 ppm as CaCO ₃ Ideally 200 – 400 ppm	100 – 800 ppm as CaCO ₃ Ideally 150 – 250 ppm		

This information is made available to you courtesy of your pool chemical dealer in cooperation with Church & Dwight Co., Inc.

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