



Total Alkalinity measures the total amount of alkaline materials present which help buffer or resist pH changes. Alkaline materials may be present in bicarbonate forms, carbonate forms and hydroxide forms.

Proper Alkalinity Ranges

Plaster Pools	80-120 PPM
Painted Pools	100-150 PPM
Vinyl Pools	100-150 PPM
Fiberglass Pools	100-150 PPM

If Alkalinity is Too Low:

Corrosion
pH Bounce
Staining

If Alkalinity is Too High:

Bicarbonate Scale
Cloudiness
pH usually high

How to Adjust Total Alkalinity:

To Decrease:

Sodium Bisulfate
Dry Acid
Muriatic Acid
Hydrochloric Acid

To Increase:

Sodium Bicarbonate

Calcium Hardness is the amount of calcium salts found in water and may range from 100 to 275 PPM. Swimming pool water requires a substantial amount of calcium hardness to prevent it from prematurely deteriorating the pool itself and its equipment.

If Calcium Hardness is Too Low:

Etches Plaster
Increases Corrosion
Shorter Plaster Life
Shorter Vinyl Life
Rough Plaster
Minute Pores for Algae Roots

If Calcium Hardness is Too High:

Scale forms on surfaces
Discolors Plaster
Rough Surface
Causes Heater Scale
Piping Scale Reduces Circulation

How to Adjust Calcium Hardness:

To Decrease:

Dilute with fresh water

Use scale inhibitor

Consult a water softening company

Use 1 lb. Trisodium Phosphate per 10,000 gallons (11 PPM)

To Increase:

Add 1 lb. Calcium Chloride per 10,000 gallons

Scale forms more readily in pH above 8.4

Calcium Hardness can increase initially 50 to 75 PPM in newly plastered pools, as plaster cures.

Total Dissolved Solids (TDS) is a measure of all dissolved chemicals and minerals in pools, including chlorides, calcium, magnesium, sulfates, stabilizer and carbonates. High TDS leads to reduced chlorine efficiency, erratic pool behavior (i.e. pH drift), staining/scaling, loss of water quality and eye irritation.

Increased TDS requires chlorine to work harder because of dissolved debris.

Factors influencing TDS:

1. Make up water/Geographical area
2. Type of sanitizer (stabilizer)
3. Amount of pH adjustment
4. Type of filter
5. Winterizing method
6. Perspiration/Urine
7. Wind blown debris

Acceptable Range of TDS: 500 to 1500 PPM

To Decrease TDS: Dilute with make-up water having lower TDS.