



Total Alkalinity

Total alkalinity (TA) is a measurement of the total quantity of alkali ions present in the water. It should not be confused with pH, which is the measurement of the balance between alkali and acid ions.

In swimming pools using sodium hypochlorite for disinfection and CO₂, or pH balance, the total alkalinity should be kept in the range of 100 - 125 ppm.

At this level the pH can be maintained around 7.4 - 7.6 without requiring excessive amounts of CO₂ or acid. There have been reported instances of operators maintaining the TA level at 150 - 200ppm where the amount of acid or CO₂ (and money) required to control pH (7.4 - 7.6) is approximately double that of a system maintaining the TA between 100 - 125ppm.

In swimming pools using chlorine gas for disinfection and sodium carbonate or sodium bicarbonate for pH control, a higher TA is required to buffer against the hydrochloric acid produced when the chlorine gas is added to the water. Typically, the TA should be maintained between 180 - 200 ppm.

Dry Chlorine systems typically require a lower TA to prevent too much scale build up within the dosing system. (80 to 100ppm)