

### Total Hardness

Calcium Hardness is a measure of the amount of dissolved calcium in the water. This naturally occurring element helps prevent concrete and grout etching, vinyl liner wrinkling, and equipment corrosion. If the residual gets too high, the water may not be able to hold all the minerals, and calcium can fall out of solution, causing scale build-up and cloudy water.

Proper hardness levels vary with water temperature, (the colder the water, the more calcium is needed), and other balancing factors. Higher levels of total alkalinity and pH will require lower levels of hardness to prevent scaling. Ideal levels of total hardness are from 200 - 275 ppm for concrete and tiled pools, and from 175 - 225 ppm for all other surfaces. NOTE: These levels might be ideal, but a wider range of values can be acceptable, meaning there will be no damage to the pool surface or problems with water clarity. The computer can assess the overall balance of the pool, and bases adjustment recommendations on the saturation index. By using this method of balancing, ALEX does not recommend unnecessary product.

### Low Total Hardness:

If the hardness is low, add [Balance Pak 300](#) according to label or ALEX instructions to prevent etching, liner wrinkling or other surface damage and corrosion.

### High Total Hardness:

If the fill water has a lower hardness residual, the pool can be drained partially and diluted to lower total hardness. If the fill water has a high total hardness, add 250 mL of [Scale Inhibitor](#) per 10,000 litres, and then add 125 mL per 10,000 litres monthly for maintenance. For salt chlorinated pools, use the same amounts of

[Salt Pool Stain and Scale Control](#)

. These products will not lower the calcium hardness, but it will prevent scale buildup. If you are unable to lower the calcium hardness, avoid the use of products containing calcium, such as

[Cal Chlor CLC 700](#)

or

[Burn Out](#)

. Regular use of these products will raise the hardness even higher.