



# pH RESISTANT TO MOVEMENT

This can cause cloudiness, excessive scaling and residues in the pool.

## Probable cause

- High total alkalinity

Total alkalinity is a measure of the alkaline materials (mainly bicarbonates) in the pool water and should be maintained in the range 80 - 150mg/l (ppm).

Having sufficient total alkalinity prevents sudden pH fluctuation ('bounce') but an excessively high total alkalinity will make the pH resistant to change and the water will then become what is described as over buffered.

High total alkalinity makes it difficult to adjust the pH as any correcting chemicals will have their effect taken up (buffered) by the total alkalinity. The management of pH will become relatively easy once the total alkalinity level is within the range of 80 - 150mg/l (ppm).

SANITISER



SHOCK



WATER BALANCE



PREVENTION OR CURE



## High total alkalinity can arise from a number of causes:

- The make up (fresh mains) water has a high total alkalinity which is usually associated with a 'hard' water source, or the water supply company has artificially raised the alkalinity.
- Overdosing with chemicals that are designed to increase the alkalinity.
- Very high usage of sodium hypochlorite sanitiser (bleach/liquid chlorine) has on some occasions been associated with a high alkalinity.

## Action to be taken

Before adding any chemicals to your pool, ensure nobody is swimming. Keep the circulation running to ensure adequate dispersion of the chemicals

### To lower the total alkalinity

- Carry out a total alkalinity test and if the reading is above 150mg/l (ppm), the level will need to be lowered. If you are unable to test for total alkalinity, take a fresh sample of pool water to your approved Fi-Clor dealer who will carry out the test and advise on any necessary treatment.
- To lower the total alkalinity, dose **Fi-Clor pH & Alkalinity Reducer** at a rate of 1kg per 50m<sup>3</sup> (11,000 gallons). This dose is designed to reduce the total alkalinity by approximately 10 – 20mg/l and should be repeated as necessary on a daily basis until the total alkalinity is below 150mg/l (ppm). With the circulation running, pour in a small area at the deep end of the pool, avoiding the skimmers.
- Re-test the water after 24 hours and if the total alkalinity is still high, repeat the dose varying the location slightly but avoiding the skimmers.
- Please note that the acid dosing technique is important here. To have the desired effect of reducing the total alkalinity rather than the pH, the acid must be poured into a small area of the pool and not widely dispersed. The aim is to create localised conditions of low pH such that the acidity will react with the bicarbonates which make up the bulk of the total alkalinity at normal swimming pool pH values.
- If pH and total alkalinity both need correction, treat the total alkalinity first.

## What you may need...

**Fi-Clor pH & Alkalinity Reducer 7kg**  
To correct high alkalinity (& high pH)



- The table below gives an indication of the amount of **Fi-Clor pH & Alkalinity Reducer** required to lower the total alkalinity by approximately. 10 – 20mg/l for various volumes of pool water.

m3	Gallons	Dose Rate
5	1,000	90
11	2,500	230
23	5,000	460
34	7,500	680
45	10,000	910
50	11,000	1.0
57	12,500	1.1
68	15,000	1.4
80	17,500	1.6
91	20,000	1.8
114	25,000	2.3
136	30,000	2.7

Weights in RED are grams    Weights in BLUE are kilos