

Lonza

Swimming Pool Handbook



The UK's Favourite Pool Care Products



Contents

PG

3 **BASICS OF MAINTAINING A GOOD POOL**

4 **SANITISE**
Chlorination

8 **SHOCK TREATMENT**
Removing impurities

10 **WATER BALANCE**
pH
Total alkalinity
Calcium hardness
Stabilising and balancing

16 **PREVENTION OR CURE**
Cleaning your pool
Algae and green water
Debris
Stains & scale
Eye and skin irritation
Discoloured water
Cloudy water
Too much chlorine
Chlorine odour

26 **SAFETY**
Swimming pool safety
Pool chemical safety

Preliminaries

CALCULATE THE VOLUME OF WATER IN YOUR POOL

When using Fi-Clor Pool Care products, it is essential to know how much water needs treating to calculate the correct dose rate for the various products. Use the chart below to help you calculate the pool water volume. Measure in **feet** if you want the answer in **gallons** or in **metres** if you want the answer in **litres** or **cubic metres**. When you have the answer, record it here for use in the future.

POOL TYPE

RECTANGULAR

Maximum **Length** x Minimum **Width** x Average **Depth**

_____ x _____ x _____

x 1.0 (m³) or
x 6.23 (galls)

OVAL

Maximum **Length** x Minimum **Width** x Average **Depth**

_____ x _____ x _____

x 0.89 (m³) or
x 5.54 (galls)

ROUND

Diameter x **Diameter** x Average **Depth**

_____ x _____ x _____

x 0.79 (m³) or
x 4.89 (galls)

KIDNEY

Maximum **Length** x Maximum **Width** x Average **Depth**

_____ x _____ x _____

x 0.85 (m³) or
x 5.30 (galls)

The size of my pool is: _____ m³ or _____ gallons

GET HOLD OF A GOOD TEST KIT

A good test kit is essential; a cheap one is a false economy. To get the best from your pool, your test kit should enable you to determine pH, free available chlorine, total alkalinity and calcium hardness. A special test kit to measure cyanuric acid would also be an asset. In the bathing season, testing should be done on a daily basis.

This guide is designed to explain the necessary steps to maintain your pool. It is not a substitute for reading and following product labels. If, after reading this guide, you have any pool care questions, please visit our web site at www.fi-clor.co.uk or consult your local Fi-Clor pool shop.

The Basics of Maintaining a Good Pool



Owning your own swimming pool can make every day seem like a holiday, especially if you have an indoor heated pool that allows you take a dip throughout the year. However, a pool needs regular care and attention if you are to get the best out of it.

Ideally, you should be able to enjoy swimming in crystal clear water with a minimum of fuss. With Fi-Clor's simple pool care system you can achieve that ideal - perfect water quality from a complete range of pool care products that will give you clear, bright water throughout the season.

Sanitise

Swimming pool water is re-circulated and constantly re-used. Bacteria, viruses and other micro-organisms deposited by bathers must be destroyed before they can pass from one person to another. Water must be thoroughly sanitised and chlorine is arguably the most successful broad spectrum sanitiser.

The Fi-Clor **Sanitiser** range is the popular choice for outdoor pools. The built-in stabiliser prolongs the effective life of the chlorine.



Shock Treatment

To achieve good water quality and bather comfort, the impurities introduced by bathers need to be removed and any by-products need to be broken down. The pool should be treated at intervals with Fi-Clor **Shock** products.

Our Superfast range of sanitisers and shock treatments contain no stabiliser - which when present in excess may inhibit chlorine activity.



Water Balance

Algae growth, eye and skin irritation and cloudy water are all common problems associated with unbalanced water. For water to be in balance, the pH, total alkalinity and calcium hardness should all be within certain limits - if not, the efficiency of disinfectant, flocculent and other treatment products are inhibited.

With our extensive range of corrective products the **Water Balance** can be easily maintained.



Prevention or Cure

Even when pool water is disinfected and balanced it is still affected by the bather load, wind, air pollution, insects, surrounding vegetation and the ambient temperature. These factors can cause the water to become cloudy or turn green.

Fi-Clor offers a complete range of **Prevention or Cure** products that not only solve these problems but also prevent them from recurring.



Sanitise

Chlorine is used to kill potentially harmful germs and micro-organisms. It is arguably the most successful broad spectrum sanitiser known to man - broad spectrum because it tackles not only germs which include bacteria, viruses and fungi, but also microscopic plant life such as algae. Fi-Clor chlorine-based sanitisers, available as a granular or tablet product, deliver chlorine in a solid form that is safe for pool owners to use, but when mixed with water releases a powerful and effective dose of free available chlorine.

Chlorination

Q. What is free chlorine?

A. Free chlorine is the amount of chlorine, or sanitiser, left in the pool after dealing with bugs and organic matter already in the water.

Q. How does free available chlorine kill bugs?

A. By a combination of oxidation and complex cell disruption processes.

Q. What level of chlorine do I need in my pool when using Fi-Clor Pool Care Products?

A. That depends on the type of chlorine you are using. With **stabilised chlorines**, such as **Premium 5 Granules** or **Tablets** the free chlorine in your pool should always be in the range **2.0 - 4.0 milligrams per litre (mg/l)**, often expressed as parts per million (ppm), even when the pool is not in use. With **unstabilised chlorines**, such as **Superfast Granules** or **Supercapsules**, free chlorine should be kept between **1.0 - 3.0mg/l (ppm)**. To put this in perspective - if you were looking at Mount Everest, 1ppm would be equivalent to only the top 1cm of the mountain.

Q. Why should the free chlorine be at those levels?

A. Below 1.0mg/l (ppm) there may be insufficient chlorine to kill all the bacteria and algae and there is a danger of infections, rashes and cloudy water. Very high levels of chlorine can lead to bather discomfort, though levels slightly higher than 4.0 mg/l (ppm) are not a major concern with Fi-Clor stabilised chlorines because the release of free chlorine is controlled by the built-in stabiliser (for more on this, see pages 14-15).

Q. How often should I test the chlorine level in my pool?

A. In the bathing season, this should be done daily, whether the pool is in use or not.

- Insta-Test® 5 Strips measure Free & Total Cl (or Br), pH, Alkalinity & Total Hardness
- Insta-Test® 3 Strips measure Free Cl (or Br), pH & Alkalinity



If the free chlorine is too high

If the chlorine is only a few parts per million above the recommended upper limit for the sanitiser you are using, it will normally fall of its own accord over a few days. For levels where the chlorine is too high for safe bathing, or where it is necessary to reduce chlorine levels quickly, add **Fi-Clor Chlorine/Bromine Reducer**



Dosing Method

Distribute the product evenly around the pool. Wait for at least 2 hours before re-testing, making further additions if required

Which products are best for my pool?

Your choice of sanitiser depends to a large extent on whether you have an **indoor** pool or an **outdoor** pool, the properties of the local **water supply** (i.e. whether you live in a hard or a soft water area) and personal preference - in particular the amount of time you are able to devote to maintaining your pool. Whatever you decide, Fi-Clor can provide a product, or a combination of products that will enable you to get the best results when it comes to achieving perfect water quality.

Standard Sanitiser

The standard Fi-Clor range is available in tablet and granular form. It is the popular choice for outdoor pools as the built-in stabiliser prolongs the effective life of the chlorine. Fi-Clor sanitisers also help to control pH and kill waterborne bacteria.

Ideal for use in outdoor pools



Premium 5 Sanitiser

Our multi-functional Premium 5 products contain **extra ingredients** allowing them to perform five key pool care tasks simultaneously. They include an **algicide** to help prevent green water and a **clarifier** to keep the water crystal clear.

Ideal for use in outdoor pools where it is necessary to prevent wasteful loss of chlorine to sunlight.



Superfast Sanitiser

Superfast Granules and Supercapsules are made from calcium hypochlorite and contain **no stabiliser**, which when present in excess, may inhibit chlorine activity.

Superfast Granular products dissolve rapidly when added to water and produce an impressive 78% available chlorine.

Ideal for indoor and outdoor pools, with both granular and tablet versions helping to balance the water in soft water areas.



* Dosage will vary with chlorine consumption which in turn will depend on such variables as circulation rate, bathing load and temperature.

Dose rates for your pool

IN MY POOL

Fi-Clor Standard or Premium 5 Granules	90g per 50m ³ (11,000 gallons) will raise the free chlorine by approx 1mg/l (ppm)
Fi-Clor Maxi-Tabs or Premium 5 Tablets	Approx 2 x 200g tablets per 50m ³ (11,000 gallons) every 5-10 days *
Fi-Clor Mini-Tabs	Approx 13 tablets per 50m ³ (11,000 gallons) every 7 days *
Fi-Clor Superfast Granules	65g per 50m ³ (11,000 gallons) will raise the free chlorine by approx 1mg/l (ppm)
Fi-Clor Supercapsules	Approx 2 capsules per 50m ³ (11,000 gallons) every 5 days *

Sanitiser Range Stabilised Chlorine



Premium 5 Chlorine Granules 3kg, 5kg, 10kg

Dosing Method

- Kills waterborne bacteria
- Contains water clarifier
- Helps prevent algae
- Helps control pH: easier to keep the water in balance
- Improves water quality
- Fast acting
- Built-in stabiliser: prevents loss of chlorine to sunlight
- Ideal for outdoor swimming pools

Sprinkle required dose over the surface of the water



Premium 5 Chlorine Tablets 200g tablet 1kg, 2.4kg, 5kg, 10kg

Dosing Method

- Kills waterborne bacteria
- Contains water clarifier
- Helps prevent algae
- Improves water quality
- Simplifies pH control in hard water areas
- Low pH
- Built-in stabiliser: prevents loss of chlorine to sunlight
- Ideal for outdoor swimming pools
- Convenient to use tablets

Tablet feeder or floating dispenser



Chlorine Granules 3kg, 5kg, 10kg, 25kg

Dosing Method

- Kills waterborne bacteria
- Helps control pH: easier to keep the water in balance
- Fast dissolving
- Fine particle size
- Quickly raises free chlorine
- Built-in stabiliser: prevents loss of chlorine to sunlight
- Ideal for outdoor swimming pools

Sprinkle required dose over the surface of the water



Maxi-Tabs® 200g tablet - 2.4kg, 5kg, 10kg

Dosing Method

- Kills waterborne bacteria
- No measuring out
- Convenient to use tablets
- Long lasting
- Less time on routine maintenance
- Low pH
- Simplifies pH control in hard water areas
- Less stabiliser per unit of chlorine than granules
- Less over-stabilisation problems
- Ideal for outdoor swimming pools

Tablet feeder or floating dispenser



Mini-Tabs® 20g tablet - 1kg, 2.5kg

Dosing Method

- Kills waterborne bacteria
- Convenient to use tablets
- Long lasting
- Simplifies pH control in hard water areas
- Built-in stabiliser
- Prevents loss of chlorine to sunlight
- Ideal for outdoor swimming pools
- Ideal for small circulatory feeders and refillable floating dispensers

Tablet feeder or refillable floating dispenser



Tri-Tabs® 300g tablets - 25kg

Dosing Method

- Kills waterborne bacteria
- No measuring out
- Convenient to use tablets
- Long lasting
- Less time on routine maintenance
- Low pH
- Simplifies pH control in hard water areas
- Less stabiliser per unit of chlorine than granules
- Less over-stabilisation problems
- Ideal for outdoor swimming pools

Tablet feeder

Sanitiser Range Stabilised Chlorine



Hygiene Effervescent Tablets 3.3g tablets - 500g **Dosing Method**

- Kills waterborne bacteria
- General purpose disinfectant
- Around 150 tablets
- Fast acting
- Long shelf life
- Ideal for paddling pools

Dose directly to moving water



Mini-Buoy & 5 Buoy Dispensers **Dosing Method**

- User friendly
- Filled and ready to use
- Long lasting disinfection
- For 1 to 2 months
- Works even when the water is not circulating
- Kills waterborne bacteria
- Built-in shock dose, clarifier and algicide
- Prevents loss of chlorine to sunlight
- Continuous release of low-level chlorine
- Mini-Buoy suitable for small pools from 10m² to 30m²
- 5 Buoy ideal for large pools up to 50m²

Float in the pool. Remove before bathing

Chlorine-free Sanitiser



NEW Bromine Tablets 5kg **Dosing Method**

- Kills waterborne bacteria
- Comfortable alternative to chlorine
- Ideal for indoor pools and high water temperatures
- Convenient to use tablets

Dosing Method

Tablet feeder or refillable floating dispenser

Superfast Sanitiser Range Stabiliser-free



Superfast Granules 1kg, 2.5kg, 4kg **Dosing Method**

- Powerful shock & sanitiser
- Stronger than any unstabilised granular chlorine alternative
- Fast dissolving and fast acting
- Kills bacteria, controls algae and breaks down combined chlorines
- Stabiliser free, no chlorine lock
- No dumping of water and topping-up to control cyanuric acid levels
- Convenient alternative to liquid chlorine
- Approximately 42% more available chlorine than stabilised granules

With the circulation running, sprinkle the Superfast granules evenly over a wide area in the deepest part of the pool



Supercapsules sleeved 300g - 4.5kg **Dosing Method**

- Safe and easy to handle
- Enclosed in a protective plastic sleeve
- Each capsule lasts up to 5 days
- Kills waterborne bacteria
- No chlorine lock
- Supercapsules contain 65% available chlorine and no stabiliser

Skimmer

Note: Never mix unstabilised chlorine with stabilised chlorine.



Shock Treatment Removing impurities

In addition to bacteria, algae and viruses, pool water also contains chloramines. Although not a direct health risk, they need to be broken down to maintain high quality water that's pleasant to bathe in. High chloramine levels are responsible for eye-sting and that unpleasant stale chlorine smell associated with old-fashioned swimming baths. If chloramines are controlled, bathers in pools sanitised by Fi-Clor will only be aware of a faint, but reassuring trace of chlorine in the water, though in most cases the chlorine will be virtually undetectable.

Understanding chloramines

Q. Where do chloramines come from?

A. They are formed when the free chlorine comes into contact with nitrogen contained in waste such as sweat, soaps, cosmetics and even urine.

Q. What is the difference between chloramines and combined chlorine?

A. The two terms are used interchangeably. Combined chlorine simply means that some of the free chlorine has been used up in combining with the nitrogen compounds.

Q. Can you measure chloramine levels in a pool?

A. Yes. By testing for total chlorine and subtracting the free chlorine you will have the combined chlorine level.

Q. Apart from bather discomfort, how do I know if chloramine levels are too high?

A. The free chlorine level should always be at least twice the level of combined chlorine, and combined chlorine should always be below 1 mg/l (ppm).

Q. How do I get rid of chloramines?

A. Superchlorinate, i.e. raise the free available chlorine to 5 - 7mg/l (ppm).

Q. Can I use standard Fi-Clor or Premium 5 Granules to superchlorinate?

A. This is not best practise as these products will unnecessarily add extra stabiliser to the pool. Our Fi-Clor **Superchlorinator** is far more effective as it contains no stabiliser.

Q. What if I want to use the pool straight after superchlorinating it? Won't the chlorine level be too high?

A. The level will invariably be too high. The best technique is to superchlorinate in the evening leaving chlorine levels to fall overnight.

Q. How frequently should I superchlorinate?

A. Whenever chloramine levels are too high and at least once a fortnight.

- Insta-Test® 5 Strips measure Free & Total Cl (or Br), pH, Alkalinity & Total Hardness
- Insta-Test® 3 Strips measure Free Cl (or Br), pH & Alkalinity



Remedial Action

Once a fortnight, the pool should be superchlorinated using an unstabilised chlorine such as **Fi-Clor Superchlorinator**.

However, depending on bathing load, it may be necessary to treat the pool more often to reduce high chloramines.



Superchlorinator 450g

Dosing Method

- Single-shot, "shock pot"
- No measuring out- just the right amount to dose the average domestic pool of 50m³ (11,000 gallons)
- Stronger than any unstabilised granular chlorine alternative
- Fast dissolving and fast acting
- Stabiliser-free
- Dissolves quickly to kill bacteria and break down bather contamination (organic pollution)
- Helps overcome the problem of "chlorine-lock" by restoring the effectiveness of chlorine in over-stabilised pools. Approximately 15% more available chlorine than standard calcium hypochlorite

With the circulation running, sprinkle the Superchlorinator evenly over a wide area in the deepest part of the pool



Superfast Granules 1kg, 2.5kg, 4kg

Dosing Method

- Powerful shock & sanitiser
- Stronger than any unstabilised granular chlorine alternative
- Fast dissolving and fast acting
- Dissolves fast to kill bacteria, control algae and break down combined chlorines
- Stabiliser free, no chlorine lock
- No dumping of water and topping-up to control cyanuric acid levels
- Convenient alternative to liquid chlorine
- Approximately 23% more available chlorine than stabilised granules

With the circulation running, sprinkle the Superfast granules evenly over a wide area in the deepest part of the pool

Dose rates

per 11,000 gallons (50m³)

IN MY POOL

Fi-Clor Superfast Superchlorinator

The entire contents of the 450g Superchlorinator pack.

Fi-Clor Superfast Granules

65g will raise chlorine by approx 1mg/l (ppm).
Remember to aim for 5-7ppm for shock doses.





Water Balance

You should balance the water to help keep it crystal clear and protect both the pool and the circulation system from scale or corrosion. For water to be in balance, the pH, total alkalinity, calcium hardness and stabiliser should all be within recommended limits.

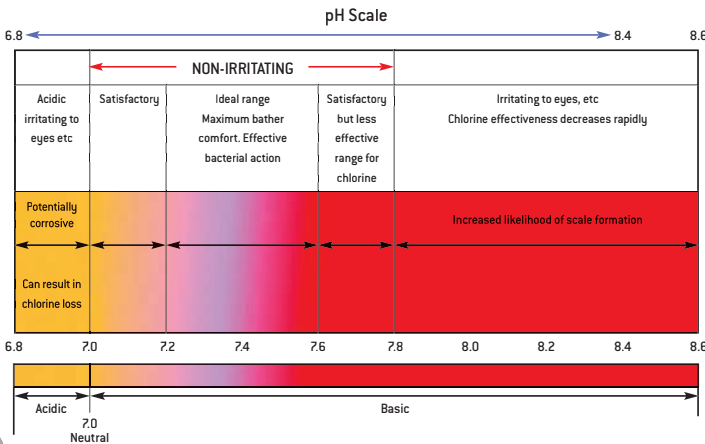
To achieve the perfect balance of pool water, here's what we recommend*:

The ideal pH level	7.2 - 7.6
Total alkalinity	80 - 150 mg/l
Calcium Hardness	for liner pools min. 175ppm for tiled pools min. 250ppm
Stabiliser	30 - 100 mg/l max.

*In certain areas of the UK the mains water balance may not allow these levels to be achieved.

Understanding pH

Regulating pH is one of the most important aspects of pool care. Low pH can lead to skin irritation and corrosion of equipment. High pH can result in cloudy water and contribute to scale formation. More importantly, high pH will reduce the effectiveness of the sanitiser, especially chlorine based ones. The amount of free available chlorine released falls off quite rapidly with increasing pH.



- Insta-Test® 5 Strips measure Free & Total Cl (or Br), pH, Alkalinity & Total Hardness
- Insta-Test® 3 Strips measure Free Cl (or Br), pH & Alkalinity



Q. What is pH?

A. It is a measure of how acidic or alkaline the water is. For example, lemons and cooking apples are sour and acidic and have a low pH. Soda crystals and bicarbonate of soda are alkaline and have a high pH.

Q. What are the yardsticks?

A. pH is measured on a scale of 0 (*extremely acidic*) to 14 (*extremely alkaline*). A reading of 7.0 is pH neutral.

Q. What should the pH of the pool water be?

A. Between 7.2 and 7.6, but keep it as near as possible to 7.2 if you are using Fi-Clor **Superfast Granules** or **Supercapsules**. This is a compromise as the chlorine would be more effective if the pH was below 7.0, but this would lead to potentially corrosive conditions. Also, the human body is most comfortable bathing in water with a pH of approx. 7.4.

Q. Is accuracy important when measuring pH?

A. Yes - you should bear in mind that the pH scale

is not a linear one. It is in fact logarithmic with pH 8.0 being ten times more alkaline than pH 7.0, and pH 9.0 one hundred times more alkaline than pH 7.0. So small differences are worthy of attention.

Q. What effects the pH of the pool water?

A. In some water areas, especially in the south of England, the water is hard because it contains dissolved calcium (and magnesium) salts which it has picked up by flowing through chalk strata. It also tends to have a naturally high pH and alkalinity.

Q. How often should I check the pH?

A. Preferably daily - but at least once a week.

Remedial Action

If the pH is **below 7.2** add Fi-Clor **pH Increaser**.

If the pH is **above 7.6** add Fi-Clor **pH & Alkalinity Reducer**



pH Increaser 5kg

Dosing Method

- Fast acting
- Corrects low pH
- Ideal for all pools and compatible with all treatment products

With the circulation running, distribute evenly around the pool avoiding the skimmers



pH & Alkalinity Reducer 7kg, 25kg

Dosing Method

- Fast acting
- Corrects high pH & alkalinity
- Ideal for all pools and compatible with all treatment products

TO LOWER PH
With the circulation running, distribute evenly around the pool avoiding the skimmers.

TO LOWER ALKALINITY
With the circulation running, pour in a small area at the deep end of the pool, avoiding skimmers.

Dose rates

per 11,000 gallons (50m³)

IN MY POOL

Fi-Clor pH Increaser 500g per day until the pH is correct

Fi-Clor pH & Alkalinity Reducer 500g per day until the pH is correct

Understanding total alkalinity

Total alkalinity is an important parameter that needs to be taken into account when optimising water conditions.

Q. What is total alkalinity?

A. Total alkalinity is a measure of the amount of alkali (or in chemical terms, bicarbonates, carbonates and hydroxides) in the water.

Q. How is it different from pH?

A. The two are closely inter-related. pH is a scale measuring whether the water is acidic or alkaline (it is in fact a logarithmic scale measuring the hydrogen ion concentration – see page 10). Total alkalinity quantifies how much alkali (mainly bicarbonates) there is in the water and this is measured in the usual mg/l (ppm) units.

Q. What is the correct amount of total alkalinity?

A. The total alkalinity should be between 100 and 150mg/l (ppm), or between 80 - 120mg/l (ppm) for pools sanitised with Fi-Clor **Superfast Granules** or Fi-Clor **Supercapsules**.

Q. Why is total alkalinity important?

A. It has a big influence on how easy or difficult it can be to control pH. Low alkalinity can lead to rapid fluctuations of pH; high alkalinity makes it difficult to adjust the pH - this is known as the 'pH being over buffered'.

Q. What else can happen if total alkalinity is outside the recommended range?

A. Low alkalinity may lead to low pH, which could cause corrosion and damage to the pool. Total alkalinity above 200mg/l (ppm) may cause cloudy water or scale formation, especially if the pH is high as well.

Q. How often should I test for total alkalinity?

A. At least once a month.

Remedial Action

If the total alkalinity is below the recommended lower limit for the sanitiser you are using, add Fi-Clor **Alkalinity Increaser**.

If the total alkalinity is above the recommended upper limit for the sanitiser you are using, add Fi-Clor **pH & Alkalinity Reducer**.



Alkalinity Increaser 5kg

Dosing Method

- Corrects low total alkalinity
- Helps to maintain the pH level
- When the TA is too low, corrosion and pH 'bounce' (fluctuation) can occur
- Ideal for all pools and compatible with all treatment products

With the circulation running, distribute evenly around the pool avoiding the skimmers

Dose rates

per 11,000 gallons (50m³)

IN MY POOL

Fi-Clor Alkalinity Increaser

1.5kg per day until the total alkalinity is at the required level

___ g per day until the total alkalinity is at the required level

Fi-Clor pH & Alkalinity Reducer

1kg per day until the total alkalinity is at the required level

___ g per day until the total alkalinity is at the required level

Understanding calcium hardness

It's wise to keep an eye on calcium hardness, which can lead to problems on pool surfaces or in the circulation system if it is too high or too low.

Q. What is total calcium hardness?

A. It is a measure of the amount of dissolved calcium and magnesium in the pool water. If there is a calcium deposit on the bottom or the sides of your pool, it is no longer dissolved.

Q. Why is it important?

A. It is an important factor in balancing your pool water.

Q. What happens if the calcium hardness levels are too low?

A. Water is sometimes described as being calcium hungry - if there is not enough (*dissolved*) calcium in the water it will try to take it from grouting, and in fact from any cement based material in the pool (*non liner pools*) - see photograph above.

Q. What happens if calcium levels are too high?

A. Under certain conditions (*high pH and/or high alkalinity*), the calcium can come out of solution, producing cloudy water and scale formation on pool surfaces, pipes and fittings. A similar phenomenon occurs during the formation of stalagmites and stalactites.



Q. Are high calcium levels a real worry?

A. They are not now thought to be a major concern unless there are also high levels of pH and total alkalinity, and the pool is run at a high temperature.

Q. What is the correct level of calcium hardness?

A. The calcium hardness should be above 175mg/l (ppm) for liner pools and above 250mg/l (ppm) for tiled pools, with the upper limit in both cases being 1,000mg/l (ppm).

Q. How often should I test for total hardness?

A. Test 2 or 3 times a season.

- Insta-Test® 5 Strips measure Free & Total Cl (or Br), pH, Alkalinity & Total Hardness



Remedial Action

Add Fi-Clor **Hardness Increaser** if: liner pools - the calcium hardness is below 175mg/l (ppm), tiled pools - the calcium hardness is below 250mg/l (ppm).



Hardness Increaser 4kg

- Corrects low calcium hardness
- No need to pre-dissolve
- Ideal if your pool has corrosion problems or if the calcium level is too low

Dosing Method

With the circulation running, sprinkle the product directly into the water around the perimeter of the pool. Do not pre-dissolve as this could generate excessive heat. Only use when bathing has ceased and avoid areas near the skimmers.

Dose rates

per 11,000 gallons (50m³)

Fi-Clor Hardness Increaser 1kg per day until the calcium hardness is at the required level

IN MY POOL

_____ g per day until the calcium hardness is at the required level

Understanding stabilisers

Free available chlorine is used up in purifying the pool water, but it can also be lost in outdoor pools to ultraviolet rays of sunlight. This plays no part in the water treatment process and is entirely wasteful.

It can be prevented by having the right amount of stabiliser (*sometimes misleadingly called conditioner*) in the water. Tests have shown that in water that has not been stabilised, chlorine dosed into the pool in the morning can be broken down by sunlight and lost before noon, giving harmful organisms and algae an opportunity to breed.



Q. What is stabiliser?

A. Its chemical name is cyanuric acid. With **Fi-Clor Chlorine Granules & Tablets** and **Premium 5 Granules & Tablets**, we attach cyanuric acid to atoms of chlorine. That's why we say it has its own built-in stabiliser.

Q. Do all chlorines contain stabiliser?

A. No. **Superfast Granules - Shock & Sanitiser** and **Supercapsules** have no cyanuric acid in them. If you are using these products to sanitise an outdoor pool, you could save money by adding **Fi-Clor Chlorine Stabiliser** to the water.

Q. How much stabiliser do I need to protect the chlorine in my pool?

A. About 30mg/l (ppm). ***If you are a regular user of Fi-Clor Standard or Premium 5 Granules or Tablets, there will almost certainly be enough stabiliser in the water without the need for further additions of Chlorine Stabiliser.***

Q. Why is too much stabiliser a bad thing?

A. It slows down the time it takes the chlorine to kill bugs, germs and algae. To compensate for this, you will need to run your pool at higher levels of free chlorine. If cyanuric acid is 100 ppm, you should let free chlorine go no lower than 2.5 mg/l (ppm) at all times.

Q. How high is too high?

A. Opinions vary among experts, but most would agree that the effectiveness of the chlorine can be impaired at levels in excess of 100mg/l (ppm) and in fact current thinking is that the optimum level is 30-60mg/l (ppm). Certainly, you should allow it to go no higher than 200mg/l (ppm) which is the industry recommended maximum limit.

Q. What is 'chlorine lock'?

A. It is a term loosely used to denote the fact that the stabiliser is at a level where it is reducing the effectiveness of the chlorine. It is misleading in that it implies that the chlorine is entirely locked up and inactive. This is not in fact the case, as the chlorine's activity has only been reduced below a level where it is practically effective.

Q. How can I reduce the cyanuric acid level in my pool?

A. There is no chemical way of doing this. The only practical way to reduce stabiliser levels is to partially drain the pool and top up with fresh water. Do this in stages so as to avoid putting a strain on the structure of the pool.

Q. How often should I test for cyanuric acid?

A. At least once a month during the swimming season (consult your pool dealer if in doubt).

Dosing of chlorine stabiliser

Only add additional stabiliser when using unstabilised chlorine donors such as Fi-Clor **Superfast Granules - Shock & Sanitiser** or **Supercapsules**.



Chlorine Stabiliser 3kg

Dosing Method

- Prevents loss of chlorine to sunlight
- Raises stabiliser levels
- Reduces wastage of chlorine
- Free dosing glass
- Essential for outdoor pools using unstabilised sanitisers

Dose directly into the pool. Stabiliser can take a few days to dissolve. Assist dissolution by sweeping accumulated product with a pool brush.

Dose rates

per 11,000 gallons (50m³)

Fi-Clor Chlorine Stabiliser 50g will raise the stabiliser level by 1mg/l (ppm)

IN MY POOL

_____ g will raise the stabiliser level by 1mg/l (ppm)

Summary

Keeping pool water balanced ensures that it is neither corrosive, nor scale forming to an unacceptable extent. There is, however, a bit more to it.

Q. Is there any further way of finding out if the water is in balance?

A. Yes. There is a calculation you can do based on an empirical formula which gives you the Langelier Index, sometimes also called the Saturation Index.

Q. What gets taken into account in the formula?

A. Five factors based on the readings for pH, total alkalinity, calcium hardness, pool water temperature and total dissolved solids (sometimes abbreviated TDS).

Q. What are total dissolved solids (TDS)?

A. In pure chemical terms, TDS is the total solids remaining after evaporating away all the water, but in pool water terminology it represents the dissolved solids that can be measured with a conductivity meter - mainly chlorides and sulphates. These ionic species increase the ability of the water to conduct electric current, thereby increasing the risk of corrosion to metalwork.

Q. How do I measure TDS?

A. With a special probe which measures the conductivity of the water. It's hardly worth buying one as TDS only needs to be checked about once a season. It is best to take a water sample to your pool shop

Q. Can I get my pool water balance checked?

A. Take a 500ml pool water sample to your nearest Recommended Fi-Clor Water Test Centre. This will be tested using our Fi-Clor WaterLink photometer and the data analysed by the Fi-Clor **WaterChemist** computer software.





Prevention or Cure

There are certain things you can do to get the best out of the chemicals you use to sanitise the pool and keep the water clear and inviting, such as regular cleaning and vacuuming. If algae gets into the pool, or if there are tiny suspended particles in the water, it can spoil the appearance and in extreme cases even stop you using the pool. The best way to prevent this happening is by occasional use of specially developed chemicals such as algicides and water clarifiers.

Cleaning your pool

During the swimming season, you should clean your pool thoroughly at least once a week. A thorough cleaning includes leaf skimming, brushing, vacuuming, cleaning the skimmers and checking the circulation system and the filter.

- Cover your pool when not in use.
- Have swimmers shower before entering your pool.
- Shock treat fortnightly with either **Superfast Granules** or **Superchlorinator** and try our new convenient one dose product - **Oxy-Brite** to keep your pool water sparkling clean and clear

Superfast Range (See Page 9)



Oxy-Brite® 400g



- A convenient one dose sachet containing chlorine, active oxygen and clarifiers.
- Dissolves fast
- Keeps pool water clean & clear

Dosing Method

Evenly broadcast the entire contents of the sachet in the deepest part of the pool at a level close to the water surface.

Leaf Skimming

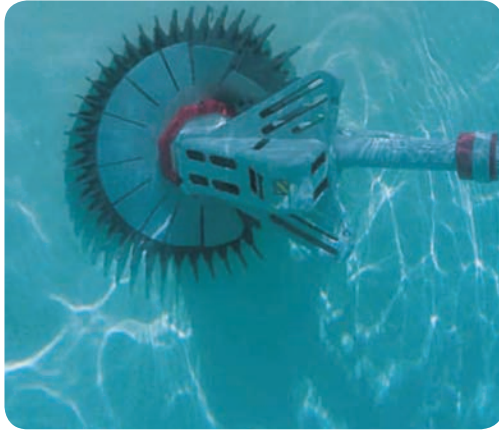
Leaf skimming removes debris before it sinks to the bottom of your pool. Debris becomes much more difficult to remove and can also cause staining if it reaches the bottom of the pool.

Use a long-handled leaf skimmer to remove leaves, insects, and any other debris floating on the pool surface.

Vacuuming

A weekly vacuuming is essential for keeping your pool consistently clean and maintaining sparkling clear pool water.

Vacuuming removes debris from the pool floor as particles that are left at the bottom of the pool can cause staining. If your vacuum attaches to the skimmer or to a designated vacuum point, be sure not to allow any air into the hose. In order to do this, submerge the vacuum head and hose underwater before connecting it.



Brushing

Regular brushing of pool walls and bottom prevents the unwanted build up of dirt, dust, leaves and dead insects. This debris can cause stains on your pool surface.

You should use a brush to remove loose dirt, dust and soil that has collected on the sides and bottom of your pool. Direct the collected dirt to the main drain so that it can be caught by recirculating currents or easily vacuumed. If your pool does not have a main drain, you should vacuum immediately after brushing. Concrete pools require a stiffer bristle than vinyl-lined pools.

Cleaning tide marks

Cleaning oily deposits along the water line (often due to the use of sun screen or body lotions) not only improves the appearance of the pool, but perhaps more importantly removes potential breeding sites for micro-organisms.

Be sure to use Fi-Clor **Tile & Liner Cleaner** which is compatible with chlorine. Some detergent-based preparations can react with chlorine and cause eye and skin irritation. Simply squeeze some of the gel onto a cloth or sponge and wipe over the affected area.

Tile & Liner Cleaner 1lt



- Removes dirt and grease from the water line
- Very effective on vertical surfaces
- Gel based formulation
- Graduated container

Dosing Method

Brush or wipe on, rinse-off

Prevention or Cure



Algae

Q. What are algae?

A. Algae are microscopic plants that grow in water. There are many different strains and they are usually green, but you can find blue-green, black or mustard algae. They can grow on a pool surface (a colony) or float in the water (a suspension). A suspension can turn pool water completely green and this can literally happen overnight if you are unlucky.

Q. Won't chlorine kill algae?

A. Yes, usually, but there are occasions when chlorine levels are too low, or the chlorine is not acting effectively because the water is out of balance or there are very high levels of stabiliser. There are also some strains of algae that are resistant to chlorine.

Q. What can I do to prevent algae?

A. Firstly, ensure that the chlorine and pH levels are correct at all times even when the pool is not in use. Secondly, use a long life algicide when you open the pool up, and if necessary also during the swimming season. (An algicide is a chemical that kills algae). Use Fi-Clor **Long Life Multi-functional Algicide** or Fi-Clor **Ultra Concentrated Algicide** (both copper free) or Fi-Clor **Long Life Extra Strong Algicide** (copper based). Please consult your approved Fi-Clor dealer or stockist for advice on the best product to use.

Q. What about Premium 5 Granules and Tablets? Don't they contain an algicide anyway?

A. Yes, using **Premium 5** sanitisers will go a long way to help. But to give them a sporting chance, it is best to start off with a boost dose of **Long Life Algicide**. This slowly releases its active ingredients over a period of time. The algicide in the **Premium 5** granules and tablets will be more effective if it is used to replenish the active ingredients from the **Long Life Algicide**.

Q. What if the pool has already turned green with algae?

- A. Follow these easy steps:
1. Adjust the pH to as near 7.2 as possible.
 2. Shock dose the pool with an unstabilised chlorine such as Fi-Clor **Superfast Granules**.* Shock dosing kills the algae and usually produces the fastest results. The dose rate for Fi-Clor **Superfast Granules** is 1kg per 50m³ (11,000 gallons) of pool water.
 3. Brush off any algae that may remain on pool surfaces. Look for colonies behind step ladders and around underwater lighting. If you have a concrete pool, use a stainless steel brush. If you have a liner pool, use a soft nylon brush.
 4. Run the filter for 24 hours then backwash to remove dead algae from the top of the filter media.
 5. Vacuum the pool.
 6. Any remaining haziness in the water should be removed by applying a remedial dose of Fi-Clor **Rapid Clarifier**. If this is insufficient to clear the pool, carry out a total floc using Fi-Clor **Granular Floc** or Fi-Clor **Liquid Floc**.
 7. Thereafter maintain chlorine at around 2.0 - 4.0mg/l (ppm) for stabilised chlorine products such as Fi-Clor **Standard** and **Premium 5**, and 1.0 - 3.0mg/l (ppm) for unstabilised chlorine products such as **Superfast Granules**.
 8. Finally, to prevent a recurrence, dose with Fi-Clor **Long Life Extra Strong Algicide** (copper based), or if copper levels are already high with Fi-Clor **Long Life Multi-Functional Algicide** or **Ultra Concentrated Algicide** (copper free). Consult your Fi-Clor dealer or stockist for advice if you are uncertain which product to use.

Multi-Functional Algicide 3lt



- Eliminates algae
- Protects pool for a season
- Clarifies water
- Anti-stain
- Anti-scale
- Copper-free

Dosing Method

Distribute evenly around the pool



Ultra Concentrated Algicide 1lt



- Highly concentrated
- Dual action algicide and clarifier
- Compatible with all sanitisers and filters
- Copper-free

Dosing Method

Distribute evenly around the pool

Granular Floc 3kg

- With regular use your pool water will be sparkling clear
- Removes large amounts of debris



Dosing Method

Distribute a solution evenly over the pool surface, then vacuum after 12 hours

Extra Strong Algicide 3lt



- Destroys all algae - even the most resistant
- Highly concentrated composition
- Long life

Dosing Method

Distribute evenly around the pool

Liquid Floc 3lt



- Removes large amounts of suspended debris
- Concentrated source of aluminium floc
- No pre-dissolving of solid required

Dosing Method

Distribute evenly over the pool surface, then vacuum after 12 hours

Dose rates

per 50m³ (11,000 gallons)

IN MY POOL

Fi-Clor Long Life
Multi-Functional Algicide

1.5 litres every 6 months

Fi-Clor Long Life
Extra Strong Algicide

0.5 litres every 3 months

Fi-Clor Frequent use
Ultra Concentrated Algicide

150ml every week

Prevention or Cure



Algae

Q. What can I do if the algae keeps coming back?

A. The recommended procedure is:

1. Lower the pH to as near 7.2 as possible.
2. Superchlorinate the pool at least once a fortnight using Fi-Clor **Superchlorinator** *. The dose should be sufficient to raise the free available chlorine to between 5 - 7 mg/l (ppm) in a pool of 50m³ (11,000 gallons).
3. Apply another dose of Fi-Clor **Long Life Extra Strong Algicide** (*copper based*), **Long Life Multi-Functional Algicide** or **Ultra Concentrated Algicide** (*both copper free*) if some time has elapsed since the last application.
4. There may be high levels of phosphate and/or nitrate present. If this is suspected, ask your dealer to test a pool water sample or test for yourself using our **Phosphate Test** strips.
5. If Phosphate levels are high reduce them by using Fi-Clor **Phosphate Remover**.
5. Ensure that adequate levels of chlorine and algicide are maintained at all times.

Phosphate Test

- Easy to use test to determine levels of phosphate
- Contains 10 reagent strips
- Full instructions included



Phosphate Remover 1lt

- Reduces algicide consumption
- Easy to use measuring cap
- Concentrated
- Could solve recurring algae problems

Dosing Method

First measure the phosphate level using our Phosphate Test Strips. With the filter running, add the product directly to the pool at the inlets. After 48 hrs, measure the phosphate level again and if necessary repeat.



* **WARNING** Do not mix Fi-Clor Superfast products with any other types of chlorinating compounds (even other products in the Fi-Clor range) either in the dry state, or in the skimmer. If using with other products, dose them into the pool separately.





Debris

Q. Isn't the filter supposed to keep the water clear?

A. The filter will take out most of the larger particles in suspension in the pool water, but water can become cloudy because minute, colloidal particles are so small that they can pass through a filter without being trapped. For instance, hardness salts can change from being in solution into very fine solid particles if the pH or total alkalinity are too high. Dead algae may be broken down into a fine powdery residue. The filter alone cannot cope with these.

Q. What can you use to take out these fine particles?

A. You can use a water clarifier. You will often find them referred to as flocculants or coagulants. On the Fi-Clor range you have the choice of using our Fi-Clor **Rapid Clarifier** (*a liquid that can be dosed directly into the pool*) or Fi-Clor **Clarifier Tablets** (*which go in the skimmer*).

Fi-Clor **Rapid Clarifier** is especially recommended after shock dosing to kill algae - a double dose may be beneficial in removing large amounts of suspended matter (*dead algae cells*).

Q. How do coagulants work?

A. Suspended particles in the water are held apart because they all contain a negative electrical charge (*remember like repels like*). With a coagulant, you introduce a molecule carrying a number of positive charges. These molecules attract the negatively charged fine particles in the water. They are clumped together into a large enough size to be trapped by the filter.

Q. Are there any other benefits in using a coagulant?

A. Yes. Fine particles in the water can present breeding sites for bacteria and algae. This creates an additional demand for chlorine. Remove the particles, and you should save on chlorine.

Q. What else will a water clarifier do?

A. Good water clarifiers give an attractive sparkle to the surface of the water.

Rapid Clarifier 1lt



- Powerful formula
- Can be used with all sanitiser types
- Can be used with filter running

(Not suitable for diatomite filtration systems)

Dosing Method

Skimmer (or directly into the pool)

Clarifier Tablets 1.25kg

- Improves efficiency of sand filtration
- Compatible with all pool sanitisers



(Only to be used in sand filters)

Dosing Method

Skimmer or (pump strainer box)

Dose rates per 50m³ (11,000 gallons)

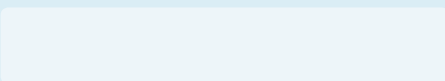
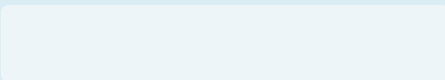
Fi-Clor Rapid Clarifier

For remedial treatment (if you already have a clarity problem), pour 200ml of Fi-Clor Rapid Clarifier into the pool near one of the inlets

Fi-Clor Clarifier Tablets

Add 1 mini sachet into the skimmer. Make sure there are no other chemicals present in the skimmer

IN MY POOL



Stains & Scale

Q. What causes stains?

A. Stains can be caused by debris that has fallen to the bottom of the pool or by dissolved metals. When pool water pH, calcium hardness or total alkalinity levels are consistently low, dissolved metals may leave deposits on the pool surface.

Q. What should I do if I see a stain?

A. Treat the stain immediately to remove it. If the stain is accessible (*above the water line*), use Fi-Clor **Stain & Scale Remover** * neat, or diluted at a rate of 1 litre to 30 litres of water, depending on the severity of the stain to be removed.

Q. What happens if you don't treat stains immediately?

A. An untreated stain may become a permanent stain.

Q. How can you prevent staining?

A. Keep your water balanced (*see p15*). In addition, regular use of Fi-Clor **Stain & Scale Inhibitor** will help prevent staining. The dose rate is 1kg per 50m³ (11,000 gallons) but if levels of dissolved metals exceed 1.5mg/l (ppm), double the dose. Use of this product may assist in the slow removal of existing stains below the water line.

Q. What is scale?

A. Scale is a white, grey or brownish deposit commonly found on metal surfaces and pool walls.

Q. What causes scale?

A. Scale can be caused by a combination of the following pool water conditions:

1. Total alkalinity above 150mg/l (ppm).
2. pH above 7.6.
3. Very high calcium levels, normally above 1,000mg/l (ppm).

Q. What should you do if your pool has scale?

A. If the affected area is accessible (*above the water line*), use Fi-Clor **Stain & Scale Remover** * neat or diluted at a rate of 1 litre to 30 litres of water depending on the severity of the scaling to be removed.

Stain & Scale Inhibitor 2kg

- Helps reduce scale
- Phosphate free - lowers risk of algae
- Ideal for areas with hard water



Dosing Method

Dose directly into the pool near the inlet

Stain & Scale Remover 1lt



- Removes scale and mineral stains
- No unpleasant odour
- Effective on all types of pool surfaces
- Ideal for removing unpleasant stains caused by some metals

Dosing Method

Brush or wipe on, rinse-off

Winteriser 3lt



- Prevents the formation of scale and staining from dissolved minerals
- Contains long life algicides and additives
- Ideal for pool shut down

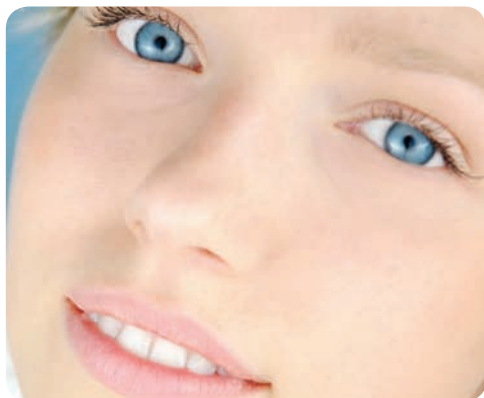
Dosing Method

Distribute evenly around the pool

* **WARNING:** Wear gloves and protective eyewear when using Fi-Clor Stain & Scale Remover.

Q. How can you prevent scale?

- A. Maintain total alkalinity, pH and calcium hardness at the following levels to keep your water balanced:
1. pH: 7.2 - 7.6.
 2. Total alkalinity: 80 - 150mg/l (ppm), depending on sanitiser.
 3. Calcium hardness: 175 - 1,000mg/l (ppm), depending on sanitiser.
 4. Use Fi-Clor **Stain & Scale Inhibitor**.
 5. Use Fi-Clor **Winteriser** for pool shut down to prevent the formation of scale and stains. See the special *Winterising leaflet* - www.fi-clor.co.uk.



Eye & skin irritation

Q. What causes eye irritation?

- A. There are two possible causes - use your test kit to see which is the most probable.
1. It could well be a pH problem - the water could be too acidic or too alkaline. The pH of the human eye is around 7.4. Anything significantly higher or lower will irritate.
 2. Alternatively, it could be due to high combined chlorine (*chloramines*), which are a known eye irritant (see section on *chloramines*, page 8). Also, if you get an unpleasant chlorine smell, it's odds on that the problem is due to high chloramines.

Q. What can I do to the pool water if eye irritation occurs?

- A. Depending on the results of your tests:

1. If it is a pH problem, correct the pH as necessary.

To lower the pH, add Fi-Clor **pH & Alkalinity Reducer** once a day at a rate of 500g per 50m³ (11,000 gallons) until correct reading is obtained.

To raise pH, dose at the same rate with Fi-Clor **pH Increaser**.

2. If combined chlorine is too high:

Break the chloramines down by superchlorinating the pool with Fi-Clor **Superchlorinator** to temporarily raise the free chlorine. In a pool of 50m³ (11,000 gallons) use sufficient Fi-Clor **Superchlorinator** to raise the free available chlorine to between 5 - 7mg/l (ppm), preferably last thing at night so that chlorine levels can fall naturally before bathing resumes. The ratio of free chlorine to combined chlorine should be 2:1 or better.

Discoloured water

Q. What causes discoloured water?

- A. Excess minerals (such as copper, iron and manganese) cause discoloured water. Copper makes the water blue/green, iron a brown rust colour and manganese a purple/ black colour.

Q. How do these minerals get into the water?

- A. A variety of causes - for instance over-use of a copper-based algicide, corrosion of metal parts in the circulation system because of low pH, or filling the pool from spring or well water.

Q. What can be done to remove minerals from pool water?

- A. Follow these steps:

1. Test the pH and adjust to 7.2 - 7.6 (see pages 10-11).
2. Shock dose the pool to a level of around 10mg/l (ppm) with Fi-Clor **Superfast Granules**. The dose for a pool of 50m³ (11,000 gallons) will be 650g.
3. Filter continuously until the water is clear. A dose of Fi-Clor **Rapid Clarifier** water clarifier will help with this.
4. Shock dose again if the problem persists.
5. The addition of a sequestrant such as Fi-Clor **Stain & Scale Inhibitor** will help remove minerals by taking them into a chemical complex, thus rendering them inactive. For high levels of dissolved minerals, dose at the rate of 1kg per 50m³ (11,000 gallons). If the water is discoloured because of algae growth, follow the method described in the algae section (see pages 18-20).

Prevention or Cure



Cloudy water

Q. What causes cloudy water?

A. Cloudy water can be caused by several different water conditions: high pH and high total alkalinity levels, intense algae growth, poor pool filtration, or a build-up of swimmer waste.

Q. What should you do if your pool water is cloudy?

A. Do the following:

Adjust the pH to 7.2 - 7.6 (see pages 10-11 for information about adjusting the pH).

Adjust the total alkalinity to 80 – 150mg/l (ppm). (See page 12 about adjusting total alkalinity).

Adjust the free available chlorine to 1.0 - 4.0mg/l (ppm). (See pages 4 - 5 for information about adjusting the free available chlorine).

Check the colour of the water. If the cloudy water looks green, your pool water probably has algae. In this case treat the pool for algae. (See pages 18-20 for information about solving this problem).

Test for combined chlorines. If swimmer waste needs to be removed, shock your pool (see page 8 for more information).

Ensure you have adequate circulation & efficient filtration.

Q. What should you do if the cloudy water doesn't clear?

A. Do the following:

Run your filter longer than normal.

Use Fi-Clor **Rapid Clarifier** to help your filter remove fine particles that tend to dull the water. (See page 21 for product information). You could try using Fi-Clor **Non-Chlorine Shock** which can restore sparkle to cloudy water by shock dosing without raising the chlorine levels.

If these actions are unsuccessful, contact your pool dealer for advice.

Non-Chlorine Shock 5kg

- Breaks down pollutants
- Restores sparkle to cloudy water
- Shock doses without raising chlorine
- Ideal for pools with automatic covers



Dosing Method

Sprinkle required amount into an area of the pool where there is good water circulation

Too much chlorine

Q. What happens if there is too much chlorine?

A. Too much chlorine can cause bleached hair, bleached swimsuits, and possible eye irritation.

Q. What should you do if you have too much chlorine in your pool?

A. Simply stop adding chlorine, allowing it to fall of its own accord over a few days until the free available chlorine level is 2.0 - 4.0mg/l (ppm) if you are using Fi-Clor **Standard Granules**, **Maxi Tablets** or **Premium 5 sanitisers**. If you are using **Superfast Granules** or **Supercapsules** allow to fall to 1.0 – 3.0 mg/l (ppm).

Q. What should you do if the free available chlorine is more than 10mg/l (ppm)?

A. If you wish to start using the pool without waiting for the levels to fall naturally, use Fi-Clor **Chlorine/Bromine Reducer**.

Bathers should not use the pool if the free chlorine is above 10mg/l (ppm).

Chlorine/Bromine Reducer 2.5kg

- Corrects sanitiser levels
- Fast acting
- Rapid dissolving with no residue
- No need to waste heated pool water
- Ideal after quick shock doses



Dosing Method

Distribute the product evenly around the pool. Wait for at least 2 hours before re-testing, making further additions if required

Dose rates

per 50m³ (11,000 gallons)

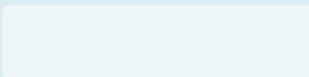
Fi-Clor Chlorine/Bromine Reducer

to reduce levels by 1ppm (mg/l)

Pools on Chlorine 350g

Pools on Bromine 150g

IN MY POOL



Chlorine odour

Q. What happens if there is a strong chlorine odour?

A. Swimmers may misleadingly complain that there is too much chlorine in the water. However, this is invariably not the cause of the problem.

Q. What causes chlorine odour?

A. High combined chlorine (chloramines) produces the unpleasant chlorine like odour. It is in fact a sign that there is too little free available chlorine present, which is required to break down ('burn out') the combined chlorine (see page 8).

Q. How can you get rid of the chlorine odour?

A. Adjust the pH to 7.2 – 7.6 if necessary (see pages 10 – 11 for information about adjusting pH) and superchlorinate the pool with Fi-Clor **Superchlorinator** to temporarily raise the free available chlorine. In a pool of 50m³ (11,000 gallons), use sufficient product to obtain a level of between 5 - 7mg/l (ppm) (see pages 7 - 9 for further information on superchlorinating). This will break down and remove the combined chlorines.



Swimming Pool Safety



It makes good sense to establish safety practices around your pool. Review the safety rules at the beginning of each pool season. Some suggested rules are listed below.

GENERAL POOL SAFETY

- No running or pushing around the pool side.
- Shower before swimming. This will reduce the amount of bacteria and contaminants that swimmers bring into the pool.
- Keep a life saving ring in the pool area.
- Keep all glass and other breakables away from the pool area.
- Never use electrical appliances around the pool area.
- DO NOT swim during thunder or lightning storms

POOL SAFETY FOR YOUNG CHILDREN

- A supervising adult should be present whenever children are using the pool.
- Install a sturdy fence around the pool.

BE PREPARED FOR AN EMERGENCY

- Keep a complete first aid kit in a clearly marked and convenient location. Keep this kit out of the reach of children.
- Family members should be encouraged to undergo training in mouth-to-mouth resuscitation. Ideally this technique should not be practised without the appropriate training.

ENVIRONMENT TIP

- DO NOT back-wash into a stream, river or lake.

See www.fi-clor.co.uk for further details

Pool Chemical Safety

Pool chemicals must be handled with great care. Certain precautions must be taken when handling and storing pool chemicals. Read and follow the dosages, directions and precautionary statements on each product label. Keep all pool products away from children! Fire, explosion, or release of gas can result from misuse. Use these checklists when handling and storing any pool chemicals. In case of emergency ring 999.

POOL CHEMICAL HANDLING CHECKLIST

- Keep all chemicals out of the reach of children & pets.
- Read first aid procedures printed on the product's label before using the product. If the product gets on your skin, in your eyes, is swallowed, or is inhaled, follow the correct procedure which is clearly printed on the label.
- DO NOT use contents of unlabeled containers.
- Keep an arm's distance away when opening the container.
- Open all pool chemical containers carefully.
- NEVER mix pool chemicals with any other substance.
- NEVER mix different types of pool chemicals. Add each chemical to the pool separately.
- ALWAYS add the chemical to the water, NEVER add water to the chemical.
- Use separate, clean utensils and measuring cups for each pool chemical.
- Use the exact quantities specified on the product label.
- Immediately wash your hands after handling any pool chemical.

POOL CHEMICAL STORAGE CHECKLIST

- Carefully seal each container tightly after use.
- Store pool chemicals in a cool, dry place.
- Keep pool chemicals away from heat or open flame.
- Keep pool chemicals away from moisture, waste materials, dirt, chemicals (including other pool chemicals), pool chlorinating compounds, household products, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter.
- Keep pool chemicals away from your lawn, shrubs and trees.

POOL CHEMICAL CONTAINER DISPOSAL CHECKLIST

- Wash empty pool chemical containers before disposing of them.
- Dispose of all empty chemical containers according to the label directions on that product.

IN AN EMERGENCY CALL: 999

Call 999 if any of your pool chemicals spill. A spill requires emergency handling if there is any sign of activity, such as bubbling, smoking or fire.

Lonza

Your Local Fi-Clor Pool Shop



Whilst every attempt has been made to ensure the accuracy and reliability of the information contained in this document, Lonza gives no undertaking to that effect and no responsibility can be accepted for reliance on this information.

Lonza
Arch Chemicals Ltd
Wheldon Road, Castleford, West Yorkshire
WF10 2JT England

Tel: 01977 714100 Fax: 0870 889 5277
Email: watersales@lonza.com
www.lonza.com
www.fi-clor.co.uk

© Fi-Clor, MAXI-TABS, MINI-TABS, OXY-BRITE and TRI-TABS are registered trademarks of Arch Chemicals Ltd

£4.99