

## What Makes Swimming Pools Dirty?

Every day your pool is bombarded with dirt and bacteria from:

**People** – Every time you swim in your pool, you release bacteria, body fats, and between 15-50 ml of ammonia and nitrogen. Not to mention any dirt you may have picked up near the pool.

**Dirt** – Dust from the wind, bird droppings, decomposing leaves and muddy feet. All contribute to the 'not quite clean' state of your pool.

**New Water** – Rain carries sediment, and washes in from the side of the pool. Even tap water is far from pure.

**Algae** – Any body of water that is not constantly moving will have a gradual build up of algae. Algae come in thousands of types and many colours.

## How Do I Keep My Pool Clean?

Keep your pool clean and sanitised by using a combination of chlorine (sanitiser) and filtration. Chlorine works instantly and effectively to kill algae and bacteria. Dead algae and dirt in the water are removed by using your filter. The filter vacuum is used to pick up dirt and algae that have sunk to the bottom of the pool.

## Water Balance

Water quality varies widely depending on its source. If your pool is filled by tap, bore or rainwater you will have to treat it differently to obtain ideal pool conditions, or in other words the pool needs to be 'balanced'. Water balance is the relationship between pH, total alkalinity and calcium hardness. If your pool water is in balance the pH will be more stable and your pool will be more economical to run because your chlorine will work at maximum efficiency to sanitise water and kill algae. Within the balancing act, it is essential to keep your pool physically clean. Chemical treatment cannot remove dirt. This can only be achieved by using the filter and other cleaning devices.

## How To Balance Pool Water

To balance your pool for summer and then maintain it you will need to:

1. **Adjust Total Alkalinity**
2. **Adjust pH**
3. **Check Calcium Hardness**
4. **Treat with Chlorine**

## Testing Your Pool Water

Test your pool water balance at least once a week by using either:

- **Pool & Spa Test Strips** – A fast easy method of testing which provides sufficiently accurate readings for most purposes.
- **A DPD Test Kit** – For pools under heavier use, this is a more accurate testing system.

### Step 1 – Adjust Total Alkalinity

Total Alkalinity acts as a buffer to sudden changes in water pH. For example, heavy rainfall may cause the pH to rise and become too alkaline. If total alkalinity is in the correct range, the change is less drastic. Check your Total Alkalinity level at the beginning of every pool season and adjust if necessary.

The ideal level for pools treated with:

**Handichlor** or **Handitabs**: 120-150 ppm

**Hichlor** or **Liquid Chlorine**: 80-120 ppm.

Add **Sodium Bicarbonate** to increase Total Alkalinity.

### 2. Adjust pH Level

pH is a measure of acidity or alkalinity in water and is measured on a scale of 0-14.

- pH below 7 is 'acidic'
- pH above 7 is 'alkaline'
- pH at 7 is 'neutral'

Water with a low pH (below 6.8) can cause eye or skin irritation, corrosion of fittings and excessive use of chlorine sanitiser. Water with a high pH (above 8.0) can cause eye irritation, cloudy water, scale formation and dramatically decreases the algae-killing efficiency of chlorine sanitiser.

pH is affected by the type of pool surface, heavy rain, dust, amount of use and the type of sanitiser used.

Having the correct pH is important and should be tested weekly. Adjust to between 7.2-7.6 as necessary by using **pH Minus** or **pH Plus**.

### 3. Adjust Calcium Hardness

This refers to the amount of Calcium and Magnesium salts in your pool water. Levels of Calcium Hardness will vary between geographical areas and depends on your water source. Calcium Hardness should be checked at the beginning of the pool season. The ideal range is between 100-300 ppm. Use **Calcium Chloride** to increase low Calcium Hardness levels.

### 4. Chlorine Treatment

Chlorines are efficient sanitisers, which rapidly kill bacteria and algae, and 'burn up' organic matter. Chlorine is most efficient in a pH of between 7.2 – 7.6. Chlorine is lost rapidly from the pool in sunlight, high temperatures and when the pool is under constant use. To maintain a clean germ-free pool it is necessary to add chlorine daily to maintain a chlorine level of at least 1ppm.

Use your test kit or test strips to determine the chlorine level of you water. Remember it is best to add chlorine to your pool in the evenings when the temperature had dropped and direct sunlight is off the pool.

## Which Chlorine?

The 'Poolstar' range offers four different types of chlorine to suit individual pool owners needs.

**Hichlor (Calcium Hypochlorite)** A granular form of chlorine with a low residue formulation. Requires premixing in water before use and is suitable for daily chlorination for shock dosing.

### Handichlor (Sodium Dichloroisocyanuric Acid)

Granular chlorine with a built in stabilizer to help stop it being evaporated by sunlight. It can be used for daily dosing.

**Handitabs (Trichloroisocyanuric Acid)** These tablets are ideal for use in larger pools offering convenience and ease of use. Handitabs dissolve slowly over 5-7 days and like Handichlor are less affected by sunlight than other chlorines.

**Liquid Chlorine (Sodium Hypochlorite)** This chlorine offers the benefits of convenience – no premixing and no residue. Ideal for shock-dosing salt pools, and for daily use in all types of pool.

## Maintenance Program For A Pool

### Shock Dosing with Chlorine

Shock dosing with chlorine is an essential part of any pool maintenance program, especially at the start of summer or if algae growth is evident. 'Shock dosing' refers to giving 2-3 times the normal daily dose of chlorine. We recommend the use of **Hichlor** or **Liquid Chlorine** for this purpose.

Shock dosing should be carried out at a minimum of every 3 weeks to prevent bacteria and algae from becoming resistant to your usual daily dose rate. Shock dosing also burns up excess organic matter from bathers during the peak of summer, pools with a heavy use may require shock dosing every 7-10 days.

Shock dosing is a safe procedure but should be done after, not before, swimming. Allow the chlorine level to drop to approx 1.0 ppm before commencing swimming.

### Filtration

During summer the filter should operate on a daily basis to help remove algae and debris from the water. For an outdoor pool the pump and filter capacity should be large enough to filter the entire contents of the pool twice in a day. As a guideline, the filter should run for at least 1 hour per 4000 litres of water.

It is better to run the filter continuously for the required period of filtration rather than breaking it down into two lots.

### Floccing

If your pool becomes murky or cloudy and the filtration system does not clean it, the water can be returned to a crystal-clear state by using a flocculation agent. Flocculation is only of use if chlorination and filtration has failed.

Murkiness should not be confused with the early stages of algae growth.

Use **Poolfloc** to clear murky or cloudy water.

## Salt Pools

Salt pools generate their own chlorine but still require pH and total alkalinity adjustments, as outlined in steps 1 & 2 for the treatment of chlorinated pools.

To shock dose a salt chlorinated pool, you can either run the chlorinator overnight until the desired chlorine level is reached or use **Liquid Chlorine**.

## SAFETY FIRST

### SAFE HANDLING

Keep all chlorine and conditioning chemicals in a cool dry place out of the reach of children.

Do not mix different chemicals or types of chlorine.

Do not interchange container caps.

**ALWAYS** add chemicals to water.

Never water to chemicals.

### FIRST AID

If Pool chemicals accidentally contaminate skin or eyes, immediately flush with copious amounts of water.

If swallowed **DO NOT** induce vomiting.

Give plenty of milk or water.

Seek medical advice or ring the **National Poisons and Hazardous Chemicals Information Centre**.

**0800 764 766**



## Easy Care Guide For Your Swimming Pool

