

# ClearWater™

## SAFETY TIPS

### GENERAL

- Do not allow water temperatures to exceed 40 °C (lower for children)
- Do not leave non swimmers / children unattended
- Do not overload the Spa
- Do not use electrical appliances near water
- Use plastic and not glass around the Spa
- Do not drink alcoholic beverages before or during use of Spa's
- If you are pregnant, have high blood pressure or cardiovascular conditions then consult your doctor before using Spa's
- When changing (dirty) filter cartridges, wear gloves

### CHEMICAL HANDLING

- Read instructions thoroughly on each product/box before use
- When pre dissolving chemicals always add chemicals to water and not vice versa
- Never mix different chemicals in concentrated forms including these kit products but also with other products like bleach or weedkillers – a dangerous reaction may occur
- Always pre dissolve chemicals in a clean, plastic container in a well ventilated area
- Avoid spillages but in event of spillage clean up using clean receptacles and dispose in the Spa. Flush cleaned spill areas with water
- Never use unlabelled chemicals
- Wash hands after handling Spa chemicals

### STORING CHEMICALS

- Store chemicals well away from children and pets
- Store in a secure, cool and dry place

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## PROBLEM SOLVING CHART

SYMPTOM	CAUSE	REMEDY
Green/cloudy water/ Slippery sides	Algae	Shock dose with double dose chlorine or consider if time to drain/refill
Too much chlorine	Overdose	Allow time to naturally dissipate or buy a chlorine reducer
pH hard to control	Alkalinity low	Seek advice on how to raise total alkalinity
Cannot maintain chlorine levels	Chlorine demand of water too high at start up, after holidays or due to excess contamination or neglect	Shock dose with double dose chlorine Repeat after 24 hours if necessary
Foaming water	Oils/detergents present	Use Foam Reducer
Cloudy water	Poor chemical controls or Inadequate filtration	Clean cartridges or consider if time to drain and refill. Retest water and add chemicals, if necessary
Rough Spa sides/edges	Scale formation	Ensure pH levels are correct and if scale persists use a spa scale inhibitor to stop calcium precipitating out of water
No colour change on test strip dip test	Too high chlorine leading to bleaching of indicator pads (over 15ppm chlorine)	Check expiry date on test strips. Wait for chlorine level to drop and re-test
Test results vary	Air bubbles can increase pH and reduce alkalinity temporarily	Test when system turned 'off' for true results

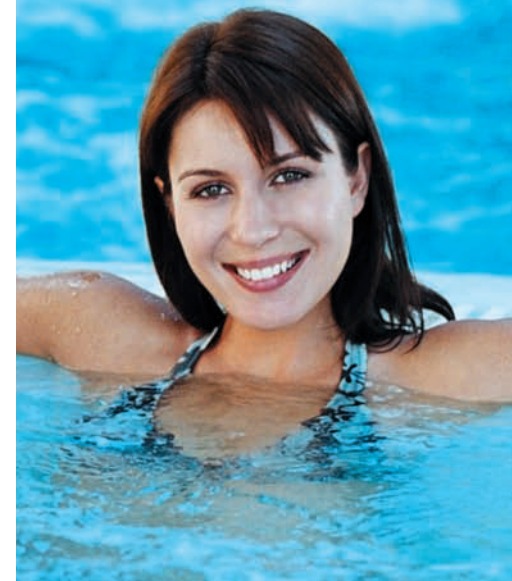
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# Spa

## GUIDE



### ESSENTIAL INFORMATION ON...

- Starting up
- Circulation and filtration
- Water testing
- Chemical water treatment
- Draining and refilling
- Working out a Spa volume
- Safety and problem solving chart

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# S P A CHEMICALS

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## STARTER OR SHOCK DOSING

### AFTER THE SPA HAS BEEN ERECTED

#### Important

Commissioning a new hot tub requires an initial chlorine dose of 50mg/l (ppm) for an hour or 20 mg/l (ppm) for 2 hours to ensure any contamination from factory wet tests or whilst hot tubs are in transit is eradicated. In practice 20 mg/l (ppm) for 2 hours is much more practicable as waiting for chlorine to reduce after these commissioning dosages can, in any event take, a while. Dose your commissioning quantities (see below) and then immediately turn on your spa filtration system. Bathe only when chlorine levels reduce to near normal levels (see ideal readings below).

Commissioning Dose	Spa Volume
100g	220 gallons (1,000 litre)
40g	220 gallons (1,000 litre)

See page 4 for typical Spa volumes.

### THE IMPORTANCE OF CIRCULATION AND FILTRATION

Most Spas include a pump, blower and cartridge filter chamber as standard. It is a combination of circulating the water through the cartridge, to collect suspended particles and grease, together with good chemical water treatment, that helps you maintain clear, clean and healthy water.

It is advised to run your Spa's circulation every day, as outlined in your Spa owner's booklet. Some Spas run on a timer, which automatically ensures circulation, in which case just ensure the system is in good working order.

Note, when the cartridge filter is dirty, filter efficiency and circulation are impaired often leading to poor water quality. Typically, cartridges will need cleaning every 4 – 6 weeks, but more regularly when usage or contamination (e.g. grass in tub) is high.

### WATER TESTING AND IDEAL SPA LEVELS

Using **Clearwater 3 way dip tests** you are able to quickly and accurately assess your Spa's water conditions and make adjustments to chemical levels by adding appropriate quantities where necessary. Test daily whether the Spa is in use or not, to keep on top of requirements as warm water will need regular sanitisation.

TEST	IDEAL READING	
Free Chlorine	3 – 5 ppm *	* ppm = parts per million
pH	7.2 – 7.6	* total alkalinity should be learned in time only after mastering chlorine and pH first
Total Alkalinity	80 – 160 ppm *	

When using **Clearwater dip tests** follow the instructions on the bottle for best results being observant of the optimal reading times and always holding strips level (to avoid indicator pad colours mixing).



By regular testing of Spa water you will soon learn how various activities like refilling, topping up, adding chemicals and general usage can affect various test readings.

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## CHEMICAL WATER TREATMENT

Bacteria Control – **Clearwater stabilised chlorine granules** are used to disinfect the Spa's water and keep it free from bacteria and algae, some of which may be hazardous to health. **Clearwater stabilised chlorine granules** are quick dissolving and relatively pH neutral and may be added direct to the Spa.

To raise Spa's water by 1 ppm	
Add 2 grams	220 gallons ( 1,000 litres)

To ensure the ideal reading of 3 – 5 ppm is maintained it is advised to aim for 5 ppm to provide a useful "buffer" for fluctuating conditions such as bathing loads and hot weather. The rate of chlorine consumption can and does vary depending on different conditions and chlorine will be consumed even when there is no sparing (i.e. just sunlight or heat). Because of this, the only way to be sure that there is chlorine present in the water is to test regularly.

pH Control – The pH scale of 0 – 14 measures acidic or alkali conditions respectively. The middle reading of 7 is neutral, so Spa water with a pH below 7 is acidic and Spa water with a pH above 7 is alkaline.

For Spa users the ideal pH level is slightly alkaline between 7.2 – 7.6, ensuring plant protection and bather comfort are maintained (the pH level of the eye is consistent with this level).

8.5	RISK OF...
8.00	* skin / eye irritation
	* scale formation
	* reduces chlorine effectiveness

### 7.2-7.6 → IDEAL

7.00	RISK OF...
6.5	* plant corrosion especially metals
	* unpleasant smells and bather discomfort
	* chlorine quickly used up

### Adjusting pH

If the pH of your Spa water is above 7.6 then use **Clearwater pH minus** to reduce it, using the application instructions on the bottle.

If the pH of your Spa water is below 7.2 then use **Clearwater pH plus** to increase it, using the application instructions on the bottle.

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## OTHER SPECIAL TREATMENTS

### Foam Control

Foam appearing on the water surface can be unsightly. Due to warmer Spa water the build up of foaming agents from body oils, cosmetics etc, can sometimes exceed the Spa filter cartridge's ability to remove them. In such cases an easy remedy is available using Clearwater Foam Remover, dosed as below for effective foam control.

Initial dose	110ml	220 gallons (1000 litres)
Weekly dose	55ml	220 gallons (1000 litres)

### Cleaning and Maintenance

Periodic cleaning of waterline grease will not only help your Spa look good but will also optimise the use of your chemicals and help to reduce the time in which your Spa's filter cartridge becomes dirty.

Use Spa cleaning preparations since household cleaners often contain detergents that cause foam.

### Draining and refilling

Over time water absorbs minerals, chemicals and other soluble materials that lead to an increase in Total Dissolved Solids (TDS) in Spa's water. This, in turn, reduces chemical efficiencies, can create dull water and makes Spa's hard to maintain correctly.

To avoid this as a guide drain and refill every 4 – 6 weeks or estimate by the following:-

Spa litres ÷ daily bathers ÷ 12 = days before draining/refilling  
e.g. 1,000 litres ÷ 2 daily bathers ÷ 12 = 41 days

### Working out Spa volumes

TYPICAL SPA SIZE	VOLUMES ( g & Ltrs)
2/4 person round	175-264 gallons (800-1200 ltrs)
4/6 person square	264-330 gallons (1200-1500 ltrs)

### Chemical treatment summary

TASK	IDEAL LEVEL	PRODUCT	DOSE FREQUENCY
Disinfect	3 – 5 ppm	Clearwater Stabilised Chlorine granules	Daily
pH	7.2 – 7.6	Clearwater pH minus to reduce. Clearwater pH plus to increase.	Weekly or as required to maintain ideal levels
Foam Removal	N/A	Clearwater Foam Remover	As Foam appears