

JACUZZI® CHEMICALS GUIDE



Information and guidance on the use
of chemicals with Jacuzzi® hot tubs



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HOT TUB CHEMICAL TERMS

As an introduction, here's a few generic chemical terms that you will need to become familiar with.

Sanitiser

A sanitiser is a disinfectant chemical that is added to hot tub water to kill bacteria and keep it safe for bathers to sit in. The most popular (and strongest) sanitiser is chlorine. Another popular choice is Bromine, which is less harsh to sensitive skin and eyes. Bromine is usually bought as tablets. Tablets must be used with a slow release dispenser. Oxidiser is a natural sanitiser based on active oxygen and some people find this non-harmful option suits them best. It is generally recommended that a shock dose of chlorine is used periodically to make sure that bacterium is controlled effectively this way. See back of packs for details.

pH

This is the term used to indicate whether the water is acidic or alkaline. It uses a scale of 0-14 where 7 is neutral. 7.2-7.4 is ideal for hot tubs. Even very small movement in hot tub water pH can have a tremendous effect on the water condition.

PPM

Amounts of chemical are usually measured in PPM (parts per million) or mg/l (milligrams per litre). For Chlorine, between 2 and 3ppm is ideal.

Alkalinity

This refers to the measure of alkaline salts affecting the balance of the water. Alkalinity also affects water hardness so it is important to measure the water balance accurately to avoid scaling.

BASIC HOT TUB CHEMISTRY

Hot tub water must be chemically managed so that it stays safe for bathers. Measured application of water balance chemicals keeps hot tub water clean and free from harmful bacteria and mould growth for longer.

Since hot tub water is warm, its chemical balance is constantly changing. It is important that these changes are noticed and dealt with appropriately and safely.

With useful hints and tips, this guide has been designed to make the job of managing hot tub water easier. From understanding chemical terms and products to measuring the balance of hot tub water, you can use the processes outlined here to help you. Once you start to recognise impacts on water quality, your new hot tub will be easy to maintain and enjoy.

The ratio of people in the tub to its water capacity has a big impact on the chemical performance, so it is important that you take time to really know what is required to make your hot tub water safe.

Hot tub water balance is affected by several factors, including:

- // Heat
- // Sunlight
- // Number of people
- // How often it is used
- // How much water there is
- // Efficiency of filters
- // Body creams
- // Hard or soft water areas

Shock Dosing

This requires raising the sanitisation levels usually to instantly deal with water problems. A shock of Chlorine or Oxidiser/Non Chlorine Shock can be used. Chlorine can act as both a sanitiser and a shock. (When your sanitiser is Bromine, a shock dose of Non Chlorine Shock is recommended.)

Hardness

This refers to the measure of calcium salts affecting the balance of the water. It helps to determine how corrosive or scaling the water is. The level of calcium hardness does not usually require major adjustment in most areas; however an increaser may be required in soft water areas.

Flocculent

A chemical used to clarify cloudy water. It works by causing smaller dirt particles to clump together into larger particles so that they may be caught by your hot tub's filtration system.

Ozone

A gas based on active oxygen that naturally kills bacteria and helps to disinfect water. It is created and released into water using an ozonator.

Skimmer

Usually the basket on top of a filter where debris and dirt flows and gets trapped into the filter. Some hot tubs have a removable skimmer to collect larger particles. Most have a weir which floats or pivots above the waterline to collect surface water for recycling through the filtration system.

CHEMICAL SAFETY

Misuse of chemicals can lead to bather discomfort, injury or component damage, so to prevent this, always use chemicals safely and according to the manufacturers instructions.

It is important that water quality is chemically managed so it is safe for the bather.

Although hot tubs are treated in the same way as a swimming pool, there are certain challenges involved in maintaining the water quality of a smaller volume of water. It is important that the person/s responsible for treating and managing the environment of your hot tub water has some knowledge of which chemicals to use and why they are necessary.

Ask your hot tub supplier to explain how you should look after your new tub. Following this guide and using the instructions provided on product labels can also help you. It is a good idea to invest some time in understanding your hot tub and what influences water changes.

- ✓ Always read the label and follow the instructions
- ✓ Never mix chemicals
- ✓ Always pre-dissolve granular chemicals in a jug or container before adding them to hot tub water
- ✓ Always add chemicals to water, never the other way around
- ✓ Only add chemicals when the hot tub is not being used
- ✓ Use chemicals in a well ventilated area. Beware of strong winds when using powdered chemicals
- ✓ Keep all chemicals away from children and animals
- ✓ Always wash your hands after using chemicals
- ✓ Wear protective clothing when handling chemicals
- ✓ Test hot tub water daily
- ✓ Store away from heat and moisture
- ✓ Dose after using your hot tub
- ✓ Always leave your hot tub switched on (except when changing filters or water)



WARNING

Store hot tub chemicals away from household or garden chemicals. Many household chemicals can cause harmful reactions when mixed with hot tub or pool chemicals.



ADVICE

If a product label is damaged or missing so that you are unable to read the instructions, do not use it. Contact your supplier for safe disposal advice.



SETTING UP YOUR HOT TUB

It is good practice to drain and refill your hot tub every 3-4 months, depending on the level of use. Whether setting up your hot tub for the first time or refilling after draining use the process below to remind you of the steps involved to making the water safe to use.

YOU WILL NEED:

- Jacuzzi® Test Strips
- Preferred Jacuzzi® Sanitiser (Chlorine, Bromine or Oxidiser)
- Jacuzzi® pH Increaser and Decreaser
- Jacuzzi® Alkalinity Increaser
- Jacuzzi® Oxidiser/Non Chlorine Shock

Make a note of the capacity of your Jacuzzi® hot tub as this will determine how much of a chemical to add. Refer to your owner's manual or check the charts at the back of this guide.

Until you get used to your hot tub, it would be prudent to test the water an hour or so after adding any chemicals before allowing yourself or others to use it.

Keep your hot tub switched on all year. This prevents freezing and more importantly, stagnant water from building up. Unsanitised, stagnant water can become a breeding ground for dangerous bacteria.

Be sure to run the filtration system for a period of time every day, even when your hot tub is not being used. Jacuzzi® hot tubs maintain temperature and continuously filter the water even when not in use.

For example; J200 and J300 hot tubs can be programmed to activate a 30 minute filtration cycle every 6 hours. J400 hot tubs can be programmed to activate every hour if required in colder climates. In warmer climates, economy mode can be set, which activates a 30 minute cycle every 6 hours.

* Examples involve tubs with circulation pumps.

* Factory default setting is a 30 minute cycle every 12 hours.

PROCESS:

1. Fill the hot tub with fresh water using a hose
2. Turn on pumps and filtration system
3. Test the water with test strips and record the sanitiser and alkalinity levels
4. If necessary add alkalinity increaser to 90-120 ppm
5. Add sanitiser to 2-4 ppm (Chlorine) 3-4 ppm (Bromine) 3 ppm (Oxidiser).
NB: We recommend that granular chemicals are pre-dissolved in warm water, using a separate container before being added to hot tub water. All tablet chemicals should be used in a tablet dispenser.
6. Test water again to check pH levels
7. Adjust pH to 7.2-7.4 as required
8. You should give the water a shock dose which will ensure all water-borne bacteria are killed from the beginning

Chlorine, Bromine or Oxidiser?

The choice is yours. All are effective sanitisers with different benefits. Speak to your supplier for recommendations of water treatment in your area.

Chlorine

Strong disinfectant, but can be irritating to sensitive skin. You should pre-dissolve granular chemicals before adding them to hot tub water.

Bromine

A disinfectant less harsh on eyes and skin, usually available in tablet form. Remember to use a dispenser.

Oxidiser

A natural sanitiser, but not as strong as others. Additional sanitisation may be required. May be used as a non chlorine shock.



TIP

Look at alkalinity first. By getting the alkalinity right, the pH will usually follow suit.



ADVICE

For a truer test result, wait about 8 hours after chemical adjustment.



TIP

The use of floating dispensers is a popular way of maintaining consistent sanitisation in your hot tub water for longer. Some Jacuzzi® filters include a chemical dispenser.

CHEMICAL ROUTINE

YOU WILL NEED:

- Jacuzzi® Test Strips
- Preferred Jacuzzi® Sanitiser
- Jacuzzi® pH Increaser or Decreaser
- Jacuzzi® Alkalinity Increaser

PROCESS:

1. Using test strips, test for sanitiser, pH and alkalinity daily
2. Record results (you can use the table at the back of this guide)
3. Adjust alkalinity increaser to 90-120 ppm
4. Adjust sanitiser to 2-4 ppm (Chlorine) 3-4 ppm (Bromine) 3 ppm (Oxidiser)
5. Adjust pH as required to 7.2 - 7.4



Test strips for testing Oxidiser



Test strips for testing Chlorine/Bromine

Always chemically treat your hot tub after use and never immediately before. It is recommended that you do not use your hot tub for at least 8 hours after dosing with chemicals.

There are other factors which affect hot tub water and there are products in the Jacuzzi® chemicals range to help you keep your water clean and safe.

Consider the type of water in your area. Hard water or soft water areas will have different impacts on hot tub water and therefore need different treatments. High calcium hardness is the main cause of scale formation, which affects hot tub components, so it is better to prevent build up by using Jacuzzi® No Scale treatment. In soft water areas it may be necessary to use more Alkalinity Increaser to stabilise the pH level.

Sanitisation needs to be closely monitored as it is this which kills harmful bacteria. It will sometimes be necessary to shock your hot tub water and raise the sanitisation level. Following the guidance on the label, add a shock dose of Chlorine or Oxidiser/Non-Chlorine Shock and circulate for 24 hours. This will instantly kill water-borne bacteria. Test again and dilute with fresh water if the chlorine level gets above 5 ppm.



ADVICE

The amount of sanitiser needed will depend on the size and temperature of the hot tub water and number of bathers.



TIP

Record daily results so you can track performance and identify common issues. Use the table at the back of this guide to get you started.



TIP

Encouraging everyone to shower before using your hot tub helps keep the water cleaner and means that you should use fewer chemicals.



TIP

Care should be taken when measuring the quantity of chemicals. Be cautious. The more you use your hot tub, the more chemicals you will need.

CLEANING YOUR HOT TUB

Cleaning must become part of your hot tub water management routine if you are to keep water safe for longer. There are several products in the Jacuzzi® chemicals range to help you keep your hot tub clean and the filtration system working most efficiently.



Jacuzzi® Everyday Cleaner is a new product that is neutral and environmentally friendly. It is a solvent free concentrated cleaning agent that removes oils, grease and dirt. It is neither toxic nor aggressive so may be used to clean tide lines and hot tub surfaces everyday. Simply spray on and wipe off with a sponge or cloth.



Jacuzzi® Spa Polish is specifically designed for hot tubs to remove heavy duty grime and dirt without being aggressive to the hot tub or bathers. It is biodegradable and contains no caustic soda. After spraying onto the surface, leave for 3-5 minutes before polishing with a sponge or cloth and rinsing away. Jacuzzi® Spa Polish may also be used to clean hot tub covers.



Jacuzzi® Filter Cleaner is an easy to use liquid solution. Simply add 6 capfuls of cleaner into 20 litres of water in a container. Rinse loose debris from used filters and immerse in the solution. Leave to soak overnight before rinsing and drying. The solution will remove scale, oils and grease, leaving your filter pristine white. Wash hands immediately after use.

As a reminder, here's a handy guide to help you keep check of your water management routine:

| Everyday | Weekly | Fortnightly | Quarterly | 6 monthly |
|---|--|---|---------------------------------|---------------|
| Sanitisation test | Water hardness check | Clean filters using Jacuzzi® Filter Cleaner | Drain and refill | Filter change |
| pH adjust | Shock dose | Use Jacuzzi® No Scale to prevent scale build up | Clean using Jacuzzi® Spa Polish | |
| Alkalinity check | Use Jacuzzi® No Foam to prevent foam from starting | | | |
| Clean tide line using Jacuzzi® Everyday Cleaner | | | | |

Filtration

All Jacuzzi® hot tubs feature a full filtration system that is complete with cartridge filters. Filters and filter bags collect dirt and debris to keep the water clean and safe. It is important that filters and bags are kept clean so that they continue to function correctly. Dependant on how often you use your hot tub, it is recommended that you clean your filters every fortnight.

Use Jacuzzi® Liquid Filter Cleaner to keep your filters clean.

You should buy new filters approximately every 6 months.



TIP

Always have a spare filter or filter bag to use whilst one is being cleaned.

JACUZZI® CHEMICAL RANGE



The new range of Jacuzzi® chemicals is available from a supplier near you. With everything you need to manage your hot tub water you can now enjoy relaxing even more.

| | |
|--|--|
| Jacuzzi® Chlorine Granules 55% | Use Jacuzzi® Chlorine Granules to keep your hot tub water clean and bacteria free. Chlorine is a strong sanitiser recommended for regular hot tub use. Our 55% quality chlorine will give you peace of mind. |
| Jacuzzi® Oxidiser (Non Chlorine Shock) | Use Jacuzzi® Oxidiser (Non Chlorine) as a basic sanitiser to keep your hot tub water free from bacteria. It can also be used as a shock dose with other sanitisation. Jacuzzi® Oxidiser is based on active oxygen, a natural sanitiser. It is still recommended that a little Chlorine or Bromine, used as a shock dose, is periodically used to keep bacteria away. |
| Jacuzzi® Bromine Tablets | Use Jacuzzi® Bromine Tablets to keep your hot tub water clean and bacteria free. Bromine is less harsh on sensitive skin and eyes, but is also an effective sanitiser. Tablets must always be used with a dispenser. |
| Jacuzzi® pH+ | Jacuzzi® pH+ will be required if the pH level of the hot tub water is too low (too acidic). |
| Jacuzzi® pH- | Jacuzzi® pH- will be required if the pH level of the hot tub water is too high (too alkaline). |
| Jacuzzi® Hardness Increaser | To inhibit corrosion, it is generally beneficial to have a higher calcium hardness level. Use Jacuzzi® Hardness Increaser to raise hardness levels accordingly, especially in soft water areas. |
| Jacuzzi® No Foam | Cosmetics, oils and various forms of pollution all contribute to the production of foam within a hot tub when air is being introduced. Jacuzzi® No Foam can be used as a weekly treatment to prevent foam from starting. It is also very effective at reducing foam when used as a shock dose. |



| | |
|---------------------------|--|
| Jacuzzi® Spa Clear | Jacuzzi® Spa Clear is a flocculant. It is a liquid that is added to hot tub water to aid filtration, and keep water clear. |
| Jacuzzi® No Scale | Used on a regular basis, Jacuzzi® No Scale restricts the build up of uncomfortable and damaging scale, iron staining and helps maintain swivelling water jets. |
| Jacuzzi® Filter Cleaner | A clogged filter can lead to poor water quality. Jacuzzi® Filter Cleaner is a traditional liquid cleaner that helps keep filters dirt free. Clean your filters every fortnight. |
| Jacuzzi® Everyday Cleaner | As the name suggests, Jacuzzi® Everyday Cleaner is effective in cleaning the tide line around a hot tub everyday. This is a pH neutral product, ready to use from its spray bottle and can be easily applied using a damp cloth. |
| Jacuzzi® Spa Polish | A deeper surface cleaner for a thorough approach. Use all over acrylic and jets to keep your hot tub clean. Helps to maintain the shine of your heat retention cover. |
| Jacuzzi® Algacide | This is an effective means of preventing algal growth when used in conjunction with a sanitiser. |



TIP

Always read the label and follow manufacturers instructions.



TIP

Always shower before using your Jacuzzi® hot tub. This helps keep your hot tub water cleaner for longer

COMMON CHEMICAL PROBLEMS

Use the guide below to help you treat common water problems. For persistent problems or if you need further guidance, please contact your Jacuzzi® dealer or the Jacuzzi UK after-sales desk. Contact details appear at the back of this guide.

| Problem | Possible cause | What to do |
|---------------------------------|---|--|
| Cloudy water | Poor or inadequate filtration leading to dirty or blocked filter cartridges | Use Jacuzzi® Spa Clear to help the filter remove small particles. Clean the filter with a solution of Jacuzzi® Filter Cleaner or replace with a new Jacuzzi® Filter. Increase the filter run time. |
| Chlorine smell | Could be too little free chlorine in the water | Test and adjust to between 2–3 ppm(mg/l). Consider shock dosing. Oxidiser, which is also referred to as Non Chlorine Shock, is a good way of doing this. After shock dosing the water, test the alkalinity. |
| | Too much chlorine | Dilute the hot tub with fresh water or drain and refill. |
| Green water or musty odour | Bacteria or algae growth | Shock dose with chlorine or consider draining and refilling. Algacide could be considered if the problem persists. |
| | Could be an indication of iron content in the water | Avoid copper based algacides |
| Stinging eyes or irritated skin | pH too high or too low Sanitiser level low | Test and adjust Use a shock treatment to raise sanitisation, and remove unwanted pollution. |
| Scale | Too much calcium in water (pH or alkalinity levels maybe too high) | Adjust alkalinity and pH using a deescalator. With heavy scale, drain and refill. Use Jacuzzi® No Scale weekly as prevention. |
| pH difficult to control | Very hard or soft water | Check the alkalinity and spend time getting that right first. Once alkalinity is controlled, pH usually follows suit. |



DOSING GUIDES

| J400 Series | | | J480 | J470 | J465 | J460 |
|----------------------|-------------|--|-------|-------|-------|-------|
| Capacity | | Litres | 2158 | 2025 | 1817 | 1548 |
| Chlorine Granules | 2-3 ppm | To increase level by 1ppm | 4g | 3g | 3g | 2g |
| Bromine Tablets | 3-4 ppm | Sufficient to maintain levels. Add as required | | | | |
| Oxidiser | 3 ppm | To increase level by 1ppm | 35g | 32g | 30g | 25g |
| Alkalinity Increaser | 90-120 ppm | To increase levels by 10ppm | 43g | 40g | 36g | 30g |
| Hardness Increaser | 200-300 ppm | To increase levels by 10ppm | 32g | 30g | 27g | 23g |
| pH- | 7.2 - 7.4 | To reduce levels by 0.1ppm | 21g | 20g | 18g | 15g |
| pH+ | 7.2 - 7.4 | To increase levels by 0.1ppm | 21g | 20g | 18g | 15g |
| No Foam | N/A | Initial dose | 215ml | 200ml | 180ml | 150ml |
| | | Weekly dose | 54ml | 50ml | 45ml | 38ml |
| | | Or as required | | | | |
| No Scale | | Initial dose | 320ml | 300ml | 270ml | 230ml |
| | | Weekly dose | 120ml | 110ml | 100ml | 85ml |
| Spa Clear | | | 120ml | 110ml | 100ml | 85ml |
| Spa Polish | | As required | | | | |
| Everyday Cleaner | | As required | | | | |
| Filter Cleaner | | Add between 4 and 6 capfulls to a bucket of clean water and soak cartridges for 1hour or overnight | | | | |
| Algacide | | Initial dose | 5ml | 4ml | 3ml | 3ml |

| J300 Series | | | J375 | J365 | J355 | J345 | J335 | J325 | J315 |
|----------------------|-------------|--|-------|-------|-------|-------|-------|-------|-------|
| Capacity | | Litres | 2006 | 1893 | 1836 | 1734 | 1715 | 1628 | 1037 |
| Chlorine Granules | 2-3 ppm | To increase level by 1ppm | 3g | 3g | 3g | 3g | 3g | 2g | 2g |
| Bromine Tablets | 3-4 ppm | Sufficient to maintain levels. Add as required | | | | | | | |
| Oxidiser | 3 ppm | To increase level by 1ppm | 32g | 30g | 30g | 28g | 28g | 26g | 16g |
| Alkalinity Increaser | 90-120 ppm | To increase levels by 10ppm | 40g | 38g | 37g | 35g | 34g | 32g | 20g |
| Hardness Increaser | 200-300 ppm | To increase levels by 10ppm | 30g | 28g | 27g | 26g | 25g | 24g | 15g |
| pH- | 7.2 - 7.4 | To reduce levels by 0.1ppm | 20g | 18g | 18g | 17g | 17g | 16g | 10g |
| pH+ | 7.2 - 7.4 | To increase levels by 0.1ppm | 20g | 18g | 18g | 17g | 17g | 16g | 10g |
| No Foam | N/A | Initial dose | 200ml | 190ml | 180ml | 170ml | 170ml | 160ml | 100ml |
| | | Weekly dose | 50ml | 48ml | 46ml | 43ml | 42ml | 40ml | 25ml |
| | | Or as required | | | | | | | |
| No Scale | | Initial dose | 300ml | 280ml | 275ml | 260ml | 255ml | 240ml | 155ml |
| | | Weekly dose | 110ml | 100ml | 100ml | 95ml | 95ml | 90ml | 60ml |
| Spa Clear | | | 110ml | 100ml | 100ml | 95ml | 95ml | 90ml | 60ml |
| Spa Polish | | As required | | | | | | | |
| Everyday Cleaner | | As required | | | | | | | |
| Filter Cleaner | | Add between 4 and 6 capfulls to a bucket of clean water and soak cartridges for 1hour or overnight | | | | | | | |
| Algacide | | Initial dose | 4ml | 3ml | 4ml | 4ml | 4ml | 3ml | 2ml |

| J200 Series | | | J280 | J270 | J230 | J210 |
|----------------------|-------------|--|-------|-------|-------|-------|
| Capacity | | Litres | 2041 | 2006 | 1742 | 1128 |
| Chlorine Granules | 2-3 ppm | To increase level by 1ppm | 3g | 3g | 3g | 2g |
| Bromine Tablets | 3-4 ppm | Sufficient to maintain levels. Add as required | | | | |
| Oxidiser | 3 ppm | To increase level by 1ppm | 32g | 32g | 28g | 18g |
| Alkalinity Increaser | 90-120 ppm | To increase levels by 10ppm | 40g | 40g | 35g | 23g |
| Hardness Increaser | 200-300 ppm | To increase levels by 10ppm | 30g | 30g | 26g | 17g |
| pH- | 7.2 - 7.4 | To reduce levels by 0.1ppm | 20g | 20g | 17g | 12g |
| pH+ | 7.2 - 7.4 | To increase levels by 0.1ppm | 20g | 20g | 17g | 12g |
| No Foam | N/A | Initial dose | 200ml | 200ml | 170ml | 110ml |
| | | Weekly dose | 50ml | 50ml | 43ml | 28ml |
| | | Or as required | | | | |
| No Scale | | Initial dose | 300ml | 300ml | 260ml | 170ml |
| | | Weekly dose | 110ml | 110ml | 95ml | 60ml |
| Spa Clear | | | 110ml | 110ml | 95ml | 60ml |
| Spa Polish | | As required | | | | |
| Everyday Cleaner | | As required | | | | |
| Filter Cleaner | | Add between 4 and 6 capfuls to a bucket of clean water and soak cartridges for 1 hour or overnight | | | | |
| Algicide | | Initial dose | 4ml | 4ml | 3ml | 2ml |

UNDERSTANDING YOUR HOT TUB

My Jacuzzi® Hot Tub details

Jacuzzi® hot tub model _____

Jacuzzi® hot tub serial number _____

Water capacity (litres) _____

Record your test results in a table like this:

| Sanitiser Chlorine/Bromine/Oxidiser | Alkalinity | pH | Calcium Hardness |
|--|------------|----|------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

USEFUL CONTACTS

Jacuzzi UK
Woodlands, Roydsdale Way,
Euroway Trading Est. Bradford BD4 6SE

Aftersales department
Tel: 01274 471887
Email: hottubsaftersales@jacuzziuk.com



Jacuzzi UK is a member of BISHTA
(British and Irish Spa and Hot Tub Association)
Email: admin@bishta.co.uk
Visit: www.bishta.co.uk

For more information visit www.jacuzzi.co.uk

Reminder:

Don't forget to register your hot tub guarantee online today!
Visit our website and have your guarantee number ready
(this is on the guarantee registration card enclosed with your
new hot tub).

Note: All Jacuzzi chemicals meet standard UK and BISHTA regulations.
Using chemicals which do not adhere to BISHTA regulations in your Jacuzzi hot tub will make all warranty claims void.

