

POOL CARE



Your whirlpool is a place of relaxation and well-being. It is therefore particularly important that the water is also clear, fresh and hygienically perfect so that you can enjoy your whirlpool without worry. With this guide, we want to show you that caring for your whirlpool water using the right products can be very simple and takes very little time. Our pool care offers the discerning whirlpool owner an optimally coordinated range of products for the care of his whirlpool.

WATER BALANCE

Although water always looks the same, water parameters such as the pH value or water hardness can vary greatly from region to region. Therefore, it is important to balance the water immediately after refilling to make regular maintenance as easy as possible.

Three parameters play an important role in this context: total hardness, alkalinity and pH. The total hardness is a measure of the content of mainly calcium and magnesium in the water. You can find out the value of the total hardness of your water from your local waterworks. If the value exceeds 200 mg/L, limescale can build up on the walls when the water is heated, resulting in rough surfaces. To prevent limescale deposits, use Kalkinex immediately after refilling.

Another value plays an important role in water care: the alkalinity (TA value). If it is too low or too high, the pH value fluctuates extremely and is difficult to adjust. This can cause damage to the whirlpool as well as irritation to the skin and eyes. The ideal TA value is between 80 - 120 mg/L. Check the TA value immediately after filling and then once a week. Dose directly into the whirlpool tub water.



PH-VALUE

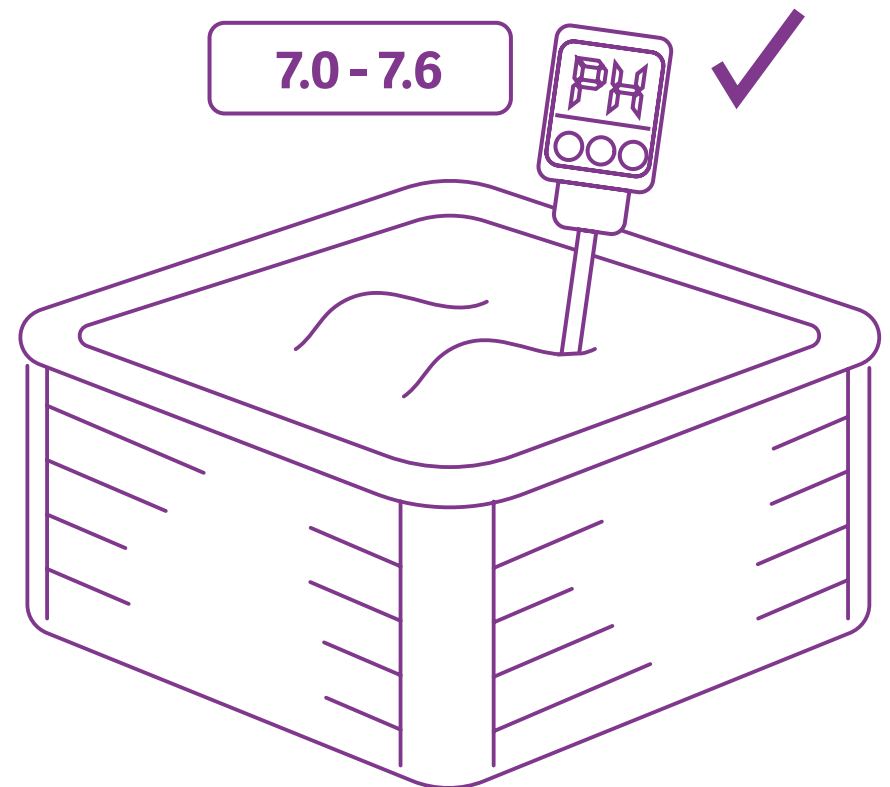
pH is a unit of measurement to measure the relative acidity in water, on a scale of 1 - 14. Check your spa water regularly to ensure the correct pH level. Pure water has a pH value of 7 and is neutral. Values above 7 are alkaline (base). Values below 7 are acidic. It is very important that the pH value is kept between 7.0 - 7.6.

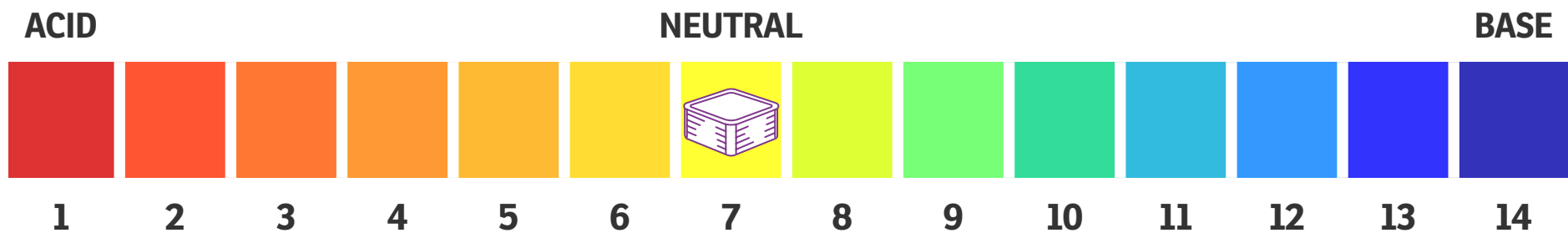
If the pH rises above 7.6, minerals or scales detach from the water and can clog pumps, filter cartridges and nozzles. The disinfectant works less effectively and the water can become discoloured.

If the pH falls below 7.0, the acidity of the water increases and the acid attacks the heating element and the linings of the nozzles. The disinfectant works less effectively and the acid attacks the skin.

The pH value is influenced by various factors:

- Number of users.
- How much new water is added.
- How many different chemicals are added.
- What type of disinfectant is used.
- Alkalinity and hardness or calcium content of the water.
- Water temperature and environmental effects.





Optimal values

pH value 7.0 – 7.6 pH

Total alkalinity 80-120 ppm

Water hardness (calcium) 150-300 ppm

Alkalinity

Total alkalinity is the measure of the highest level of carbonates, bicarbonates, hydroxides and other alkaline substances in the water, and the resistance of the water to the change in pH that this allows. Total alkalinity acts like a damper, preventing the pH from changing even though chemicals are added to the water.

Once the PH, alkalinity and water hardness have been determined, the value must always remain within the guideline values. Test the water regularly so that any fluctuations can be rectified. If the water is not within the recommended range, problems such as water turbidity, scaling, property damage or skin irritation may occur.

Safety data sheets

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If the alkalinity is too high, the pH value will be difficult to lower again.



If the alkalinity is too low, the pH value moves from high to low.

WATER CHEMISTRY

Understanding and correctly applying water chemistry is an important aspect of ensuring the quality and life of your pool. Improper use of chemistry can have various effects on the life of the spa, connecting tubes, jets, filter cartridge, heating element and pumps. Damage caused by inappropriate water is not covered by the manufacturer's warranty.



The chemicals needed to maintain a clean, disinfected spa are potentially toxic and dangerous if not used appropriately. Scan the QR code on the right or download any safety data sheet from our website www.sonnenkoenig.ch.

Here you will find instructions regarding the use and storage of the chemicals.

It is important to understand that the water in the whirlpool is different from normal water (e.g. in a swimming pool). In a whirlpool the water is heated to between 36 - 40° C. This is much warmer and more turbulent than in a swimming pool. Therefore it also needs a different treatment. It is important to test the water. If you keep the water in balance, many problems that can arise due to incorrect treatment will be avoided.

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General safety instructions for Pool-Chemie

- Before using the chemicals, carefully read the package leaflet and application guidelines.
- Keep the chemicals away from children.
- Pay attention to the expiry date of your chemicals.
- Use only the original lid and make sure it is always tightly closed when the chemical is not in use.
- Chemicals must not be stacked.
- Store the chemicals in a clean, dry and well-ventilated room to prevent contamination by other substances. Keep the whirlpool chemicals away from garden equipment and lawn care products such as lawn fertiliser.
- Separate chemicals with different states of aggregation.
- Do not store the chemicals in rooms where you also store other flammable objects or agents.
- Never mix two chemicals. Use a clean, new spoon for each chemical and prevent old chemicals from mixing with new ones.
- Follow the operating instructions.
- Never add the chemicals while people are in the whirlpool.
- If parts of the chemicals are spilled, remove the residue with plenty of water.
- Dispose of the chemical containers in an environmentally conscious manner and in accordance with local and national regulations.
- Do not breathe in dust or vapours from the chemicals.

POOLCARE

Clean and crystal clear pool water is a prerequisite for every pool owner. With POOL CARE products from Sonnenkönig of Switzerland, you are always on the safe side when it comes to pool water quality.

- Water balance, pH / TA correction
- Disinfection
- Anti-algae, flocculant
- Cleaning and accessories



WATER ANALYSIS

At first glance, whirlpool water care seems time-consuming and complicated and complicated: too many products and too many rules. However, once you have familiarised yourself with the details, you will quickly realise that the maintenance effort is minimal, because only a few rules need to be carried out regularly, others only as required.

The basic rules are the correct pH value and a basic disinfection of the water. The corresponding values can be checked easily and quickly with the pool tester + test strips. If you follow these two rules without interruption, you will automatically avoid problems with the water treatment. Therefore our request to you:

Get into the habit of a regular routine and, if possible, always carry out the steps on a specific day. This way you won't lose track of what's going on and you can manage the time you need to do it.

The practical service plan will help you by entering the date of your „maintenance day“ and hanging it up near your whirlpool tub.



PH-regulation / Multireiniger cover

The pH value is the basis for a functioning disinfection. Only when it is correctly adjusted do the care products used have an optimal effect and the water is pleasant to the skin, hair and eyes. The ideal pH value is between 7.0 and 7.6.

The pH value is influenced by various factors. For example, it increases after adding fresh water. Increasing the water temperature or enriching the water with air through the bubbling effect also changes the pH value. Therefore, check the value at least once a week and correct it downwards with pH-Minus if necessary. The granulate is dosed directly into the whirlpool water.



We recommend our doser for correct application.

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MULTIREINIGER COVER is a neutral all-purpose cleaner with a wide range of application possibilities. Stubborn dirt that appears on the plastic surface of spas, hot tubs and swimming pool covers can be conveniently removed with our Multi-reiniger. Other materials in the wellness environment can also be cleaned with the multi cleaner.

**RECOMMENDED
PROTECTIVE CLOTHING:**



DESINFEKTION

Once the whirlpool water is in balance, the next important step comes: water disinfection. Although the water is disinfected - depending on the care method - directly before or after each bath, you should still carry out a basic treatment using Wasserklar every week.

Wasserklar provides basic disinfection and supports the disinfectant used. It provides a basis of water care regardless of how often the whirlpool is used and thus prevents disinfection gaps. The special formula destroys chloramines, which are responsible for chlorine odour and eye irritation. Wasserklar also contains substances that make your whirlpool tub water crystal clear. Another advantage is that you can use your whirlpool again just 15 minutes after adding it.

Wasserklar is a preventive treatment which only ensures that there are no problems with your whirlpool tub water care if it is used regularly. Dose the granulate regularly every week directly into the water, regardless of the intensity of use of your whirlpool tub.

This product can be used with all three care methods: chlorine, chlorine-free based on active oxygen or bromine.

RECOMMENDED PROTECTIVE CLOTHING:



Safety data sheets

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To protect your health, your whirlpool water should be continuously and sufficiently disinfected. This is particularly important in whirlpools, as the high water temperatures provide an ideal environment for bacterial growth. In order to prevent problems with water care, a sufficient amount of disinfectant must therefore be present in the water at all times.

The weekly basic treatment with Water-Clean already offers a certain protection against bacteria or contamination. However, this basic protection must be reinforced each time the whirlpool is used. You can choose between the following three methods: Disinfection with chlorine, chlorine-free based on active oxygen or bromine.



We recommend our doser for correct application.

MiniChlor for reliable water disinfection with immediate effect

Chlorine in granulate form is the traditional disinfection method for whirlpools. MiniChlor dissolves quickly and without leaving any residue and does not leave any bleach stains on surfaces. The granulate is pH neutral, i.e. the pH value of the water does not change when added.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 5 g/m³ MiniChlor after each bath. Let the filtration run for 10 minutes and then check with test strips whether the ideal value of 1.0 - 1.5 mg/L has been reached. If necessary, add further quantities. Dose directly into the whirlpool water.

Safety data sheets Warnings



Use biocides carefully.
Always read the label and product information before use.

RECOMMENDED
PROTECTIVE CLOTHING:



Bromine tablets for the odourless Water disinfection with permanent effect

Bromine tablets are just as effective as chlorine, but have a low odour. The tablets are slowly soluble and thus ensure continuous disinfection of your whirlpool water over a longer period of time.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 3 - 4 bromine tablets per m³ every 10 - 14 days. Let the filtration run for several hours and check afterwards with test strips if the ideal value of 3.0 - 5.0 mg/L has been reached. If necessary, add more tablets.



*We recommend our
doser for correct applica-
tion.*

Active oxygen for chlorine-free and gentle water disinfection

Active oxygen gently disinfects your whirlpool water. By using this absolutely chlorine-free method, the water feels particularly natural and pleasant, is gentle on skin and hair and odourless.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 10 g of active oxygen granulate per m³ before each bath. Let the filtrations run for approx. 10 minutes and check immediately afterwards with test strips whether the ideal value of 5 - 8 mg/L has been reached. If necessary, add further quantities.

RECOMMENDED
PROTECTIVE CLOTHING:



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CLEANING

Every whirlpool is equipped with a circulation pump. It moves the water and guides it through the filter. Among other things, this helps to ensure that the dosed water care products are distributed evenly and can act everywhere. Run the circulation according to your whirlpool tub manufacturer's instructions.

A well-functioning filter helps to keep the water clean by retaining contaminants. However, if the filter is not maintained, it will become clogged and its function will deteriorate drastically. The result is poor water quality and increased consumption of disinfectants. We recommend that you clean the filter cartridge every four weeks at the latest.

What to do?

- Remove the filter cartridge from the filter box of your whirlpool tub and first clean it of coarse dirt.
- Dissolve the entire contents of a bag of Cartridge Clean in a half-filled 10-litre bucket.
- Place the cartridge in the cleaning solution.
- Swivel it several times at intervals and remove it from the solution after approx. 5 hours, depending on the degree of soiling.
- Then rinse the cartridge again and let it dry before inserting it.

To further increase the filter effect, add Wasserklar. This product ensures that the smallest turbid substances, which are not normally retained in the filter, are enlarged and thus made filterable.



RECOMMENDED
PROTECTIVE CLOTHING:



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Regular draining and refilling with fresh water is an important part of whirlpool tub care, because over time the water accumulates minerals, chemicals and other substances. These make the water look lifeless and impair the effectiveness of the care products.

To determine a guideline for the number of days after which you should completely empty your whirlpool tub and refill it, use the following formula:

Water volume in litres ÷ average number of bathers per day ÷ 3 = number of days until next water change.

Example: Whirlpool with 1,500 litres of water with an average of 4 bathers per day = $1,500 \div 4 \div 3 = 125$ days.

However, the water should be changed after 3-4 months at the latest.



Safety data sheets
Warnings



What to do?

- Use the formula to calculate how often your water should be changed.
- Then drain the water completely.
- Clean all surfaces with Multireiniger Cover using a cloth or viscose sponge.
- Fill your whirlpool tub with fresh water.
- Do not forget to clean the whirlpool tub cover thoroughly as well.

Is the water foaming?

Foam on the water surface does not look very inviting. If your water tends to foam, we recommend adding Anti Foam directly to the water. If the water still foams after the addition, it should be changed.

**RECOMMENDED
PROTECTIVE CLOTHING:**



TROUBLESHOOTING

If a problem has occurred with the water quality, you should generally check:

- Is the pH value OK?

Ideal pH value: 7.0 to 7.6

- Is there sufficient disinfection in the water?

Ideal chlorine value: 1.0 - 1.5 mg/L

Ideal bromine value: 3.0 - 5.0 mg/L

Ideal active oxygen value: 5 - 8 mg/L

- Is the filter clean?

Clean or replace the cartridge.

- Is the circulation system in order?

Is the filter pump running according to the manufacturer's recommendation?

PROBLEM	POSSIBLE CAUSE	PROPOSED SOLUTION
Turbid water	<ul style="list-style-type: none"> • Dirt particles that cannot be retained in the filter. • Too many organic pollutants. • Too little disinfectant in the water. 	<ul style="list-style-type: none"> • Check pH value and adjust to 7.0 - 7.6. Add Wasserklar to achieve immediate disinfection. Clean or replace filter cartridge.
Too much chlorine or bromine in the water	<ul style="list-style-type: none"> • Overdosing of disinfectants. 	<ul style="list-style-type: none"> • Wait with bathing until the value has reduced by itself. Determine the current value with the Teststreifen.
Foaming	<ul style="list-style-type: none"> • Contamination of the water by soap and cosmetic residues. 	<ul style="list-style-type: none"> • Add Antischaum to the water. If the water still foams after adding it, the water should be changed. For the future, residues of soap or cosmetics should be thoroughly washed off the body before using the whirlpool.
Limescale deposits or Limescale residues in the water	<ul style="list-style-type: none"> • Hard water with high calcium content. • pH value too high. • Alkalinity too high. 	<ul style="list-style-type: none"> • In case of hard water, add Kalkinex directly after filling. In all cases, adjust the pH value to 7.0 - 7.6 with pH-Minus.