

FREQUENTLY ASKED QUESTIONS

Why is my water cloudy?

In a spa, there are several possibilities for a loss of water clarity:

- Broken or non-functional filter
- Tears and holes can occur in cartridge elements allowing water to pass through unfiltered. Alternatively, the cartridge may not be properly put in the filter housing, allowing water to again bypass the filter. Inspect filter, replace if necessary. Clean filters weekly using the hose and fresh water. Clean every 3 months using Filter Brite or Filter Renew spray
- Insufficient filtration
- The pump and filter should be run for at least 10 minutes after bathers have finished using the spa
- Poorly balanced water
- High pH, Total Alkalinity and/or Calcium Hardness can lead to finely divided scale formation, resulting in cloudy water
- Heavy bather load
- Regular oxidation (shock dosing) is a "must", particularly if the spa or hot tub is used extensively. This needs to be done at least weekly and more often if there is heavy bather load
- High Total Dissolved Solids (TDS) often stems from heavy bather load, evaporation, overuse of chemicals, and leaving the cover off the spa when not in use. If the TDS is high, we recommend draining the spa
- Use of a sanitiser such as calcium hypochlorite or liquid chlorine. These sanitisers should never be used in hot water. See explanation below.

Foaming

The most probable source of foam in a spa or hot tub originates from the hot water washing body oils, cosmetics, soaps and fats from the bodies of bathers. The bubbling action of the jets and the swirling of the water all combine to leave a foam on the surface. Detergent-based surface cleaners can also contribute to foaming. We recommend using a specialist spa cleaner for waterline cleaning called Squeaky Clean which does not cause foaming.

Some spa manufacturers recommend that customers use sodium hypochlorite in the form of liquid chlorine or even commercial bleach. This compound contains sodium hydroxide (caustic soda, NaOH). In hot water, dissolved fats and hydroxide combine, making soap and foam. Just like calcium hypochlorite, liquid chlorine should never be used in a spa or hot tub.

Detergent from togs can also be a cause of foaming. We suggest togs are rinsed with clean water before using the spa and not washing them in the machine.

Removal of foam

- Add 10 mL of Antifoam Concentrate (“Foam Go”) per 1,000 litres directly to spa or hot tub water to prevent foaming
- Repeat as needed to eliminate foam
- Antifoam Concentrate can also be added at the above dosage rate as a foam preventative.

Grease and oil marks on the spa walls

Apart from the bathers themselves, oils, lotions, deodorants, sunscreens, hair product and other preparations will all contribute to the contamination of spas and hot tubs. The higher water temperature will hold some of these greases and oils in solution. As the water cools, these deposit on the walls, usually at the waterline. This is not only unsightly; it is unhealthy, clogs filters and causes foam.

Removal of grease and oil

- Add 10 mL of Antifoam Concentrate (“Foam Go”) per 1,000 litres directly to spa or hot tub water to prevent foaming
- Repeat as needed to eliminate foam
- Remove any oil off the surface of the water by dragging a Chux Superwipe® or similar across the surface. This should trap water insoluble wastes and reduce the demand on the sanitiser and oxidiser
- The water level in the spa or hot tub should be lowered, and the waterline cleaned with Squeaky Clean spa cleaner. This should be rinsed (but not into the rest of the spa water!) then the unit topped up with fresh water
- To clean filters that are clogged with grease and oil, use FilterBrite/ Filter Renew. In addition to cleaning the elements or the cartridge, be sure to thoroughly clean the inside of the filter housing, itself
- Adjust the pH and other water balance parameters to within their proper ranges
- Add 1 sachet of Purity or other shock dose treatment.

Eye and Nasal Irritation

Bathers can sometimes complain of red and burning eyes usually accompanied by a strong pungent chlorine-type odour. The offending culprit is not chlorine, but rather chloramines, a combination of available chlorine and nitrogenous (nitrogen-containing) waste (e.g. urine, perspiration, etc.). This cannot be removed by filtration or any method other than oxidation (shocking).

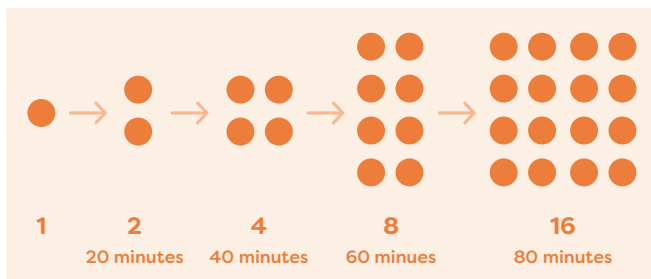
Removal of Chloramines

- Oxidise the spa using Purity, chlorine granules, bromine granules or MPS non chlorine oxidizer
- This may need to be repeated after 24 hours
- Do not allow bathers to re-enter the spa or hot tub until the free chlorine level is 5.0 ppm or less, or the Total Bromine level is 8.0 ppm or less.

Another cause may be too high or too low pH. A water test is required and remedial action required.

Skin Rashes

A cause of a skin rash in a hot water environment is a pathogenic bacteria called *Pseudomonas aeruginosa*. It reproduces rapidly every 20 minutes or so under ideal conditions, as illustrated below.



It is estimated that 7% of the population carry *P. aeruginosa* on their skin, whilst 10% have the bacteria in their lower bowel. Moreover, anywhere from 30% to 100% of bathers that use a contaminated spa will become infected by *P. aeruginosa*. Infection is indicated by the following:

- An itchy rash appears 8 - 48 hours after contamination
- The rash generally occurs on the arms, legs and/or trunk
- The rash can disappear 7 - 10 days without intervention or treatment. If you are concerned you should seek medical advice

Whilst *P. aeruginosa* has developed a resistance to many non-oxidising disinfectants, chlorine is the most effective killer of the bacteria. To combat infection and kill the organism, we recommend the following action:

1. Add double the normal shock dose of Purity (if you normally use 1 sachet, use 2 this time), run with jets on full for 20 minutes, turn off for 20 minutes, jets on for 20 minutes. Leave cover closed while you are doing this to destroy any organisms that may be harboured there
2. Drain the spa and wipe the walls down with a disposable cloth, clean the underside of the cover with squeaky clean
3. Remove filters, clean and soak in Filter Brite for at least 6 hours as per instructions
4. Replace filters, refill spa with water, do not heat. Add the normal amount of Purity and run all jets for 20 minutes, turn off for 20 minutes then on again for 20 minutes. Drain the spa again
5. Refill, heat to desired temperature, remove cover and add normal amount of Purity. Run with jets on full for 10 minutes, turn off for 10 minutes, jets on for 10 minutes. Replace cover and leave for 24 hours before use.

Free chlorine levels should be at between 3.0 - 5.0 ppm.

COVID-19

There is no evidence that COVID-19 can spread to people through the water used in spa pools. Proper operation and disinfection of spa pool water should kill the virus that causes COVID-19 (Centers for Disease Control, 2020).

Algae and Pink Slime

Occasionally a spa particularly one that is outdoors may experience visible algae growth. Algae can enter a spa from bathers, animals, shrubs and trees, decking, adjoining swimming pools, or any number of environmental factors. The presence of algae is usually indicated by a green slimy growth on the walls and floor of the unit. If the growth is slimy but pink or pale red in colour, pink slime is most likely. Both problems should be treated immediately - not only are algal blooms unsightly, they are also unsafe, causing the sides and floors to become slippery.

Treatment pink slime

- Pink slime is actually a bacterial growth that favours a vinyl or plastic finish. It is capable of growing a mucoid coating to protect its exposed surfaces
- Look for the area where the growth may have begun. Thoroughly brush and clean this area
- Disassemble and thoroughly clean the filter
- Remove cartridge and treat with Filter Brite or Filter Renew then rinse with a strong stream of fresh water. Before placing the cleaned or new cartridge into the filter housing, brush and rinse the filter housing
- Clean by brushing the skimmers, ladders, steps, and light niches. Give special attention to corners, cracks, and crevices
- Brush the entire spa or hot tub surface with a surface-compatible brush
- Adjust the pH to 7.4 - 7.6 and balance the water, if necessary
- With pump running, add one Purity sachet or 50 g of chlorine Spa Sanitiser granules or 25g brominating concentrate per 1000 litres water
- Turn off the pump
- After 24 hours, add one Purity sachet or 50 g of chlorinating granules or 25g brominating concentrate per 1000 litres water
- If the problem persists add one bag of purity and run jets for 10 minutes then add Swirl Away as per instructions.