



The Clear Chemistry Choice

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Why Clear Spa 104°

Clear Spa 104° products are designed specifically to assist you, the spa owner, in enjoying a healthy, safe, therapeutic experience while immersed in hot, clean and clear water.

Simple, safe and effective products are what Clear Spa 104° is all about. We continually strive to perfect the simplicity of spa ownership and provide you with the quality products that enable you to create a safe spa environment.

Our network of Clear Spa 104° retail dealers are trained to understand the dynamics of hot water chemistry, have the tools to assist you in maintaining your spa, and protect both you, the bather, as well as your investment.



Page 1

The Simple Basics

Spa Care & Maintenance

KNOW YOUR SPA'S WATER VOLUME:

• Your spa's gallonage is very important to establish and retain as all chemical additions are based on the volume of water your spa contains. Most spa manufacturers have the details of your spa model's volume and can provide you with the information very easily. Otherwise, below are simple formulas to calculate the volume of the spa yourself:

Average Depth in Feet:

Add the depth of the deepest end to the depth of the shallowest end, and then divide by 2 = number of gallons.

Rectangle Shaped Spas:

Multiply length x width x average depth x 7.5 = number of gallons.

Oval or Freeform Shaped Spas:

Multiply the full length x full width x average depth x 5.9 = number of gallons.

Round Shaped Spas:

Multiply the diameter x diameter x average depth x 5.9 = number of gallons.

FILTRATION / CIRCULATION:

 You must circulate your spa water daily to ensure that filterable debris is removed and deposited in the filter system and that desired products remain mixed throughout the entire body of water. Filtration and circulation go hand-in-hand to assure your spa water stays clear, safe and usable anytime.

Set your spa control to operate a minimum of 3 hours per day; longer time is better, especially for spas equipped with energy efficient circulating pump systems.

To give you an idea of a spa's filtration demands: 4 people soaking in a spa of roughly 500 gallons for 30-60 minutes has approximately the same filter and chemical demands as 160 people in a swimming pool containing 20,000 gallons!

The Simple Basics

Spa Care & Maintenance

SELECT AN APPROPRIATE SANITIZING SYSTEM:

First and foremost it is important to choose the appropriate sanitizing system to keep you protected from waterborne bacteria and viruses. Clear Spa 104° provides two of the oldest and most reliable forms of spa sanitizers: chlorine which is typically found in a granular form, and bromine which is available in compressed tablets or in granular form. Sanitizing is discussed further in this guide under "Sanitize Your Spa Water".

TEST YOUR SPA'S WATER AND PERFORM THE FOLLOWING ROUTINE TASKS

- Once per week or more if at high usage Test using a reliable test kit or test strips to ensure the water stays in balance and the sanitizing system level is maintained to protect you anytime you're enjoying your spa.
- When using at Test Kit Always rinse the test block a few times prior
 to water testing. Be sure that samples are taken approximately 18" or
 more below water level and away from any inlet. Do not let the water
 sample stand; test as quickly as possible for the most accurate results.
- Every 6-8 weeks Bring a sample of spa water to your professional Clear Spa 104° authorized dealer for a complete water analysis.
- **As needed** Adjust the pH and sanitizer levels and re-test prior to use to validate levels are where they need to be.
- Weekly Add Clear Spa 104° Metal Guard scale and stain preventer to protect the plumbing, equipment and spa's surface.
- Weekly or as needed Add Clear Spa 104° Crystal Shock or Spa Seltzer to remove any unwanted organic contaminants from the spa.
- Weekly or as needed Add Clear Spa 104° Crystal Brite water clarifier to assist in removing fine particles and restore water to sparkling clear condition.

The Simple Basics

Spa Care & Maintenance

HOUSEKEEPING / PREVENTATIVE MAINTENANCE:

- Every 4-6 weeks Keeping a clean, efficient filter cartridge is important in maintaining a long and useful spa life. Use Clear Spa 104° Cartridge Cleaner™ to easily cleanse and remove any accumulated oils, films and scale from your filter cartridge. It is also recommended that you invest in a second filter cartridge to enable you to clean the filter at your leisure, providing seamless operation. These simple measures will help extend the life of the filter cartridge as well.
- Weekly or as needed Clear the waterline of scum and mineral build-up
 by wiping down the exposed surface of your spa's interior with Clear Spa
 104° Surface Cleaner™ and an approved spa polish to restore and protect
 the luster of your spa's finish. As needed, skim the surface and remove any
 physical debris from the spa.
- Every 2-3 months Drain the spa and clean the interior surface to protect the spa finish and begin a fresh chemistry cycle. Draining and starting fresh every couple of months assures that your spa water will stay balanced and healthy.

Use the following formula to help determine spa draining intervals:

Spa gallons divided by daily users divided by 3 = the approximate days between draining.

E.g. Spa gallons = 325 divided by 2 daily users divided by 3= 54 days.

Balance

Protecting Your Spa!

Clear water begins with Clear Spa 104° balancing products which are easily identified by their sunny orange colored labels.

Starting Your Spa Up For The First Time

Before use - take a sample of your spa water following an initial filter cycle of 4-6 hours. Bring the sample to your Clear Spa 104° professional retailer for analysis and balance the water according to their recommendations!

ALKALINITY LEVELS:

Total alkalinity is a measurement of all alkaline/buffering chemicals in the water. Alkalinity assists in maintaining a proper pH level. The pH is easier to control if the spa water has a total alkalinity between 100 – 150 ppm.

Clear Spa 104° Alkalinity™

Symptom: Low total alkalinity - can cause the pH of the spa water to become unstable and drift.

Remedy: Use **Clear Spa 104° Alkalinity** to increase the total alkalinity of your spa water to levels between 100-150ppm.

pH RANGES:

pH refers to the Acid or Base balance of water. A reading of 7.2 - 7.8 is the acceptable range for the pH of your spa.



Clear Spa 104° pH Minus[™]

Symptom: High total alkalinity - can cause the pH of water to be unstable and create a "bounce" effect, not allowing the pH to stay adjusted for any significant period of time.

Remedy: Lower the total alkalinity using **Clear Spa 104° pH Minus** in multiple doses unless it is close to time to drain and re-start the chemistry.

Balance

Protecting Your Spa! Continued...



Clear Spa 104° pH Plus™

Symptom: Low pH. A low pH (below 7.2) can cause: burning eyes, skin irritation, etching of the interior surface, liner wrinkling, corrosion of metal fixtures with resulting stains on the surface, and/or rapid loss of the sanitizer level. **Remedy:** Check and balance the total alkalinity first. Apply any necessary **Clear Spa 104° pH Plus** in multiple doses to increase the pH of your spa water.

CALCIUM LEVELS:

Calcium hardness is the amount of dissolved calcium in your spa water. A certain level of calcium is desired to assist in preventing corrosive activity. However, low calcium hardness may etch your plaster or decrease the life of your spa's interior finish. The acceptable range of calcium hardness in spa water is 150-300 ppm.



Clear Spa 104° Calcium™

Symptom: Low calcium

Remedy: Use **Clear Spa 104° Calcium** as needed to raise calcium levels to the acceptable range.

Sanitize

Protecting the Bathers!

Clean, clear water is maintained with Clear Spa 104° sanitizing products which are easily identified by their ocean blue colored labels.

Definition:

The sanitation of spa water is required to protect you, the bather, from contact with various waterborne pathogens (i.e. germs, viruses, bacteria and fungi) as well as other organic contaminants. The potential for these contaminants in your spa varies depending on bather load, water temperature, and various other factors. It is very important to have a reliable test kit to ensure you're maintaining a proper sanitizer level.

Clear Spa 104° offers three products for keeping spa water sanitized. First, decide on which method (chlorination or bromination), best suits your needs, then, establish and maintain a consistent sanitizer residual.

CHLORINATION

Chlorine is the most universal and popular stand-alone water sanitizer. Use of granules may require day-to-day monitoring and sometimes daily additions depending on the unique demands of your spa. Test your spa's chlorine residual level regularly, as it may vary in different conditions. Acceptable residential spa ranges are from 3.0 - 5.0 ppm.



Clear Spa 104° Chlorinating Granules™

Symptom: Low chlorine residual.

Remedy: Clear Spa 104° Chlorinating Granules is quick dissolving and fast acting for increased chlorine residual. **Dosage Frequency:** Use as needed to maintain 3.0 - 5.0 ppm chlorine residual.

Complement your chlorine feeding program with a weekly application of Clear Spa 104° Spa Seltzer; a sanitizing booster that helps maintain a spa's bromine or chlorine residual as well as providing a soft, soothing, silky feel to the water.

Sanitize

Protecting the Bathers! Continued...

BROMINATION

Bromine products work very well in hot water environments and have a low odor. Tablets use a convenient in-line feeder (may have even come supplied with your spa at the time of purchase) or a floating dispenser.

Preparation

For start-up applications, we recommend an initial shock with Clear Spa 104° Crystal Shock (see the next page) followed by Clear Spa 104° Bromo Boost. This establishes the initial base residual for your bromine santizing program.

Clear Spa 104° Bromo Boost™

If using a silver/zinc or copper mineral purification system, this is the Bromine remedy you'll need to utilize.

Symptom: Low Bromine.

Remedy: Application of **Bromo Boost** should be done in conjunction with the draining and refilling of the spa. **Bromo Boost** is quick dissolving and fast acting for increased bromine residual. Can be used with a stand-alone sanitizer or with silver/ zinc or copper mineral purifying systems.

Dosage Frequency: Use to maintain 4.0 - 6.0 ppm bromine residual as recommended or when replacing your spa mineral purifier as required by the manufacturer.





Maintainence

Once a proper bromine residual has been achieved, use Clear Spa 104°Bromo Bright tablets to maintain your everyday sanitizer at proper levels.

Clear Spa 104° Bromo Bright Tablets™

Symptom: Low Bromine level.

Remedy: Add Clear Spa 104°Bromo Bright tablets through an approved feeding device to keep a constant bromine residual in your spa water.

Dosage Frequency: Every week, or as needed to maintain enough Bromo Bright in the feeder to hold the bromine level between 4.0 - 6.0 ppm.

Shock

Restore and Brighten!

Clear Spa 104° Shock Oxidizer Products are easily identified by their fabulous fuchsia colored labels.

Definition:

Spas require periodic oxidizing or shocking to remove organic contaminants and non-filterable impurities. This relieves some of the demand on your sanitizing system and restores an inviting clear and sparkling body of water to the spa. **Clear Spa 104°** offers two choices for shocking:

Clear Spa 104° *Crystal Shock*™ is a universal shock/oxidizer compatible with all types of sanitizing systems.

Symptom: Cloudy water.

Remedy: Add the appropriate amount of Clear Spa 104° Spa Seltzer or Clear Spa 104° Crystal Shock. These products remove or breakdown impurities and organic waste (such as chloramines) through strong oxidation.

Dosage Frequency: Once per week or more often depending on bather loads. These products will also assist in boosting your bromine or chlorine levels to assure a bacteria and virus free hot water environment.

Symptom: Chemical/musty odor in the spa.

Remedy: Add Clear Spa 104° Spa Seltzer or Clear Spa 104° Crystal

Shock in sufficient quantity to remove offensive odors.

Dosage Frequency: As needed.



Manage

Protecting Your Investment!

Water Care ends with Clear Spa 104° specialty products easily recognized by their powerful purple or glorious green labels.



Clear Spa 104° Natural Enzymes™

Symptoms: Foamy or oily brownish water.

Remedy: Clear Spa 104° Natural Enzymes searches out grease, lotion, pollen, body oil, and other foaming agents. It breaks these down and removes them from the spa water so they will not clog the filter.

Dosage Frequency: Weekly or as needed.

Clear Spa 104° Metal Guard™

Symptoms: White cakey scale in the filter, on the fixtures or on the spa walls.

Remedy: Clear Spa 104° Metal Guard chelates and coagulates minerals, making them large enough to be caught by the filtration system while removing them from the water. Clear Spa 104° Metal Guard also lowers the calcium levels of the spa while removing stains and scale from surfaces and equipment.

Dosage Frequency: Weekly or as needed.





Clear Spa 104° Jet Blast™

Symptoms: Loss of jet pressure. Particles or floating debris inside jets.

Remedy: Clear Spa 104° Jet Blast is a professional grade debris flushing product used to remove unwanted particles such as oils, grime, sand, leaves and other organic matter that may clog your spa jets. Clear Spa 104° Jet Blast keeps jet pressure strong, extends the life of your motor and keeps your spa sparkling clean. Frequency: Apply during drain and refill intervals or as needed.

Manage

Protecting Your Investment! Continued...



Clear Spa 104° Spa Phos™

Symptoms: Algae or slime growth that persists or returns with frequency.

Remedy: If you find yourself constantly battling algae in various forms, your water may have high levels of phosphates. Clear Spa 104° Spa Phos removes phosphates from the water to eliminate the algae food source.

Dosage Frequency: As needed.

Clear Spa 104° Crystal Brite™

Symptoms: Cloudy or milky water.

Remedy: Clear Spa 104° Crystal Brite is a non-staining, non-foaming product that will bind microscopic particles together so that they are large enough to be trapped by your filtration system. **Clear Spa 104° Crystal Brite** aids in neutralizing your pH while working to keep algae out of your water.

Dosage Frequency: Weekly or as needed.





Clear Spa 104° Cartridge Cleaner™

Symptoms: Murky, cloudy water. Excessive floating particles. Remedy: Clear Spa 104° Cartridge Cleaner is a professional grade filter cleaning product used to remove particles such as oil, grime, sand and other organic matter from filter cartridges. Clear Spa 104° Cartridge Cleaner can be used as a spray, backwash or soaking agent for your filter cartridges, thus freeing the filter of contaminants that may clog and reduce its efficiency. Frequency: Every 4-6 weeks.

Manage

Protecting Your Investment! Continued...





Clear Spa 104° No Foam™

Symptoms: Excessive white foam bubbles on the surface of your spa water.

Remedy: Clear Spa 104° No Foam is an instant reactive agent that dissipates foam caused by detergent, oils, and lotions Dosage Frequency: As needed.

Clear Spa 104° Surface Cleaner™

Symptoms: Oil, scum or scale build-up along the top of the waterline.

Remedy: Use Clear Spa 104° Surface Cleaner to clean the spa's interior surface waterline and aid in preventing build-up. **Frequency:** After each use or as necessary when cleaning the entire spa interior surface during the draining and refilling process.



Protect Your Spa

Preventative Maintenance Suggestions

Your Spa's Fill Water Source:

When possible, always fill and top-off the spa water level with treated municipal water. If concerned, secure a sample of the tap water used to fill the spa and have it tested by your professional spa dealer or obtain a copy of the water analysis from your water supplier.

Acceptable Chemical Levels:

Total Alkalinity: 100-150 ppm

pH: 7.2-7.8

Calcium Hardness: 150-300 ppm

Acceptable Sanitizer Levels:

Chlorine: 3-5 ppm

Bromine Tablets: 2-4 ppm Bromine Granular: 3-6 ppm

Filtration and Circulation:

Set your spa controls for at least 3 hours (preferably longer) daily to filter out the impurities.

Keep the Spa Covered:

Spa covers are designed to assist in energy savings and prevention of foreign matter from entering the spa. Always keep the spa covered during no-use periods.

Facts To Know...

Never soak alone!

Prevent the spa water temperature from exceeding 104°.

If you are pregnant or have any severe health issues be sure to check with your medical professional for precautions before using a spa.

Store all your spa chemicals separate from other products. Keep in a cool, dry environment and safely out of reach of children. Never store liquids on top of dry compounds. Store spa chemicals away from any metallic items to prevent possible rusting or deterioration. Keep all spa chemicals away from any intense heat or flame.

Don't store spa chemicals too long in your car or trunk. Shop at the spa store last to prevent overheating of products.

Keep all products capped tight during storage. Watch for any expiration dates found on product labels as well as signs of chemical decomposition.

Protect The Exterior Cabinet

Your spa exterior is exposed to the elements constantly. If the finish begins to look dull or faded, follow your spa manufacturer and/or professional dealer's recommendations for maintenance.

Glossary of Terms

Acidity - Low pH.

Acid - A liquid or dry chemical which lowers a high pH.

Algae - Microscopic plant life that thrive in pools and spas.

Alkalinity - A buffer factor responsible for maintaining a stable pH.

Algaecide - A preventative chemical which assists chlorine or bromine in controlling the growth and reproduction of algae.

Bacteria - Microscopic organisms which are introduced to pools and spas from animals, the atmosphere, and people. Some bacteria is known to cause light to severe irritation, infections, or illness.

Balanced Water - Water which has been chemically adjusted to industry standards.

Broadcasting - To add/disperse a chemical directly out into the deepest portion of the spa. Make sure eyes, face and other exposed body parts are protected from potential harm of chemicals.

Bromine - A granular or compressed tablet compound. Used in sanitizing a body of spa water, destroying most bacteria, viruses and assisting in algae prevention.

Blower - A motorized device designed to suck in outside air and deliver bubbles through air rings and/or jets to the spa. Provided to enhance hot water therapy.

Chloramine - A byproduct of chlorination created when ammonia combines with chlorine during the sanitation process. Shocking water breaks down these organic compounds and frees up the chlorine to do it's job.

Chlorine - A granular or compressed tablet compound used in sanitizing a body of spa water destroying bacteria, viruses and assisting in algae prevention.

Clarifier - A chemical designed to coagulate small micro particles thereby making them large enough to be trapped by the filter.

Combined Chlorine - A chemical reaction of chlorine coming in contact with excessive amounts of ammonia or nitrogen compounds including bather waste and other organic contaminants.

Corrosion - A reaction of metal components which are exposed to certain chemicals and/or imbalance of the spa water.

Dilute - A term meaning to take a portion of the spa water out and replenish with fresh tap water. Usually performed to treat the buildup of particular factors prior to a scheduled drain, refill and rebalance.

Dosage - A term describing the amount of a particular product required to correct a problem.

Glossary of Terms

Filter - A device that is used to clean sediment and debris out of the spa water.

Filter Pressure - The amount of water pressure required to pass water through the filter. The higher the number, the dirtier the filter and the more the pump has to work.

G.P.M. (Gallons Per Minute) - A measurement of the flow of water.

Hardness - The concentration of total minerals contained in spa water.

Jets - Jets provide a powerful flow of water mixed with air to create a soothing, therapeutic, massage effect.

pH - The measurement of acidity or base in a solution of spa water

P.P.M. - Parts per million; a measurement used to define a quantity, e.g. 100 grains of salt in a million specs of pepper would equate to 100 ppm.

Oxidize - To chemically or mechanically destroy organic contaminants found in spa water.

Residual - Following any chemical adjustments, including chlorine, the residual is the measure of the concentration of a chemical remaining in solution.

Sanitize - A substance or device designed to remove harmful bacteria and viruses from water.

Scale - A crusty substance usually derived from excessive mineral build-up impairing proper flow and jet action

Shock - A substance which will elevate the chlorine or bromine level. (Depending on the sanitizer chosen.)

Total Alkalinity - A measurement of all alkaline and buffering agents in the water. Contributes to the stability of pH balance.

Total Dissolved Solids (TDS) - The measure of the combined content of inorganic and organic solids in the spa water that cannot be reduced or destroyed by chemical methods. A high TDS greatly reduces treatment results and usually requires a draining of the spa and restart of a chemical treatment program.

Winterize - A process in which a pool or spa is mechanically and structurally prepared for a winter non-use period, preventing freezing and/or other harsh winter weather conditions.

Maintenance Schedule

A few notes makes it easy to keep it clean.

Date	Notes

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