

THE INS AND OUTS OF SPA MAINTENANCE



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ABOUT SERENA SPA® SPA CARE

Hello!

Our **Serena Spa® Spa Care** program offers you a chemical line for spa water. When you use **Serena Spa®** you are using trusted and reliable products that make spa care easy. We have our own chemists, manufacturing, packaging, and distribution, and all made in the USA!

With over 40 years of experience in the formulation of Specialty Products, we never compromise quality, and our products have the highest formula efficacies. Our mission is the best chemistry and new innovations, and we are proud to offer the **Serena Spa®** line of products.

Learn how to identify water problems with FAQs, Troubleshooting Tips, Safety Tips, and Spa Terms. It is easier and cost-efficient to prevent problems rather than fix them.

Be water ready! We are here to help you with SPA CARE BASICS, so you can:

PROTECT YOUR BATHERS with Spa Water Sanitization
PROTECT YOUR INVESTMENT with Spa Water Balance
BEST PRACTICES with Spa Equipment Maintenance

Visit us for all your spa care needs at: www.phoenixproductsco.com

Want to reduce the amount of Chlorine and Bromine in your spa?

Look for products with this symbol to maximize product efficiency in your spa!



SPA CARE BASICS

Below are steps to guide you through starting your spa for the first time or refilling it after draining. It is important to maintain good water quality to protect the bathers and keep your spa investment in excellent condition.

Starting Your Spa

- 1. Install new filters or recently cleaned filters that were cleaned with **Serena Spa® Cartridge Cleaner.**
- 2. Make sure the spa is clean.
- Most source water contains metals and minerals that could damage the
 equipment in your spa. Add at least 6" of water, then add 8 ounces of Serena Spa® Stain & Scale Preventer per 250 gallons of water. This will remove
 iron, copper, and other metals.
- 4. Complete filling the spa with water. Turn on the power.
- 5. Test hot tub water. The maximum water temperature should not exceed 104° F. The spa may be set to your desired temperature. Test Strips are the easiest and preferred way to test your spa water. Make sure the pH, Alkalinity, and Hardness of your water are at the proper levels. If not, see "Balancing Your Water."
 - a. pH requires a level between 7.4 to 7.6 ppm.
 - b. Alkalinity requires a level between 80 to 120 ppm.
 - c. Hardness requires a level between 150 to 250 ppm.
- 6. Select and add whichever Sanitizer you choose to use. See "Choice of Sanitizers."
- 7. RELAX AND ENJOY YOUR SPA!

BROMINATING TABS

- When "Starting Your Spa," add Serena Spa® Oxy Blast, 2 ounces per 250 gallons of water, to oxidize organic material. Make sure the spa pump is circulating.
- 2. Place tablets into Bromine Floating Dispenser and adjust opening per your dealer's recommendation.
- 3. Add 2 ounces per 250 gallons of water of **Serena Spa® Oxy Blast** each time after using your spa. Add 2 ounces per 250 gallons of water weekly if the hot tub is not in use. A double dose may be used after heavy spa use.
- 4. Add tabs every 5 to 7 days to maintain proper Bromine level.
- 5. Remember to follow instructions on "Weekly Maintenance," "Monthly Maintenance," and "Balancing Your Water."

SIMPLE CONVERSION TABLE:

2 ounces = $\frac{1}{4}$ cup

2 pounds of **Serena Spa® Oxy Blast** = 32 ounces = approximately 16 doses

CHLORINE

- 1. When "Starting Your Spa," add 4 ounces per 250 gallons of water of Serena Spa® Granular Dichlor Chlorine. Make sure the spa pump is circulating.
- Add 2 ounces per 250 gallons of water of Serena Spa® Granular Dichlor
 Chlorine each time after using your spa. Add 2 ounces per 250 gallons of
 water weekly if the spa is not in use.
- 3. Test every other day and add **Serena Spa® Granular Dichlor** to maintain proper chlorine level.

IMPORTANT

DO NOT enter the water where the residual exceeds 5 ppm. Remember to follow instructions on "Weekly Maintenance," "Monthly Maintenance," and "Balancing Your Water."

Weekly Maintenance

- 1. Test pH, Alkalinity, Sanitizer, and Hardness every two days.
- 2. Add Sanitizer and adjust all levels as required.
- 3. Add 2.5 ounces per 250 gallons of water of **Serena Spa® Stain & Scale Preventer.**

Monthly Maintenance

1. Remove and clean your filters using **Serena Spa® Cartridge Cleaner**. See **"Filter Care."**



Proper Drain and Fill

- Every 3 months, it is essential to replace the hot tub water with fresh water.
 This is recommended, as you continue to add more Sanitizer, it will start to dissolve slower and slower until it doesn't dissolve in your spa anymore.
 Water then is susceptible to bacteria contamination.
- 2. BEFORE draining the spa water, remove your filter cartridges, add 16 ounces of **Serena Spa® Jet Line Cleaner**, and turn on all pumps for 15 minutes.
- 3. Then turn off pumps and let spa water sit still for one hour.
- 4. Turn on all pumps and jets again for 5 minutes.
- Turn the power off, so jets and pumps cannot accidentally turn on during the draining process. Drain the spa. Hose debris off the side walls when spa is almost fully drained.
- 6. Clean the acrylic surface first with an approved all-purpose cleaner.
- 7. Replace the filter cartridges and follow "Starting Your Spa" instructions.

Important Things to Remember

- Remember to clean and replace your filter when required, to ensure the filter's performance and efficiency are not compromised.
- Always keep your hot tub covered when the spa is not used. Extend the life
 of your vinyl cover using Serena Spa® Cover Rejuvenator.
- When adding chemicals, always make certain your pump is circulating.
 Always wait 30 minutes between adding different chemical products.
- SIMPLE CONVERSION TABLE: 6 Teaspoons = 2 Tablespoons = 1 ounce



PROTECT THE BATHER

Spa Water Sanitization

Choose a Serena Spa® Program for You

Included in all Serena Spa® programs are sanitizers and shock/oxidizers. Sanitizers kill bacteria, and oxidizers remove residue and restore clarity and comfort. These products are essential in maintaining soft, soothing water, and ensuring the longevity of your spa.

NOTE: If your spa is equipped with an ozone generator or an ion device, you must refer to that care guide. Ozone and ionizers are supplemental treatments and are not "stand-alone" spa care programs.

Choice of Sanitizers

BROMINE PROGRAM

The preferred indoor* or covered spas program is "slow dissolving" Serena Spa® Brominating Tabs. They reduce odors and are effective over a broader pH range.

*Indoor spas must be placed in a well-ventilated room.

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SerenaSpa

SerenaSpa

CHLORINE PROGRAM

Our traditional Serena Spa® Granular Dichlor is an excellent sanitizing product for an immediate sanitizer reading. Chlorine also oxidizes organic material and undesirable compounds such as oils, cosmetics, perspiration, etc., from the water.

BROMINATING SANITIZER

Serena Spa® Brominating Tabs are an alternative to Chlorine. Hot tub owners prefer Serena Spa® Brominating Tabs over Chlorine because they are slow to dissolve and long-lasting. They work better in warmer temperatures and over a wider pH range.

> Add Serena Spa® Brominating Tabs as needed to an approved Bromine Floating Dispenser.

CHLORINE SANITIZER

Serena Spa® Granular Dichlor, a Chlorine Sanitizer, dissolves rapidly and will give you immediate Sanitizer residual. Chlorine also oxidizes organic material and undesirable erena)pa compounds, such as oils, cosmetics, perspiration, etc., from the water. Always maintain a constant Chlorine residual level of approximately 3 ppm and never exceed 5 ppm. Add Serena Spa® Granular Dichlor after each spa use.

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BROMIDE LIQUID SALTS



Serena Spa® Brom Bank for Spas is a clear solution of bromide salts which remain as a stable bank in the spa water. This product has no disinfectant qualities, and it is only when Serena Spa® Brominating Tabs are added that bromide is released into the water containing these products. This product should be added when the spa is filled and weekly thereafter to maintain a bank of bromide in the water. It is recommended to change spa water every 3 months or as needed to maintain water quality.

First treat the spa with **Serena Spa® Stain & Scale Preventer** according to its label directions. Then, add this product 4 ounces per 250 gallons of water directly into the spa. Circulate the spa water while adding this product to assure rapid and thorough distribution. Then add on a weekly schedule this product, 1 ounce per 250 gallons of water to maintain a sufficient bank of bromide in the water.

Test the bromide residual at least once every day with a bromide/pH test kit. The bromide residual must be between 1-3 ppm for residential spas and 3-5 ppm for commercial installations. Heavy usage or the length of time the spa is in use may result in depletion of bromide and require additional dosages of **Serena Spa® Brominating Tabs** and/or this product to maintain the desired bromide residual. NEVER mix any chemical with each other before adding to the spa water.



SALTS

Serena Spa® Spa Salts are specifically designed to work with spa saltwater purification systems. Enjoy the benefits of smoother, naturally softer feeling water! Consult the Spa Owner's Manual for saltwater spa chemical instructions.

Spa Water Shock

SHOCK - "Non-Chlorine Shock Oxidizer"

Serena Spa® Oxy Blast*, this Non-Chlorine, Shock Oxidizer is oxygen-based. It is not a Sanitizer nor an Algaecide and does not

destroy disease-causing germs or bacteria. It effectively eliminates contaminants and does not raise Chlorine levels or produce combined Chlorine. Gentle on spa surfaces. Add 2 ounces of Serena Spa® Oxy Blast* per 250 gallons of water after each use.

*Not available in California.

Note: Product images are for representation only. Color or size may vary.

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PROTECT YOUR INVESTMENT

Spa Water Balance



Serena Spa® Alkalinity - Designed to raise the Total Alkalinity of your spa or hot tub. Ideally, the Total Alkalinity should be between 80 and 120 ppm and pH between 7.4 and 7.6. **Serena Spa® Alkalinity** is fast-acting, 100% soluble, and helps to eliminate pH bounce.



Serena Spa® Liquid Calcium Balancer - Water hardness describes water's total amounts of Calcium. Serena Spa® Liquid Calcium Balancer is convenient for bringing water hardness into the acceptable range. Low hardness indicates improper water balance resulting in corrosion of spa equipment (for example, heaters) and spa surfaces.



Serena Spa® Borate Plus - Designed to be a spa water enhancement, this unique granular formulation locks in the critical pH and Alkalinity levels of spa water. Serena Spa® Borate Plus provides immediate benefits to the bather, such as reduced eye irritation, smoothness to the skin, and no itchy feeling when you exit the water. You will be impressed at the clean, sparkling water quality of Serena Spa® Borate Plus. This product helps to keep spa water perfectly balanced.

NOTE: Heavy bather loads may require occasional pH adjustments using Serena Spa® pH Up or Serena Spa® pH Down. Improperly balanced pH levels in spa water can lead to stains, scale, equipment corrosion, and skin and eye irritation.



Serena Spa® pH Down is designed to lower the pH of your spa or hot tub. Ideal pH should be maintained between 7.4 and 7.6.



Serena Spa® pH Up increases the pH of spa or hot tub water. Maintain the pH within the desired range of 7.4 and 7.6.

Balancing Your Water

Ideal levels for balanced spa water are:

- pH level is between 7.4 7.6.
- Alkalinity level is between 80 120 ppm.
- Calcium Hardness level is between 150 250 ppm.

RAISING pH

- 1. Test and determine the amount required.
 - a. If pH is between 6.8 7.2, the dosage is 1 ounce of **Serena Spa® pH UP** per 250 gallons of water.
 - b. If pH is less than 6.8, the dosage is 2 ounces of **Serena Spa® pH UP** per 250 gallons of water.
- Make sure spa pumps are circulating, then add the required Serena Spa® pH UP.
- 3. After one hour, test and add additional products if necessary.

LOWERING pH

If pH is above 7.8, refrain from entering your spa and perform the following instructions:

- 1. Make sure spa pumps are circulating.
- 2. Add only 1 ounce **Serena Spa® pH DOWN** per 250 gallons of water.
- 3. After one hour, test and add additional products if necessary.

RAISING ALKALINITY

- Test and determine the amount of Serena Spa® Alkalinity per product label instructions.
- 2. Make sure spa pumps are circulating and add Serena Spa® Alkalinity.
- 3. Test and add additional products if necessary.

RAISING CALCIUM / HARDNESS

- Test water to determine if you need to add Serena Spa® Liquid Calcium Balancer. Use test strips that include Hardness.
- One (1) ounce of Serena Spa® Liquid Calcium Balancer raises the hardness level by 15 ppm per 250 gallons of water.
 FOR EXAMPLE: To raise the Hardness level to 45 ppm in a 250 gallon spa, add 3 ounces.

The best time to assess your calcium level is when the water is cold and first filling. You can add up to 12 ounces at one time in cold water. For hot water, you should not add more than 3 ounces at one time. Each time you add **Serena Spa® Liquid Calcium Balancer**, you should wait a minimum of 30 minutes before adding the next dose.

NOTE: It can take up to 2 to 3 days to fully notice the results of adding **Serena Spa® Liquid Calcium Balancer**.

TOTAL DISSOLVED SOLIDS (TDS)

A Dissolved Solid is any chemical that remains after the water evaporates. **TOTAL DISSOLVED SOLIDS (TDS)** is the sum of all organic and inorganic materials dissolved in the water, representing a tiny part of the Saturation Index (SI). **TDS** will increase over time due to spa use.

How to tell if **TDS** is too high?

- Water may appear cloudy or hazy.
- Sanitizers will not work as efficiently.
- Foaming may be significant.

The ONLY option to correct TDS is to drain and replace water.

The maximum level is 1500 ppm above the start-up **TDS** level. Consult your professional for a **TDS** test.

WATER TEMPERATURE

Maximum spa water temperature is 104°F.

Once you have determined your preferred hot tub temperature, the best approach for the life of your spa, convenience, and energy efficiency, is to set at that temperature and keep it there.

BEST PRACTICES

Spa Water Maintenance





Serena Spa® Naturally Clear - Emulsifies and biodegrades contaminates commonly found in spas. Use weekly as a part of your routine maintenance program. Water is kept clear and odor-free. Natural enzymes emulsify and biodegrade contaminants, converting them into easy-to-remove compounds so the water and the filter will last longer between cleanings. Serena Spa® Naturally Clear works to remove organics before interfering with sanitizer performance. This boost in sanitizer effectiveness keeps spas and hot tubs safe while your spa experience improves. Add 1 ounce per 250 gallons of water once a week as part of your routine maintenance. You can use Serena Spa® Naturally Clear in hot tubs equipped with ozonators, ultraviolet and salt generators.



Serena Spa® Clear Blue - A cationic polymeric flocculant formulated to thicken and coagulate fine suspended solids from the spa. After adding Serena Spa® Clear Blue, these solids will be filtered out of the hot tub or collected on the bottom for removal. Serena Spa® Clear Blue helps clear cloudy water in spas and hot tubs. Use on start-up and once a week. The routine weekly dose is 1 ounce per 250 gallons of water.



Serena Spa® Foam Out - An exclusive formula that breaks up existing foam in spas, hot tubs, and whirlpools. Use Serena Spa® Foam Out whenever troublesome, unsightly foam develops. Quickly eliminates foaming. Compatible with other water treatment chemicals. Shake well and add 1 capful to the spa; wait 30 minutes and repeat if needed.



Serena Spa® Spa Recovery - Formulated especially for spas to remove phosphates from your spa water. This product will allow you to maintain a sanitizer level more quickly.

RECOMMENDED: Test source water at the same time.



Serena Spa® Total Tub Purge - Especially formulated to attack and eliminate the organic waste that adheres to the interior plumbing lines of the spa. **Serena Spa® Total Tub Purge** should be applied whenever you empty or refill the spa.

Spa Care Kits

Spa Start-Up Kits - Convenient, 30-day, essential water balance product supply with **Serena Spa® Spa Care Kits** to quickly get your spa up and running! Available in Bromine or Chlorine Sanitizer Programs.



Bromine Kit - Contents:

1 Brominating Tabs, 1 LB 1 Oxy Blast, 1 LB 1 pH Up, 1 LB 1 pH Down, 1 LB 1 Clear Blue, 16 OZ (1 PINT)

1 Foam Out, 16 OZ (1 PINT)
1 Stain & Scale Preventer, 16 OZ (1 PINT)

1-50 Count Test Strips

Bromine Kit

Chlorine Kit - Contents:

1 Granular Dichlor, 1 LB

1 Oxy Clean, 1 LB

1 Stain & Scale Preventer, 16 OZ (1 PINT)

1 pH Up, 1 LB

1 pH Down, 1 LB

1 Clear Blue, 16 OZ (1 PINT)

1 Foam Out, 16 OZ (1 PINT)

1-50 Count Test Strips



Chlorine Kit

BEST PRACTICES

Equipment Maintenance

Serena Spa® - Spa Care Made Easy

Spa care is made easy with preventative maintenance. Equipment maintenance best practices keep your equipment working efficiently as the manufacturer intended. Save money by lowering energy bills and extending the equipment's useful life. Spend more time enjoying your spa and less time worrying about repairs. Taking care of your spa system is as simple as regularly cleaning your spa filter. Filters perform the best filtration when maintained correctly, improving water quality, and keeping bathers and families safe.



Serena Spa® Cartridge Cleaner - This concentrated cleaning solution is designed to remove oils, grease, and soaps. This overnight soak, deep-clean system restores the filter to like-new condition. Cleaning your filter will reduce pump electricity costs and decrease the potential for bacterial growth. For use with Chlorine, Bromine, and Ozone-based Sanitizers.



Serena Spa® Instant Cartridge Cleaner - Easy to use, spray-on, let set 3-5 minutes, and rinse off; no soaking or scrubbing required! Our Serena Spa® Instant Cartridge Cleaner removes scum, oils, minerals, and scale from spa cartridges improving filter life and water clarity. This special liquid formula works in minutes so you can continue to enjoy your spa.



Serena Spa® Jet Line Cleaner - Clears spa and jetted bathtub plumbing of organics, oils, dirt, and minerals. Add Serena Spa® Jet Line Cleaner before draining the water to prevent buildup that can restrict water flow and damage equipment. This product is compatible with all sanitizers, including Chlorine, Bromine, Ozone, and Biguanide.

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Serena Spa® Stain & Scale Preventer - The water used to fill your spa may contain high amounts of metal that can stain or discolor your spa's surface. The presence of minerals can cause oxidizing and scaling on the shell's surface and erosion of the heater element. Serena Spa® Stain & Scale Preventer protects your spa from metal and mineral impurities found in spa water by suspending and inhibiting stain and scale-causing minerals. On start-up or initial fill, add 8 ounces per 250 gallons of water. When you add make-up water to your spa, you should add a maintenance dose of 2.5 ounces per 250 gallons of water.

Serena Spa® Cover Rejuvenator - Cleans, beautifies, and helps prevent fading and discoloration. Serena Spa® Cover Rejuvenator also waterproofs, leaving a protective silicone shield.

Keeping Your Filters Clean



- Regular filter cleaning is critical to keep water clear, clean, and healthy.
- Filter cleaning maintenance protects your spa equipment.
- Dirty filters can damage pumps and reduce water turnover, removal of oils and organic material, and water can become cloudy.
- When using your hot tub frequently or additional bather load, you should deep clean your filters every 3-4 months when you drain and refill.

SERENA SPA® PRODUCTS FOR FILTER CLEANING

Serena Spa® Instant Cartridge Cleaner - This easy-to-use product effectively gives you a clean filter BETWEEN your deep cleaning schedule. To use, spray Serena Spa® Instant Cartridge Cleaner on the filter cartridge,

then wait 3-5 minutes. With a garden hose, rinse thoroughly to remove the surface debris, oils, minerals, and scale from your filter cartridge. Reinstall filter cartridge(s).

2. Serena Spa® Cartridge Cleaner - This deep-cleaning, soak product provides a thorough breakdown and removal of all the body oils, grease, soap film, minerals, scale, etc., that your filter cartridge may have captured. You should deep clean your filters every time the spa water is drained and refilled. Mix 8 ounces for every 1.25 gallons of water required to immerse the cartridges fully in the solution. (A 5-gallon bucket requires 32 ounces.)

IMPORTANT

Always add Serena Spa® Cartridge Cleaner to water.

NEVER add water to Serena Spa® Cartridge Cleaner.

Rinse loose debris from cartridges before adding them to the solution. Make sure filters are fully submerged in the solution, allowing them to soak for 8 to 10 hours. Then remove cartridges and rinse thoroughly to remove any residue from the solution. For maximum filter efficiency, do not replace wet cartridges in the spa. Allow filter cartridges to air dry completely.

RECOMMENDATIONS

- 1. You can make filter cleaning even easier by keeping an extra set of spa filters, rotating them out at each drain, refilling, or filter cleaning. Simply set the freshly cleaned filters out to dry and always have a fresh filter to install in its place. No operational down time!
- 2. Frequency of spa usage, along with the average number of bathers, we recommend these maintenance schedules:

MODERATE USE: 3 times per/week with 1-2 bathers

- Use Serena Spa® Instant Cartridge Cleaner every 1 to 2 weeks.
- Use Serena Spa® Cartridge Cleaner every 3 to 4 months when draining and refilling your spa.

HEAVY USE: 5-7 times per/week with 3-4 bathers

- Use Serena Spa® Instant Cartridge Cleaner every week.
- Use Serena Spa® Cartridge Cleaner once a month.

SPA FACTS AND QUESTIONS

What Causes Foam in Spa Water?

Common causes of foaming are laundry soap residue on bathing suits and cleaning solution on filter cartridges that have not been thoroughly rinsed, along with deodorant, body lotions, and hair products. **Serena Spa® Foam Out** instantly eliminates these types of foaming issues. Other causes of foaming are high levels of TDS (Total Dissolved Solids - waiting too long to change your water), soft water, a high pH level, and poorly formulated chemical products sold at discount stores. These causes are only temporarily corrected by **Serena Spa® Foam Out**, but resurface again, until the root problem is corrected.

NOTE: Foaming will not harm you or your hot tub, but often the cause of foaming may have affected your sanitizer level, so test it after any high-level occurrence of foaming.

What is Scaling in the Water?

Scaling is precipitation (rough deposits) that forms on the internal spa components and the spa shell when they are in contact with water where the calcium hardness, pH, or Total Alkalinity is too high. The longer these deposits remain on the spa surface, the more difficult they are to remove. Since it is only the result of poor water maintenance or hard source water, any spa manufacturer's warranty is not covered.

Why is the Water Hardness Level Important?

The hardness of your water is determined by the calcium level. Too much Calcium (common in well water) could cause scaling. Too little Calcium could accelerate foaming. In spas, Calcium levels should be maintained between 150 – 250 ppm (whereas swimming pools maintain Calcium levels between 200 – 400 ppm).

To raise your calcium level, use **Serena Spa® Spa Care Liquid Calcium Balancer.** There are no chemical products available to lower your calcium level.
Either run your fill water through a water softener, drain 12" of water, refill and retest, or call for delivered water, but make sure the new water has a good hardness level. Correcting pH and Alkalinity levels and adding a mineral purifier will assist in preventing scaling but will not soften your water.

How Often Should I Change My Water?

It is recommended every 3 months, but it depends on how many chemicals you've added to your water. The more often you use your spa, the more chemicals you use, causing a high TDS (Total Dissolved Solids) level. Your chemicals become ineffective when your water is oversaturated with high TDS levels. Think

of continuing to add a teaspoon of salt to a cup of water. Each teaspoon raises the salt content, and at a certain point, your water becomes saturated, and the new salt merely settles at the bottom of the cup. LaMotte TDS Test Strips are the simplest method of knowing when to change your water. Remember to clean your acrylic shell with an approved, all-purpose cleaning product when you change your water.

How to Know When to Drain and Refill the Spa Water?

Draining and refilling the water is part of regular spa maintenance and depends on how often you use the spa. This simple formula can help:

Spa Gallons \div 3 \div Daily Bathers = Days Between Draining Example: 425 gallons \div 3 \div 1.5 Daily Bathers = 94 days **Note:** A bather is one person in the spa for 15-30 minutes.

Over time, the water absorbs and dissolves minerals, chemicals, and other soluble materials. Your **Serena Spa®** authorized dealer can perform a Total Dissolved Solids (TDS) test to help determine if it's time to replace your water. High TDS can make the water look dull, become foamy, and develop an odor.



TROUBLESHOOTING TIPS

C - CONCERN S = SOLUTION

CLOUDY WATER

- C: Inadequate filtration or dirty filter.
- S: Check that the filter is securely attached. Clean filter with Serena Spa® Cartridge Cleaner or replace the aging filter.
- C: Water is not balanced.
- **S:** Test water with a Test Strip. Adjust Sanitizer, pH, Alkalinity, and Calcium levels as needed.
- C: Unfiltered particles or chemically saturated water.
- S: Use Serena Spa® Clear Blue to combine particles. If the condition persists, drain the spa, clean, and refill with fresh water.

CHEMICAL ODOR

- C: Build-up of chloramines/bromamines (by-products of sanitizer) in the water.
- S: Shock water with Serena Spa® Oxy Blast, then test and adjust sanitizer level.

MUSTY ODOR

- C: Not enough sanitizer in water, bacteria present in water.
- S: Add Serena Spa® Granular Dichlor or Serena Spa® Brominating Tabs as necessary and Shock with Serena Spa® Oxy Blast.

 Readjust sanitizer level if necessary.

FOAMING

- **C:** High concentration of body oils, lotions, or detergent in swimsuits, as well as excess contaminants.
- S: Use Serena Spa® Foam Out as needed. For long-term prevention, use Serena Spa® Naturally Clear weekly.

GREEN WATER (ALGAE)

- C: Low Sanitizer level.
- S: Adjust pH with Serena Spa® pH Up or pH Down. Add Serena Spa® Granular Dichlor to Sanitize. Clean spa filters. See Monthly Maintenance on the reverse side of card.

NON-MATCHING pH TEST COLOR

- C: Sanitizer level is too high. (See too much Sanitizer.)
- S: Test pH again when Sanitizer level is below 5 ppm.

FAILURE TO GET SANITIZER READING

- C: Sanitizer level is too low.
- S: Add Serena Spa® Granular Dichlor, Serena Spa® Brominating Tabs, or Serena Spa® Salt, until the Sanitizer level tests in the recommended range.
- C: Algae is present.
- S: Dirty water will consume the Sanitizer as soon as it is added. Add more Serena Spa® Granular Dichlor until the Sanitizer level stays in the recommended range.
- C: Test Strip remains "white" even after Sanitizer has been added.
- **S**: Sanitizer level is extremely high. It can bleach the reagents on the Test Strip and give a false reading. (See below.)

TOO MUCH SANITIZER IN THE WATER

- C: Too much Sanitizer has been added or dispensed into the spa.
 NOTE: DO NOT use spa until the Sanitizer level registers below 5 ppm.
 Test water with a Test Strip until the desired level has been reached.
- **S1:** Activate jets with the air control open. Allow jets to run for 15 minutes.
- **S2:** Drain half (1/2) of spa water and refill with fresh water.
- **S3:** Sodium Thiosulfate "neutralizes" Chlorine and Bromine. Use ONLY if your time is limited. Follow manufacturer's instructions very carefully.

EYE OR SKIN IRRITATION

- C: Contaminants or excessive amounts of chloramines/bromamines in water.
- S: Shock water with Serena Spa® Oxy Blast. Adjust Sanitizer level.
- C: pH level is low.
- S: Adjust pH with Serena Spa® pH Up or pH Down.

CORROSION OF METAL

- C: Low pH level.
- S: Adjust pH with Serena Spa® pH Up or pH Down.

SAFETY TIPS

IMPORTANT FOLLOW PRODUCT LABEL INSTRUCTIONS

Always read labels and follow directions carefully. When used correctly, spa water maintenance products safeguard the health of your bathers. When misused, they can be hazardous. Keep the following DO'S and DON'TS in mind for a safer, more enjoyable spa environment.



- Clean up spills as soon as they occur and safely dispose of the material.
 Contact your Serena Spa Pool & Spa Care authorized dealer for advice on cleaning spills. It's hazardous to throw chemicals into the trash or put spilled material back into the original container. Keep all spills away from lawns and landscaping to avoid damage. Dispose of all chemicals according to label directions.
- Store chemical products safely and out of the reach of small children and pets. Keep your spa maintenance products in a cool, dry, well-ventilated area, away from other household or garden chemicals and petroleum products.
- Keep chemical product containers tightly closed when not in use.
- Brace liquids so they won't tip while transporting them in your car. Don't
 allow chemicals to stay in the car for a long period. Make the spa store your
 last stop. Unpack them as soon as you get home.
- Wear protective equipment (safety glasses, rubber gloves, etc.) as directed on the product's label.
- Use care when broadcasting powdered products into the spa on windy days to prevent the product from getting in the eyes, mouth or onto the skin.



- **NEVER** mix chemicals of any kind. An uncontrolled reaction such as fuming, fire, or explosion could occur. Always add maintenance products to the spa water separately and in different areas.
- **NEVER** mix two chlorine products from different containers together, regardless of their similarities. All chlorine is NOT the same.
- **NEVER** add water to chemicals. Always add the chemical to large amounts of water.
- **NEVER** inhale fumes or allow products to get in your eyes, nose, or mouth. When opening a product, turn your face to one side or point the container away from you.

IMPORTANT

In the event of accidental contact or if the product is swallowed, follow emergency advice on the product label and call your doctor and/or your local **Poison Control Center at**

(888) 875-1685
FOR EMERGENCY MEDICAL TREATMENT INFORMATION.

- **NEVER** smoke around chemicals. Some chemical fumes can be highly flammable, and a lit cigarette or match can ignite sanitizers or oxidizers.
- **NEVER** interchange measuring scoops or place wet scoops back into any chemical container.
- **NEVER** store liquids directly above sanitizers and oxidizers. They may accidentally leak and contaminate other products.
- **NEVER** store spa sanitizers and oxidizers near metal products like bicycles, lawnmowers, cars, etc., because they may cause rust.

SPA TERMS

Get to know spa-related terms so you can talk with your Serena Spa® Dealer and better understand how your spa works.

AERATION: Process of mixing air and water. In a spa, this can happen two ways: 1) Using an air blower to force air into an air channel or through the spa jets. 2) Venturi Air Controls allow air to be pulled into and mixed with the water in the spa jet.

AVAILABLE CHLORINE: The amount of hypochlorous acid (the active form of chlorine that does the work) a chlorinating product produces; is also referred to as Free Available Chlorine in the water.

BALANCED WATER: Pool or spa water with a proper pH and the appropriate mineral content to prevent corrosion and scaling.

BROMINE: A member of the halogen family is commonly used as a sanitizer or disinfectant to destroy bacteria and algae. It is resistant to heat and rapid pH fluctuations.

BUFFER: Chemicals that serve to prevent fluctuations in pH.

CLARIFIER: A coagulant gathers tiny particles together to filter them out much easier.

CORROSION: Etching, pitting, and other destructive erosion of the spa surfaces and equipment due to low pH or chemical imbalance.

FILTER ELEMENT: Device (cartridge) within a filter housing designed to remove suspended debris from the water.

MAKE-UP (FILL) WATER: Freshwater, also known as source water, is used to fill the spa.

pH: Measurement that indicates the acidic or basic nature of a solution. It is measured on a scale from 0 to 14. Refer to chart on page 4 for acceptable ranges.

PPM: Parts per million.

PUMP: This motor-powered device creates pressure and water flow by spinning an impeller for circulation through the filter and heater.

SATURATION INDEX (SI): Numeric value indicating whether water is scale-forming or corrosive. It factors pH, total alkalinity, calcium hardness, and water temperature. The ideal range is between -.3 and +.3. Not applicable to spas using Spa Sentry.

SCALE: Mineral deposits—usually calcium carbonate—form on spa surfaces and equipment due to excessive Calcium in the water. Scale is more likely to form in heated water if proper water balance is not maintained.

SHOCK TREATMENT: Add an oxidizing compound to destroy nitrogenous and other undesirable compounds.

SKIMMER: Device in the spa that continuously pulls in surface water and floating contaminants removed by the filter. Use a hand skimmer net to remove floating debris from the water manually.

SUPER-OXIDATION: Apply large quantities of oxidizing compounds to destroy chloramines, ammonia, and other oxidizable compounds. It also gets rid of odors and cloudy water and is used for maintenance.

TOTAL ALKALINITY (TA): The amount of alkaline components in water. TA acts as a buffer against rapid pH fluctuation.

TOTAL DISSOLVED SOLIDS (TDS): Measure the amount of dissolved matter in the water. High TDS (2,500 ppm and higher) can interfere with the sanitizer's ability to combat bacteria growth. Drain and refill your spa if the TDS level is above 2,500 ppm.

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