

BROMINE: Start-Up & Maintenance Instructions

Testing pH & Alkalinity

Proper Balance: pH 7.2 – 7.8 PPM; Alkalinity 80-120

- Test pH & Alkalinity using test strips at initial start-up and at least once weekly. Keeping pH & Alkalinity in balance is important for several reasons:
 - Low pH & Alkalinity can cause burning eyes and corrosion of the spa equipment.
 - High pH & Alkalinity can cause scaling and build up on the spa shell and equipment.
 - Add “**pH & Alkalinity Up**” as needed to raise the pH and Alkalinity to the proper levels.
 - Add “**pH & Alkalinity Down**” as needed to lower the pH and Alkalinity to the proper levels.
 - **For best results, always balance Alkalinity first then add sanitizer.**

Testing Bromine

Proper Balance: Bromine 1-4 on PPM on the test strip.

- Test Bromine levels using Bromine specific test strips, 24 hours after spa is first heated. Keeping Bromine at a proper level is important, because it is a sanitizer. **(It kills bacteria that may be present in the water and makes your spa safe for use).** Over time Bromine will lower the pH and Alkalinity levels.
- Add enough Sodium Bromide to establish a Bromide reserve in the water **(The amount required depends on size of spa. See Sodium Bromide bottle or packet for directions).**
- Add Bromine tablets as needed to maintain proper levels. The amount required varies depending upon several factors:
 - **Bather load:** Number of people who use the spa, and how often they use it. More people using the spa means more sanitizer is needed.
 - **Temperature:** Bromine is used up more quickly at higher temperatures.
- Alternative purification units: **Ozone, ClearRay, Spa Mineral Cartridges Formulated for Bromine;** these all reduce the amount of Bromine that will be needed in the spa.

Spa Defender/Spa Stain & Scale Defense

Add once per week on a day when not adding clarifier or enzyme cleaner. Follow the manufacturer instructions on the bottle. This product is used to prevent staining and mineral build up on equipment and the walls of the spa. It isn't required, but is highly recommended for hard water or water from a well.

Oxidizer/Shock Product

(Shock, Oxidizer, or Renew) **Add 2-4 ounces - once or twice per week.** It oxidizes by-products of Bromine (Bromamines). Carefully read and follow manufacturer instructions on the bottle.

Metal Protector

Add when filling the spa with fresh water. Use it only at start-up. It precipitates metals such as Iron, Zinc, Copper, and Magnesium. This is important for both the protection of the equipment as well as the effectiveness of the sanitizer.

Clarifier

Add 2 ounces as needed, on a day when oxidizer/shock isn't being used. This product is used to keep spa water sparkling clear. It works by coagulating oils and microscopic particles into larger particles so the filter can remove them.

Replacement of Spa Filter

This should be done every 12-18 months. Filter longevity is affected by how well it is maintained, proper water balance, bather load, etc. Having 2 filters and rotating them between cleanings to maximize their longevity is recommended.

***Note: Some filters may need replacement every 3-4 months (ProClarity®, MicroClean®, or MicroFiber Filters).**

ADDITIONAL SPA MAINTENANCE PRODUCTS

Mineral Purifier Cartridge

Mineral Purifiers decrease the amount of Bromine required. Mineral Purifier cartridges lose their effectiveness after 4 months. **Cartridges need to be replaced every 4 months** or more Bromine will be required to sanitize the spa water. Properly install the cartridge into the filter (or filter compartment) according to the instructions. ***Some mineral cartridges cannot be used with Bromine.**

Defoamer

Use as needed to control foam. Spa water may occasionally get foamy as a result of having too much chemical build-up or presence of soap products in the water. Laundry soap and body soap residue may come off in the spa water and cause foam build-up.

Cover Care with 303 Protectant

Hose the spa cover down once per month and treat it with 303 Protectant or another non-petroleum distillate cleaner made for vinyl. Taking care of the spa cover will increase its longevity. Sun exposure and other chemicals cause the vinyl on the cover to fade and deteriorate. Average life expectancy of a spa cover is 3-5 years.

Filter Cleaner

Use this product twice per year. Always air-dry your filter before replacing it in your spa. Using a filter cleaning solution every 4-6 months will increase the effectiveness of the spa filter. Soaking the filter in solution loosens dirt, oil, and grime that won't come off in normal rinsing. ***DO NOT RINSE OR CLEAN MICROFIBER FILTERS. THESE FILTERS DO NOT REQUIRE CLEANING AND ARE REPLACED ON A MORE FREQUENT BASIS. SEE MANUFACTURER RECOMMENDATIONS. NORMAL LIFE FOR MICROFIBER FILTERS IS 3-4 MONTHS.**

CHEMICAL USAGE CHART

Chlorine Procedure		Start-up	Day 1	Day 3	Day 5
✓	Test pH/ Alk: - (pH 7.2-7.8; Alk 80-120)	✓	✓	✓	✓
✓	Add Sodium Bromide	✓			
✓	Add Metal Protector/Stain & Scale	✓			
✓	Add Bromine Tablets	✓			
✓	Add Shock (Oxidizer, or Renew)	✓			

Maintenance Procedure

WEEKLY

✓	Add Shock (Oxidizer, or Renew)	✓	Add Stain & Scale Defense
✓	Add Bromine Tablets		

AS NEEDED

✓	Add Defoamer	✓	Add pH/Alk Up
✓	Add Clarifier or Defender*	✓	Add pH Down

MONTHLY

✓	Rinse Filter (except Microfiber Filters)	✓	Treat Cover w/ cleaner (303 Protectant)
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CHEMICAL PRECAUTIONS

1. Allow at least 30 minutes for all chemicals to dissolve and disperse and then retest your spa water before using.
2. Read all chemical labels prior to use.
3. When diluting, do not mix chemicals. Reactions may occur which generate heat and give off noxious, irritating fumes.
4. When diluting, always add chemicals to the water; NOT water to the chemicals.
5. Accurately measure the quantity of chemicals called for on the label. Overdosing could damage your spa and make the water irritating to the body.
6. Store chemicals in a cool dry location. Keep containers closed when not being used.
7. Do not let chemicals contact eyes, nose, or mouth, and do not inhale fumes.
8. In case of a reaction due to physical contact or if a chemical is swallowed, follow the emergency directions on the label. Call your doctor if necessary.
9. Use appropriate protective gear when applying chemicals.
10. Clean up any chemical spills immediately.
11. Keep all chemicals out of the reach of children.
12. **CAUTION: Use of Pool chemicals in a spa may cause irreversible damage to spa surface and equipment. Only use products formulated specifically for Spas and Hot tubs.**