

Keeping Your Hot Tub Clean

Hot Tub Chemicals:

Sometimes dealing with the chemicals that are required to keep your hot tub water clean and well maintained can be a bit confusing. Relax. You don't need an advanced degree in organic chemistry. Here's a primer that will help clarify the things you need to do to continue enjoying your hot tub in a safe, healthy manner.

An Introduction to Sanitizers

Sanitizing your hot tub water is the most important maintenance you can do for yourself. Why? Sanitizers kill the bacteria that can grow in warm water. Here's a quick rundown on the different types of sanitizers:

Chlorine:

You're probably familiar with chlorine as the primary sanitizer used in pools. Chlorine can be used in a different concentration in hot tubs. There are chlorine tablets and chlorine granules created specifically for hot tub use.

Bromine:

Bromine can be added to a hot tub in the form of tablets, nuggets or granules. One form is sodium bromide, which needs to be activated with an oxidizer such as chlorine or Potassium Monopersulfate (non-Chlorine) shock. Another bromine product is BCDMH, which is a self-activating chlorine bromine combination. Many people choose bromine over chlorine because bromine is an effective sanitizer in hot tubs as it doesn't "gas off" at temperatures higher than 98 degrees and produces fewer odors than chlorine. Bromine works in a wide range of pH levels. Bromine is generally distributed through a floating feeder or cartridge system.

Biguanide:

Biguanide (bi-gwan-eyed) sanitizers are a non-chlorine, non-bromine product that kills bacteria by attacking the cell wall. The elimination of organics is accomplished with a hydrogen peroxide-based oxidizer used to "burn" off the organic matter and keep the water clear. This system produces fewer odors than chlorine or bromine and does not "gas off" at spa temperatures.

Ozone:

Ozone is an oxidizer and not a sanitizer, but it reduces the work of the sanitizers and lowers the level of sanitizers needed in the spa to keep it clean. The ozone process requires that your hot tub is equipped with a piece of equipment called an “ozonator.” Even if you have an ozonator, you will need to supplement your water with a low level of sanitizer like bromine or chlorine. (Don't let anyone tell you otherwise. The idea that a hot tub can be thoroughly sanitized with ozone alone is a myth.) Ozone is compatible with bromine, chlorine, biguanide and mineral systems.

Mineral Spa Care:

You can use mineral systems to assist, but not entirely replace, your sanitizers in keeping your hot tub clear of contamination. Mineral cartridges are typically placed inside your filter cartridge or are contained in a floating dispenser through which the sanitizing minerals are slowly released into the water over time. Many people prefer to use mineral sanitizers because of the lower levels of chlorine or bromine.

NOTE: Before adding any sanitizing agent to your hot tub, you must first test the current levels by using a test strip. Test strips are easy to use and formulated to measure the level of bromine, chlorine, biguanide or mineral content in your hot tub water along with your pH levels and calcium levels. Depending on your sanitizer, you should add sanitizing agents as indicated by the test strip and the instructions on the sanitizer you are using.

Changing Your Water

Be sure to **CHANGE YOUR WATER** about every 60 to 90 days depending on the amount of use of your hot tub. No amount of chemical additives can protect you completely in water that is old and dirty. You wouldn't wash your dishes in year-old dishwater would you? Changing water is a simple task and you, your family and guests will be glad you did.

Other Important Stuff

The following items are important, just not as important as your sanitizer.

Shock Oxidizers:

This is a very useful product that oxidizes the water and helps to get rid of organic matter like dead skin, skin oils, cosmetics and lotions. Shock oxidizing your hot tub once a week starves

bacteria and helps prevent cloudy water and a clogged system. It's much better than the shock you can get from the expense that comes with not using it and creating bigger maintenance problems

There are two types of shock, non-chlorine shock and chlorine shock. Both work as a good maintenance product to oxidize your spa.

For fresh water fills, use a chlorine shock. Chlorine shock is a sanitizer and will leave chlorine residual, which is critical to a clean, safe spa. A non-chlorine shock works great once you have an established a residual of chlorine or bromine in the spa as it can oxidize organics in the water without increasing your sanitizer residual. It also allows you to use the spa soon after treatment. Be sure to follow chemical manufacturers' instructions for proper use.

Neither chlorine nor non-chlorine shocks are compatible with a biguanide system. The biguanide system uses a hydrogen peroxide oxidizer to eliminate organics and does not require shocking to maintain sanitizer efficiency.

pH:

OK, let's start with the obvious question. What is pH? Water pH is a measurement of the concentration of hydrogen ions in your hot tub water. Without getting into a freshman chemistry lesson, let's just say that pH is important because if you don't keep the pH levels within a small range (7.2-7.8), your water can become too alkaline or too acidic. If your pH is too low (less than 7.2), the water is too acidic and it can corrode parts of your hot tub and irritate parts of yourself (like your skin). If your water is above 7.8, it is too alkaline which can cause "scaling" from minerals and metals in your water forming deposits and possibly stains on your hot tub's acrylic surface. So, how do you know if your pH is in the right zone? First you need to test your water using a test strip. Then, use pH additives to achieve the right pH balance. When you change your water, you can add a pH product that will help prevent you from having to use any pH balancing agents until the next time you change your water.

More Useful Information

So far we've covered the most important stuff, sanitizing, shocking and pH balancing but here are some other situations to be aware of:

Calcium Hardness:

If you live in an area with particularly "hard" or "soft" water, it's worth checking your water calcium levels with your test strip and adjusting them if necessary. You can adjust your calcium levels up with a calcium increaser for water that is low in calcium. If the calcium level is too

high you can adjust the pH and alkalinity to their lower ranges to help avoid cloudy water and scale.

Alkalinity Control:

Total alkalinity refers to the ability of the water to resist changes in pH. Controlling alkalinity can help keep your pH in the appropriate range thereby lessening the need for pH balancing. If your test strip indicates a need, you can lower alkalinity using a pH reducer (just like lowering your pH only you'll use more of it). Or, if you need more alkalinity, you can use an alkalinity increaser.

Heavy Metal:

Some local water contains unusual amounts of iron or copper. A greenish tint in your water may indicate the presence of these metals. If this is the case in your area, resist the temptation to file for mining rights. These pesky metals can, among other things, stain your hot tub shell, increase your sanitizer consumption or foul your tub's water heater. Fortunately, you can control metals by using an additive when you change your water.

Follow the manufacturer's instructions when using metal-removing products. You will probably need to add this product each time you add make-up water or refill your hot tub. Be sure to clean your filter after using the product or you may have to use a metal removing product on a weekly basis.

Cleaning Your Hot Tub

Cleaning Your Hot Tub Filter:

As mentioned in our Hot Tub Filters section, it's highly important to keep you hot tub filter clean and it's something you should do at least monthly. We recommend that you clean your filter with a good specialized hot tub filter cleaner a few times before it gets so bad you need to toss it out.

Preventing the Dreaded Hot Tub Scum Ring:

The first line of defense is regular water replacement and proper sanitation. A scum prevention product can also be used to help prevent the build-up of oils and greases on the water surface that combine to form the dreaded scum ring. If it's too late and you're already a scum victim, use a multi-purpose spa surface cleaner and a cleaning pad that will not scratch the acrylic surface of your tub.

Cleaning Your Hot Tub Cover:

Use a cover care product at least once per month. Find one that has UV protection and is good for cleaning and conditioning your cover.

Putting It All Together

We hope our “Hot Tub Chemicals” has cleared up a few things for you. The main thing is to be aware of the fact that a hot tub does not maintain itself. It's up to you....