

## **Shocking your pool is Step 2 in good pool care.**

**Shocking is as important as regular sanitizing with chlorine or bromine (step 1) and adding algaecide (step 3). All pools need to be shocked on a regular, weekly or bi-weekly basis. Period.**

Shocking your pool weekly helps rid the pool of organic & inorganic wastes such as sweat, cosmetics, suntan lotions, body oils, urine, contaminants brought in by rain or wind or even fresh water that is added to top off or fill the pool.

Proper shocking helps ensure that the sanitizer (chlorine or bromine) can concentrate on killing bacteria & algae rather than having to fight these other foreign materials.

When a pool is properly shocked, the pool stays cleaner & actually sparkles, and is less prone to algae blooms and cloudy water.

An added bonus is that you will use LESS chlorine over the course of the average swimming season.

Shocking should be done at least every week or 2 weeks from pool opening to pool closing depending on use & current conditions.

But there's more to it! Are you shocking, trying to reach "break-point" chlorination or curing a chlorine demand?

This brochure will help to explain the differences between the 3 needs and the various products used to do the job right.

## **When shocking your pool, always...**

1. Use the full dose or amount of shock needed. Don't skimp!
2. Do not use the pool until the chlorine level returns to 3.0 ppm or less. (bromine 6.0 ppm or less)
3. Make sure that the filter system is operating properly.
4. Remove the solar blanket or automatic pool cover to allow oxidized wastes to "gas off" and away from the pool water.
5. Shock the pool the evening before a party and immediately after the party to maintain sparkling, clear water. In this case a slightly higher chlorine level will help bathers with added protection from bacteria.
6. Shock the pool after heavy rain storms.
7. Be sure to rinse out and properly dispose of empty shock bags, bottles or containers.
8. Brush the pool to help distribute the chlorine to all levels of the pool water.
9. Follow all label instructions.

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# **When Shocking your pool means more than just Shocking your pool.**

**Important information for all swimming pool owners using chlorine or bromine as the primary sanitizer.**



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"Make life simple. Make life better."

## Regular Shocking.

“Regular Shocking” is just that. The pool is otherwise clean & clear. Algae is under control. There is no haze to the water. When you test the water (done twice each week), the Total Chlorine level is equal to the Free Available Chlorine (FAC) level. There are no Chloramines (chlorine combined with swimmer and organic waste) present.

Regular shocking should be done once every 1 to 2 weeks from the time you open the pool until closing or winterizing.

Regular shocking oxidizes swimmer and organic wastes that accumulate in the pool water over time. These wastes include sweat, urine, lotions, cosmetics, “stuff” that is introduced from the wind & rain. More recently, there is a concern for “stuff” or wastes that are brought in from normal “top offs” of municipal (tap) water or well water.

These wastes contribute to red, irritated eyes, hazy water, algae growth, and water that smells like it has “too much” chlorine. Actually there is not enough FAC.

Shocking helps to “re-chlorinate” the chlorine.. A properly treated chlorine pool should smell fresh and be sparkling in appearance.

Mono-persulfate shocks are OK to use from time to time to oxidize wastes, but chlorine shocks such as Cal-hypo or lithium are the preferred product. Liquid shocks? Sorry, but they are just not strong enough (11% versus about 50% available chlorine). Household bleach? Save it for the clothes in the laundry! Would you use pool chemicals to wash your clothes?

**Typical doses:** BioGuard® Burn Out® Extreme: (cal hypo) 1 bag per 10,000 gallons (or any part of) every week or 2 depending on weather and usage. BioGuard® Burn Out® 35 (lithium): 1 bag per 6,000 gallons (or any part of) every week or 2 depending on weather and usage. 1 bag = 1 pound.

## “Break-point” or super-chlorination.

The need for “break-point” or super chlorination occurs when there is a build-up of chloramines or combined chlorine in the pool water. Chloramines are a combination of chlorine and usually nitrogen. When the chloramine situation becomes “bad” it is because hydrogen has combined with the nitrogen to form ammonia. Chloramines can and do contribute to algae blooms and cloudy water.

The more chloramines present, the more dull the water becomes. The pool doesn’t sparkle as it should. The added nitrogen becomes food for algae. The water smells like there’s too much chlorine, but the actual FAC (the chlorine that is killing bacteria) is low or maybe even zero!

Here’s an example: The total amount of chlorine in the pool is 2.0 ppm but the FAC is 1.0 ppm. That means there is 1.0 ppm of chloramines. Chloramines must be completely destroyed or they will produce MORE chloramines and the situation will worsen.

When treating chloramines, it’s an “all or nothing” proposition.

In cases of very high chloramines, it is often a good idea to use a mono-persulfate shock (MPS) which will break up most if not all of these nitrogen bonds without adding more chlorine to the pool. This is good to do in cases where the FAC is over 1.0 ppm.

If your pool has less than 1.0 ppm FAC and lots of chloramines, follow that MPS shock with a solid chlorine shock of Cal-hypo or lithium shock.

To reach break point, 10 times the amount of chloramines present must be reached to destroy the chloramines. In the example above, you would need to reach 10 ppm of FAC to reach break-point!

**Typical doses:** Double or Triple the amount of regular shocking.

## Chlorine Demand.

These are the typical symptoms if your pool has a chlorine demand problem: an inability to hold or maintain a normal Free Chlorine residual (1.5 ppm or higher) over several days, cloudy or hazy water, visible algae that just won’t clear up.

Behind the scenes, there are most likely chloramines that are combining and re-combining due to inadequate shock treatments. When “break-point” is not reached, chloramines recombine with a vengeance & become more difficult to destroy.

Treating a chlorine demand is similar to break-point chlorination except that the stakes are higher. Treatment must be complete and done at ONE time. It’s like long-jumping the Grand Canyon; you must do it in one jump. You can’t be short!

Most people don’t know that their pool has a chlorine demand problem until they have shocked & shocked & shocked and nothing has happened. The water won’t clear. The algae persists. A solid chlorine level is almost impossible to maintain.

Even a clear pool can have a chlorine demand. If the pool can’t hold chlorine, yet the water balance (pH, total alkalinity & calcium hardness) is good and proper, then a chlorine demand exists.

The best way to determine a chlorine demand is to perform a chlorine demand test. The BioGuard® Accu-Demand 30 is one of the most accurate methods for chlorine demand testing. The test takes about one hour. In extreme cases, the test may call for shocking the pool with up to 75 lbs of shock in a 20,000 gallon pool. Don’t be “shocked”!

**The good news:** once the chlorine demand is met, it is met. The pool will normally stay in great condition for weeks or months on end. But remember, shock your pool weekly or you could be back to a break-point or chlorine demand situation.

**Prevention is always the best solution.**