



ALGAE PREVENTION and CONTROL



Algae prevention and control



WHAT IS ALGAE?

- Microscopic aquatic plants
- Needs water, warmth, sunlight and nutrients

What is algae? Algae are single-celled aquatic plants that can grow on pool surfaces or float freely in the water when conditions are favorable. It needs water, warmth, sunlight and nutrients to grow.



SOURCES OF CONTAMINATION

- Wind and rain
- Leaf debris and dirt
- Contaminated swimsuits and equipment



Some sources of contamination are wind and rain, where algae spores can be carried into the pool, from leaf debris and dirt, and from contaminated swimsuits and pool equipment.



IDEAL CONDITIONS FOR GROWTH:

- Poorly sanitized water
- Areas of poor circulation
- Improper filtration
- Damaged, worn pool surface

Ideal conditions where algae can grow are in poorly sanitized water, in areas of the pool where circulation is poor, where improper filtration is concerned, and from damaged and worn pool surfaces. Once algae spores get into the pool they can activate and grown so quickly that a bloom can occur in the pool in less than a day.



WHY ALL THE FUSS?

- Indication of poor maintenance
- Clouds water, discolors pool surfaces
- Clogs filter elements
- Consumes chlorine, harbors bacteria

So why the fuss, and why do inspectors frown upon algae in a pool? This could be an indication of poor pool maintenance. Algae isn't harmful to swimmers, but it may cloud the water, discolor or even damage the pool surface. It can clog filter elements, decreasing the filter effectiveness. Most importantly, it consumes the chlorine that should be working on pathogens. Large spots of algae may also provide shelter for bacteria.



TYPES OF ALGAE

- Green algae
- Yellow (mustard) algae
- Black algae
- "Pink algae"

There are thousands of varieties of algae, but the four types you will encounter in a pool are green, yellow, black and pink algae.



GREEN ALGAE

- Free floating or stuck to walls
- Easy to remove with brushing
- Easy to kill

Green algae is very common. It can be free floating, creating a pea soup appearance to the water, or it can stick to the pool walls. It brushes off easily and is easy to kill with superchlorination. You can eliminate it completely with one treatment.



YELLOW ALGAE

- Mold-like fuzz on walls and floor
- Brushes off easily
- Difficult to kill
- Recurrence common

Yellow algae is more commonly referred to as mustard algae. It's typically seen as a yellow fuzz, especially on the more shaded walls of the pool. It's commonly seen on ladder caps and in step corners first. Brushing alone won't get rid of it; it will brush off easily but will reappear quickly if it's not properly killed. It is resistant to normal chlorine levels and superchlorination is needed to totally eliminate it.

BLACK ALGAE

- Raised masses on walls and floors
- Difficult to eliminate
- Scrubbing is a must
- Can be destructive to pools



Black algae is actually blue green in color, and it can be a nightmare in terms of expense and labor to finally get rid of a bloom. Black algae has a tough outer shell, called a spore cap, that shields it from chlorine. This means that it is very difficult to eliminate without proper scrubbing. Scrubbing will open the spore cap, allowing algaecides to penetrate the plant and kill it. Scrubbing it with a stainless steel brush, except on fiberglass, may work, or you can use scuba gear and a pressure washer to attack it. You can also take a trichlor tab and a clamp and attach them to your skim net pole to use as a scrubber. If neglected, black algae will grow deep into the pool plaster, and possibly into the pool shell itself, making total elimination impossible. In severe cases, an acid wash or even resurfacing is the only solution to getting rid of black algae.



“PINK ALGAE”

- Pink streaks in gutters and walls
- A harmless bacteria
- Easily eliminated

Pink algae shows up in gutters and on walls as pink streaks. This is not actually algae, but a colony of harmless bacteria. It is easy to eliminate because it is susceptible to normal levels of chlorine.



This is an example of a pool with a severe green algae bloom.



Here is a pool so full of algae that there are tadpoles living in the pool.



REMOVING ALGAE

- Treat in the evening
- Close the pool, turn off pumps
- Treat with 30 ppm chlorine

How do you get rid of algae in a pool? It is recommended you treat the pool in the evening when the water is cooler, the swimmers are out and there is no sunlight to interfere with chlorine levels. Make sure you close the pool and turn off the pumps. Chlorine is an excellent algaecide.....if this is your treatment of choice you want to shock the pool at 30 ppm.



30 ppm SHOCK TABLE

% Available Chlorine	Volume of Water (gallons)						
	250	400	1000	5000	20000	50000	100000
5	2.36 cp	1.89 pt	2.36 qt	2.95 gal	11.8 gal	29.5 gal	59.0 gal
10	1.18 cp	0.94 pt	1.18 qt	1.48 gal	5.90 gal	14.8 gal	29.5 gal
12	0.98 cp	0.78 pt	0.98 qt	1.23 gal	4.92 gal	12.3 gal	24.6 gal
35	2.86 oz	4.58 oz	11.4 oz	3.57 lb	14.3 lb	35.6 lb	71.5 lb
60	1.67 oz	2.67 oz	6.67 oz	2.08 lb	8.34 lb	20.8 lb	41.7 lb
65	1.54 oz	2.46 oz	6.16 oz	1.92 lb	7.70 lb	19.2 lb	38.5 lb
90	1.11 oz	1.80 oz	4.45 oz	1.39 lb	5.56 lb	13.9 lb	27.8 lb
100	1.00 oz	1.60 oz	4.00 oz	1.25 lb	5.00 lb	12.5 lb	25.0 lb

This chart helps you to determine how much chlorine you need to shock your pool at 30ppm. Let's say you're going to use trichlor granules because they have 90% available chlorine and you have a 20,000 gal pool. The chart shows that you need 5.56 pounds of trichlor to shock the pool to get rid of the algae bloom.



REMOVING ALGAE

- Brush walls vigorously
- Let sit overnight, brush again
- Vacuum to waste
- Clean filters, balance water

To remove an algae bloom, you can broadcast the chlorine granules like fertilizer over the pool. Brush the walls vigorously, and if you plan on using scuba gear to brush black algae from deep areas, make sure to do so before you add chemicals to the pool. Let it sit overnight, then brush it again. Vacuum any algae corpses to waste or brush it into the main drain, and be sure to clean your filters and balance your chemicals before reopening the pool.



ALGICIDES

- Chlorine or bromine compounds
- Quaternary Ammonium (QUATS)
- Cationic polymers (Polyquats)
- Metal ions

There are a number of algaecides on the market these days. Free active chlorine is the most cost effective and reliable way to treat algae. Some alternatives include quaternary ammonium, or QUATS, which is inexpensive but tends to foam; cationic polymers or polyquats, which are effective and don't foam but are expensive; and metal ions which are largely unused because they can stain walls.



ALGAE PREVENTION

- Brush pools routinely
- Clean filters, skimmer and strainer baskets
- Keep your own equipment clean
- Maintain balanced water at all times
- Check phosphate levels with chronic algae problem pools!

When it comes to algae, you can save a lot of headaches, time and money if you have an algae prevention program. This includes routine brushing of pool surfaces to dislodge dirt that can accumulate in small spaces, and keeping leaf debris out of filters, skimmer baskets and lint strainers. If you have a pool with chronic algae problems, be careful not to spread it to other pools with your brushes and vacuum hose. Use onsite equipment or disinfect yours thoroughly. Maintain good chemistry at all times, and if you have a regular algae issue, check your phosphate levels to be sure they aren't too high.



Questions?



Please call our office at (941)
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If you have any questions about anything that was discussed, please give us a call.