

USE AND CARE MANUAL

BIODESIGN SWIMMING POOLS

*Failure to follow specific instructions contained in this manual may result in the pool warranty being voided.

INITIAL START UP

The initial start process should be performed by the installer or pool service professional.

After the final Biodesign resin and Microban finish coat has cured completely, the start-up process can begin!








If your water source is high in metals or TDS (total dissolved solids) you may want to use a prefilter when filling the pool for the first time, or when adding a significant amount of water.

When filling the first time, use an inexpensive water meter that attaches to the hose bib. This will give a reading of what the pool gallonage is and can help in future water balance calculations. Please balance to the following parameters:

IDEAL:	FILL :	BALANCED TO:	IDEAL:	FILL:	BALANCED TO:
Total Chlorine .6 – 1.2 ppm			Alkalinity 80-120 ppm		
pH 7.2 – 7.6			Calcium 160 – 300 ppm		
CYA 10-30 ppm			TDS (dependent on sanitization type)		
Phosphates < .2 ppm			Metals (iron/copper) 0		

****Settling of the ground under the pool may occur in the first several days after filling with water. This may cause the water level to drop more than an expected amount.**

Notes:

-  Products can differ from brand to brand. Please closely follow the guidance on the product package.
-  Some products are dangerous and should be handled with care, wearing appropriate personal protective equipment.
-  Refer to local regulations on management level standards for all products.
-  Only use products indicated for swimming pool water management.
-  Keep a logbook with dated test results.
-  Many operations may require that the pool is temporarily closed for swimming.
-  Always check water quality prior to entering the pool.

- Always keep chemicals out of the reach of children, in a locked and inaccessible place. Temperature and other restrictions may apply to individual products, please refer to product packaging for storage instructions.

ROUTINE POOL MAINTENANCE

Following procedures outlined in this section, you will ensure that you are protecting the surface of the pool, accessories, equipment, and the health and safety of users.

POOL SURFACE CLEANING

Please manually vacuum your pool weekly – or after strong winds or storms. A vac head with a brush is recommended. To manually vacuum your pool, you may need to adjust valves for skimmers and the main drains to acquire a good amount of suction. Please refer to your installer for instructions on how to do this. The vac hose should be filled with water and the non-moveable end should be plugged into the suction port under the skimmer basket inside the skimmer. With the vacuum hose plugged in, and the suction pressure adjusted, run the vacuum over all pool surfaces, paying the most attention to horizontal flat areas (steps, floors) where dirt may collect in the sand. After vacuuming, use a brush on a telescopic pole to help lift any additional dirt from the pool surface. A clarifying product can help at this point to coagulate any particles in the water to a size that is large enough for your filter to more effectively trap them. A filter cleaning may be recommended at this phase, refer to filter manual for more detailed information on the frequency and process for filter cleaning. A pool robot may be used, and this may result in less frequent manual vacuuming.

SKIMMER CLEANING

Our skimmer systems are made of AISI 316L stainless steel, which thanks to molybdenum and a higher percentage of nickel is particularly resistant to corrosion in aggressive environments. If proper maintenance is not conducted, pitting can occur. These are rust spots that may be caused by metal deposits from rain or other external sources. Before opening and filling the pool up with water, a marine

grade stainless steel cleaner can be used to clean all skimmer surfaces that are visible.

FILTER AND EQUIPMENT MAINTENANCE

Please refer to manuals provided with your equipment. As of July 2021, the Department of Energy requires all new pool and replacement pool pumps be variable speed. Biodesign recommends a 24-hour filtration cycle to keep dirt from settling in the pool, and to ensure that the pool is constantly circulating and filtering water. This should result in fewer chemical additions and less corrective actions due to poor water quality.

WATER TESTING AND BALANCING

Water parameters are to be as listed below; this is to ensure that the water balance is appropriately maintained as lined out earlier in this manual. A stain and scale preventative product and an algaecide product may be recommended by your installer.

- Chlorine residual – daily. If there is no marked change, this can be extended to every other day, or twice weekly.
- Alkalinity – weekly
- pH – weekly
- Calcium Hardness – monthly
- Cyanuric Acid – every 4-6 months
- Metal Content – every 4-6 months
- Total Dissolved Solids – every 4-6 months

IRREGULAR POOL MAINTENANCE

CLEANING AND SANITIZING THE SURFACE

It is recommended that any pool is drained by a professional or with professional supervision due to the possibility of the pool lifting or having hydraulic thrust when groundwater is present.

With the pool emptied or during the emptying process, clean the surface using a high-pressure cleaner, spraying from top to bottom. Keep six-eight inches from the nozzle to the surface of the pool. After total water removal, refill to approximately one inch in depth. For every thirty square foot of water surface area, add one gallon of 12.5% liquid chlorine, or 15% calcium hypochlorite. Using a submersible pump with a hose and sprayer attached, spray all walls and surfaces. It is recommended that personal protective equipment including rubber boots, goggles and mask be used in this stage. Particularly dirty areas

can be saturated directly with 12.5% liquid chlorine. Take caution to not spray surrounding turf, plants or non-Biodesign decking with chlorine.

WATERLINE CLEANING

The waterline is where suspended organic matter, oils, sunscreens, and external biological matter will be deposited. With fluctuations in water level, minerals, algae, and dirt or dust lines may form.

A white waterline may be addressed using a salt cell cleaner or a 4:1 solution of water and muriatic acid sprayed onto the line and then rinsed with a high-pressure washer after 5 minutes. Green waterlines due to organic deposits should be sprayed with 12.5% liquid chlorine and rinsed after 5 minutes with a high-pressure washer. Black waterlines from smog, dust, or materials such as suntan oils or lotions may require an enzyme product for removal.

SEASONAL OPENING WITHOUT DRAINING

With the water level below the skimmer clean all the stainless-steel parts with a marine grade stainless steel cleaner, clean the waterline and any visible flats with the method outlined above. Refill the water to normal operating level (or slightly above to account for any water that will be vacuumed to waste) and super chlorinate. Your pool care professional may recommend the addition of a stain and scale preventer and an algaecide at this stage. Begin filtering cycle according to manufacturer instructions.

SEASONAL WINTERIZATION

Make sure that the pool is properly balanced before you winterize. Clean the pool surface and lower the water level to just below the skimmers. Blow out and air lock the main drain and each of the skimmer return lines; blow out the skimmer and plug the skimmer suction port with an expansion plug. Add a crush jug and antifreeze to the skimmers. Your pool professional may recommend the addition of winterizing chemicals – including a stain and scale preventer and an algaecide. Super chlorinate the water before covering the pool. Winterize the equipment per manufacturer instructions. The pool may be covered with a tarp cover or a trampoline style cover to protect the pool from accumulating debris and dirt during the winter months. If an auto cover is used for winterization, refer to auto cover manufacturer's manual.

ACTIVE OVERWINTERING

Active overwintering is a way to enjoy your Biodesign pool year-round. During this phase, you will adhere to the same recommendations as during the regular season, but the pump speed may be turned down and

the heater (if one exists) may be turned off. If the heater is turned off and has a bypass, make sure that it is winterized during the months of not being used.

STAIN MANAGEMENT

Stains can come from a variety of sources and can be difficult to diagnose. A stain can be caused by metals in the water introduced by the addition of pool chemicals, by overspray from landscapers, from leaf or grass clippings that end up in the pool, and sometimes via the source water itself. Other stain sources are algae, dirt, leaf stains, limescale or calcium deposits. There are stain identification kits available, and the results of this test will direct the best ways to remove the stain from the surface.

ALGAE

Algae is a plant life, of which more than 20,000 distinct species exist in the world today. They reproduce and spread via spores. It is possible and even common to have multiple types of algae in a pool at the same time. There are some algae strains that are resistant to chlorine due to their structure. Algae needs water to grow, however some algae can remain viable in a dry state for an extended period of time.

Typical causes of algae formation are due to poor water circulation, lack of brushing or vacuuming the pool surface, incorrectly directed or non-functioning water jets, clogged filters, low free-chlorine levels, bad water chemistry or water balance, lack of regular super chlorination treatments, or high phosphates,

