

Maintenance

1. For best results maintain normal pool chemistry, with a low Cl residual, and no specialty chems. Residential: Cl ppm (0.5 - 1.0) - Commercial: Cl ppm (1.5 - 2.0). If you'd like to keep a higher Cl ppm, you can, with PoolRx it will take you LESS Cl to reach it.
2. PoolRx Unit must be replaced at the beginning of every swimming season for effective results. The Unit loses its effectiveness in rejuvenating the minerals after 12 months in the water.
3. Booster Minerals should be added after 4 to 6 months based on bather load and conditions. Simply pour the contents of the Booster into the skimmer or pump basket. You do not need to add minerals back inside of unit. Leave empty PoolRx Unit inside skimmer or pump basket so Booster minerals can be rejuvenated during circulation.

How are Minerals lost?

PoolRx Minerals are lost through algae kill, splash out, backwashing and filter cleaning.

- The more these factors happen, the more extreme the conditions, the shorter the lifespan of the minerals.

How do I know when to add more minerals?

PoolRx uses proprietary chelating agents that protect the minerals from falling out of solution. Because of this, the PoolRx minerals cannot be tested for in the water by your typical reagent test equipment.



You will know you need more minerals based on these factors:

- Time: It's been 4-6 months since you first installed PoolRx
- Your chlorine demand goes back up to where it was prior to installing PoolRx
- Your water is cloudy or you start to see algae

Note: Because a small amount of minerals are still working in the water you will notice a gradual change over about a two week period. This gives you plenty of time to add a Booster.

PoolRx works synergistically with chlorine, providing superior water sanitization

PoolRx minerals are:

- Always working in the water even when your chlorine levels drop.
- Constantly killing algae, allowing chlorine to be more active and available in the water
- Saving you money on chlorine. You will be able to reach your required / desired ppm using less
- Saving you money on chems. No need for phosphate removers, clarifiers, algaecides etc.
- Providing you safe, clean, clear water

pH and how it affects ORP (chlorines effectiveness)

The effectiveness of chlorine (ORP) is all about managing the pH, keeping it in it's "sweet spot." Keeping the pH in the 7.2 to 7.4 range allows you to optimize your chlorine's effectiveness, as seen in these two charts:

How pH affects chlorine

pH	% HOCl Good	% OCl- Bad
6.0	97	3
6.5	90	10
7.0	74	26
7.2	65	35
7.4	54	56
7.5	48	52
7.6	43	57
7.8	32	68
8.	22	78
8.2	16	84
8.5	9	91

Two forms of free chlorine

Good: The molecular form
Hypochlorous acid (HCO1)
Fast Acting Free Chlorine

Bad: The ionic form
Hypochlorite (OC1)
Slow acting chlorine

← pH →

	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0
0.5	735	725	720	712	704	695	687	680	675	668	662
1.0	760	750	742	734	725	716	709	703	695	689	684
1.5	772	765	756	748	738	731	722	715	708	702	697
2.0	780	772	763	756	748	740	732	724	717	712	705
2.5	788	780	772	763	754	746	738	732	725	718	714
3.0	794	785	778	769	761	753	745	737	731	724	719
3.5	800	792	782	774	765	758	750	742	735	729	724
4.0		798	786	778	770	762	754	746	739	734	728
4.5			792	782	774	766	757	751	743	736	733
5.0			798	785	778	769	761	754	746	741	736
5.5				789	781	772	764	756	750	744	738
6.0				793	783	775	767	760	753	746	742
6.5				796	786	777	770	762	756	749	744
7.0					788	780	772	765	758	752	746
7.5					792	782	774	767	760	754	749
8.0						784	776	769	762	756	751
8.5						786	7778	771	764	758	753
9.0						788	780	773	766	760	755
9.5						790	782	775	767	762	756
10.0						792	784	777	769	763	758

↑ P P M ↓

ORP

PoolRx as your X factor

Adding PoolRx to the mix helps maintain a higher chlorine reading for longer periods, as it takes most of the workload in eliminating contaminants like algae. Using less chlorine of whatever kind, will also help keep the pH in that "sweet spot." This will Reduce your chemical consumption, save you money and keep your water clean and safe all at the same time.

Tablet Chlorine Vs Liquid

Tabs – Pros

Low pH 2.8: A great starting point for chlorine effectiveness. This will allow you to use less. Having PoolRx in the water makes the slow feed system of tabs still completely effective. The dilution of the chlorine in the water will make the pH rise to acceptable levels while still being in that pH “sweet spot.”

Tabs – Cons

Cyanuric build up: Ideal range (20 to 80 ppm). However because you are using PoolRx you will not need to feed as much tab chlorine into the water and with backwash cycles and splash out this cyanuric build up may not be a problem.

Liquid Chlorine – Pros

Fast acting, no cyanuric acid, inexpensive

Liquid chlorine – Cons

High pH -13: So you will constantly have to bring the pH down to make the chlorine effective.

Solution

The con's of both Tabs and Liquid can be overcome by using them in combination. When this combination is used with PoolRx, you will be feeding even less of each. This will further limit cyanuric build up and liquid chlorine/acid demand, and still allow you to maintain high ORP.

PoolRx can support any size body of water.

There is no difference in the mineral formulation for Residential and Commercial applications. The same minerals and rejuvenating technology is used for both. In both cases we ask you to install the correct unit/s and additional booster/s if necessary, based on total gallons of the body of water. When installing a PoolRx unit into a commercial pool, you should place it in the pump basket, or surge tank. Do not place in the skimmer to abide by your local health code. You will still need to maintain your health code required ppm of chlorine, but you will find, that the minerals will free up your chlorine to be more active and available, so it will take you less to achieve your required/desired ppm. All of the same benefits PoolRx provides Residential operators apply with Commercial Pools, Spas and Fountains.



What You Should Know

1. With or without using PoolRx, you should practice normal pool maintenance procedures,

You need to test your water and maintain balanced pool water chemistry. Normal Ranges: pH: 7.2 - 7.8, Alkalinity: 80 - 120, Cyanuric Acid: 20 - 80, Chlorine minimum 0.5 - 1.0ppm for Residential; Commercial 1.0 - 5.0ppm. No matter what products you are using, if you don't keep your water within normal ranges, you will eventually run into problems. Normal Pool Maintenance procedures also suggest you test your water at least once a year for minerals/metals, and address those potential problems immediately.

2. PoolRx is adding chelated minerals to the water.

The most active ingredient is copper sulphate pentahydrate. Even though it is chelated, this will add to the water's copper saturation index. This means in the rare event you have non chelated copper in the water and you add PoolRx, your existing non chelated copper will be more susceptible to fall out due to saturation, over oxidation or pH fluctuation. Understand that our unique chelating process protects PoolRx from fallout, and staining even in the toughest water conditions. In fact, the minerals are so protected that they will not show up on typical metal/mineral reagent test kits. If, when you test the water, you find it already has existing non chelated copper and/or other minerals or metals in it, normal procedures suggest you get those minerals and metals out of the water, no matter if you are using PoolRx or not.

If you have metals in the water, we suggest using a product called CuLator by Periodic Products. Unlike a sequestrant, this product is a bag that drops in the skimmer and physically pulls the metals completely out of the water. (if necessary use prior to installing PoolRx)

3. PoolRx minerals allow Chlorine to be more active and available in the water.

Be cautious adding PoolRx to a pool with high chlorine levels. The PoolRx minerals make chlorine hyper active and thus more corrosive. If you have a high chlorine content in the water and you add PoolRx, the highly active chlorine can do a couple things. It can knock existing non chelated metals out of solution. (For example: brown staining on the surface is typically caused from high iron content in the water that was oxidized out) Also, because of how active PoolRx makes chlorine, in a few very rare instances, right after installation, we have heard of people getting green hair. Simple remedy, lower chlorine levels before installing PoolRx. You can add PoolRx to a pool with a higher chlorine residual than what is suggested, and maintain higher levels as well, but understand that minerals will allow that chlorine to be very active.

4. Total Dissolved Solids (TDS) and Saturation Point

TDS is a measure of how old the water is or how much chemical has been added to the water.

When the water has reached Saturation Point this means the TDS has become too high. Normally with a TDS above 5000ppm nothing more can dissolve into the water. When treating a pool with high TDS it will take more of everything to keep it clear and balanced, so you've reached a case of diminishing returns. Nothing ends up working in the pool. Adding PoolRx to a pool that has reached saturation point may not work, as the minerals may not be able to dissolve into solution and will then stay in granular form and attach to the calcium build up on the surface causing a bluing effect. Your water chemistry may be in perfect balance, however if the TDS has reached saturation point it does not matter. The additional cost for a pool owner or service company to treat a pool with high TDS is so much higher than draining the pool and starting with fresh water.

5. **Too Much Cyanuric Acid** High cyanuric acid level greatly affects your Total Alkalinity readings, so it's important to calculate your Adjusted TA, and keep it within normal ranges. CYA normal ranges are 20-80 ppm. If you allow CYA levels to get into the 125 - 150ppm range, your Alkalinity reading will be off and the water will be out of balance.

For example:

if pH = 7.4; AlkTA = 100 ppm; and Cy = 150 ppm:

$$\text{AlkC} = \text{AlkTA} - (\text{Cy} \times \text{CyF})$$

$$\text{AlkC} = 100 - (150 \times 0.30)$$

$$\text{AlkC} = 55 \text{ ppm}$$

pH	6.5	7.0	7.2	7.4	7.8	8.0
CyF	.11	.22	.26	.30	.35	.36

When water is out of balance it will attempt to balance itself, and drop out of solution whatever is in excess in the water. When cyanuric precipitates out, it can coagulate the copper minerals, causing a purple dust to form and stick to surfaces. If this happens, we recommend draining or partially draining the pool. Once the cyanuric levels are within normal ranges, the purple dust will dissolve back into the water. If the cyanuric level is high use liquid chlorine until the cyanuric level gets back into normal ranges. With PoolRx you only need a chlorine minimum of 0.5 to 1.0ppm in a residential pool. This is about 1 tri-chlor tab per 10k gallons of water per week in the summer. This reduction in tabs will save you money and also help reduce your cyanuric build up. PoolRx allows for a wide margin for error in your water chemistry and balance, but everything has its limits. The only time you may run into problems with PoolRx is if you allow your water chemistry to get drastically out of balance and completely saturated.

6. **Do not use PoolRx with fish.** PoolRx is completely safe for your family and pets and any other mammals like birds etc. Fish and mammals react differently to minerals and chlorine.
7. **Do not use PoolRx with Bromine or Biguanides.** If you do, you may notice a yellow tinge to the water, and/or foaming.

Simplifying Pool and Spa Care

1 Choose the correct PoolRx unit/s based on total gallons



2 Start with a clean filter and simply place PoolRx unit in skimmer or pump basket.

Note: Do not clean or backwash filter for as long as possible after install, to allow minerals to dissolve through filter



3 Maintain Normal Pool Chemistry with as little as 0.5-1.0ppm of chlorine for residential and 1.5-2.0ppm for commercial.

4 In 4-6 months add Booster minerals if necessary. Booster minerals are for longer seasons, larger pools or extreme conditions.



Eliminates the need for specialty chemicals.

No need for Phosphate Removers:

Phosphates are just food for algae. With PoolRx there is no algae so it does not matter how high your phosphate level is.

No need for Clarifiers:

With PoolRx your chlorine is now more active and available so your water will sparkle like never before.

No need for Algaecides:

PoolRx is the most effective longest lasting algaecide on the planet.

What will PoolRx do?

• Eliminates All Algae:

- PoolRx will eliminate algae immediately and continuously for up to 6 months
- For extreme conditions or longer pool seasons you can add a PoolRx booster if needed

How: PoolRx minerals dissolve out of the unit in the first 24 hours and form a stable residual throughout the entire body of water killing algae. This frees up low levels of chlorine or salt chlorine to be more active and available. As the minerals pass back over the PoolRx unit during circulation, they are reenergized and last up to 6 months.

• Reduces Chemical Demand:

- 50% Reduction in your chlorine or salt chlorine demand
- 100% Eliminates the need for harsh chemicals like phosphate removers, clarifiers, sodium bromide, etc.

How: PoolRx only requires 0.5-1.0ppm residual of chlorine or salt chlorine in the water to be completely effective. So, you can start by putting in less. Second, the minerals are freeing up a low chlorine residual to become more active and available so it will take even less chlorine to reach your desired/required ppm.

• Simplifies Pool Maintenance:

- No installation required.

How: Start with a clean filter and simply drop PoolRx unit into the skimmer or pump basket, maintain normal pool chemistry, with as little as 0.5-1.0ppm of chlorine or salt chlorine. Do not re-clean or backwash filter for at least 2 weeks (residential) so minerals can dissolve through filter.

- PoolRx minerals last for up to 6 months
 - Minerals are lost through algae kill, splash out, filter cleaning and back washing
- For longer seasons, larger pools, or extreme conditions, a PoolRx Booster (pn.102001) can be added
 - Mineral Booster should be poured into skimmer or pump basket to dissolve. Not inside of unit
 - Leave original PoolRx unit, now empty, in either basket so the alloy cylinder can rejuvenate booster minerals
 - Start with a new PoolRx unit at the beginning of each season
 - The PoolRx alloy cylinder is effective in rejuvenating minerals for up to 12 months in the water and needs to be replaced every year

What will PoolRx do? (cont.)

- **Reduces Energy**

How: PoolRx is so effective you may be able to turn down the circulation pump run times, saving you money on your monthly electricity bill. With the PoolRx method, you only need to turn water over one and a half times in 24 hours. Pump run times should be during the heat of the day.

- **Prolongs the Life of your Equipment and Surfaces**

How: Less run times on circulation pump equals less wear and tear, longer life. PoolRx minerals include a natural de-scaler that will also help to extend equipment and surface life.

- **Ideal for Salt Systems – Improves water quality–prolongs life of salt cell**

How: With PoolRx in the water, you can turn down the Salt Generator by 50%. Thus, also reducing the acid needed to balance the water. The mineral formulation includes a natural de-scaler that helps keep the cell cleaner, longer, reducing frequency of cleaning. With PoolRx there is no need for other harsh chemicals. All of these factors improve the quality of water, while prolonging the life of the salt cell and reducing scale build up on surfaces and equipment.







- **Prolongs ‘Water Life’**

How: 50% less Chlorine means 50% less Cyanuric Acid (CYA) build up, (if you are using tabs). With PoolRx you can 100% eliminate the need for other harsh chemicals. Less total chemicals means lower TDS (Total Dissolved Solids) Lower CYA and TDS means water does not get “OLD” as quickly. It will now take less minerals and chlorine to be effective for a longer period of time. With PoolRx you will have to drain/refill the pool less frequently.

- **Improves the Quality of Water and Bather Experience**

How: PoolRx minerals work with a very low chlorine or salt chlorine residual, with no other needs for specialty chemicals. No Algae with less chemicals provides clean, clear, healthy water. Better for your eyes, skin, hair, and lungs compared to high levels of chlorine and other harsh chemicals; like phosphate removers, clarifiers, sodium bromide, etc. With PoolRx your water will look and feel like never before.



-  **Proprietary Mineral Blend**
Eliminates Algae immediately, for up to 6 months
-  **Patented Chelating Agents**
Non Staining
-  **No Installation Necessary**
Simply drop unit into skimmer or pump basket
-  **Reduces Chemical Demand**
Less chlorine, eliminates specialty chemicals
-  **Ideal for Chlorine or Salts Systems**
Improves water quality, prolongs life of equipment
-  **Support for any size body of water**
For use in Residential and Commercial Pools and Spas

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