Saline Chlorination

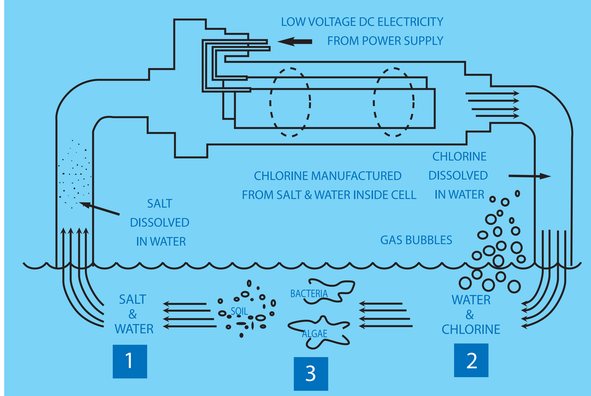
The mineral used in Mineral Springs® is a natural element found in the earth, in our bodies and in our homes. It is used to season and preserve food, rinse out contact lenses, soften drinking water, and sanitize pool water.

Saline Chlorination has been around internationally for nearly 100 years in the swimming pool industry.

Of the ~200,000 pools built in 2006, up to 60% were installed with an electrolytic generator.

Basic Chemistry

After Mineral Springs dissolves in the water, the minerals pass through a low voltage cell, where the minerals are converted to free chlorine. After the free chlorine kills bacteria and algae it reverts back to it lowest mineral state. It then passes through the cell and is again converted to free chlorine.



Advanced Chemistry

$$2\,H_2O + 2\,NaCl\,(aq) \xrightarrow{\text{⚡}} Cl_2\,(g) + H_2\,(g) + 2\,NaOH$$

$$Cl_2\,(g) + H_2O \rightarrow HOCl\,(aq) + HCl\,(aq)$$

Minerals dissolve in the water and flow through the cell.

A low voltage electrical charge passes through the solution.

Solution breaks up and forms chlorine, hydrogen and sodium hydroxide.

Hydrogen is dissolved in the water and vents to the atmosphere.

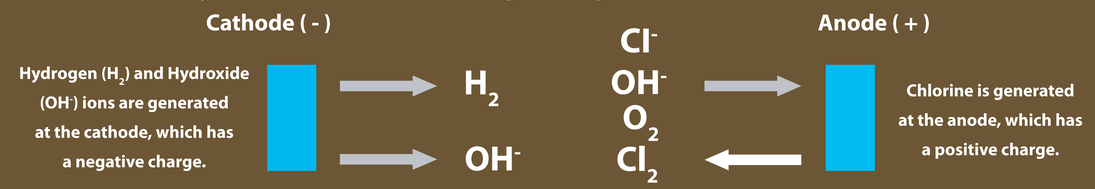
Chlorine dissociates into the active form, hypochlorous acid.

(This provides a free chlorine residual)

Hydrochloric acid is formed as a result of the chlorine dissociating in the water. It stays in the water.

Sodium Hydroxide stays in the water to neutralize (hypochlorous acid) the acidic impact of the chlorine gas. (This is why the pH tends to creep high.)

Electrolysis and Benefits of reversing polarity to prevent scale build up on cell plates.



Why make it hard on yourself?

Mineral Springs®

is your answer!

Mineral Springs Beginnings®/Renewal®

Individual Products

- Salt
- Scale Inhibitor
- Stabilizer 100
- Lo 'N Slo®
- Optimizer Plus®
- Polysheen Blue

Benefits of Mineral Springs

- **Continuous chlorination**
  - o Regeneration of minerals to hypochlorous acid (free chlorine) which kills algae, microorganisms and oxidizes contaminants
  - o High efficiency production of chlorine with low operational costs
- **Ease of pool automation**
  - o Reduction in pool chemistry adjustments
  - o Automatic booster/superchlorination button
- **Reduced system management and maintenance time**
  - o Self-cleaning cell to prevent scale formation
  - o Automatically reverses polarity every 120 minutes
  - o Automatic step down transition to lower current before switching polarity
- **Enhanced swimmer comfort**
  - o Benefits of boron chemistry
- **Monitoring and troubleshooting capabilities within control box**
  - o Alarms and automatic shut off for low minerals, low temperature, no flow to indicate an issue and prevent damage to equipment
- **Reduced handling, storage, and transportation of traditional pool chemicals**
  - o No maximum storage capacity regulations
  - o Department of Transportation does not regulate transportation
  - o Only have to add one product on a weekly basis: 4lb (per 10,000 gallons) of Renewal

BioGuard®