

Metals, Minerals and Stains

A pool can be a beautiful addition to any backyard environment. There are a variety of pool surface types and a multitude of designs, patterns and features available. Many pools also have decorative tile along the waterline that gives the pool a high-end look. Unfortunately, this can all be ruined by the formation of stains on the pool surface or scale on the tile.

Surface stains are typically caused by metals in the pool water or tannins from organic material left in the pool. Metals can come from several sources.

In many areas, groundwater contains dissolved metals or minerals. Iron, copper and manganese are the most prevalent metals found in municipal and well water. These metals can be introduced to the pool anytime water is added, and if preventive measures are not taken, the surface can become stained. The other primary cause of the introduction of metals into pool water is improper water balance. Low pH or total alkalinity can cause corrosion of the metal components of the equipment or pool—most commonly the heaters, ladders and pool lights—and that corrosion can result in a buildup of metals such as copper or iron in the pool water. This buildup not only will cause staining, but also can cause serious and expensive damage to the equipment.

The minerals calcium and magnesium can cause hard water in swimming pools, and hard water can lead to the formation of scale on the pool surface and tile. This scale can be very unsightly and difficult to remove.

As with other common pool and spa problems, the best way to fight the problems caused by metals and minerals is to prevent them. Therefore, a stain prevention program is a key part of any regular pool maintenance program.

The symptoms of high metal and mineral content include:

- Cloudy water
- Discolored water
- Stains on surfaces
- Scale formation
- Increased use of sanitizer

When treating for metal in the water, it is best to use a phosphate-free product such as SeaKlear Metal Klear. In areas of very high metal content, SeaKlear Metal Stain Control is suggested. In situations where high metals and/or metal stains exist, especially in plaster or Pebble Tec® pools, SeaKlear Stain Prevention & Remover— Professional Strength is recommended.



The rule of thumb for treating stains is, the milder the better. Stain lifters and metal removers are acids and corrosive by nature. Using SeaKlear Natural Stain Remover is recommended for lifting most stains without damaging the vessel or equipment, especially in vinyl or fiberglass pools.

For the lifting of tough stains, especially in older gunite pools, SeaKlear Stain Klear is recommended. It is highly effective on older stains on steps or on tannin stains from leaves or organic debris. For copper stains in gunite, marcite, Pebble Tec or Diamond Brite™ pools, SeaKlear Stain Prevention & Remover—Professional Strength is recommended.

Anytime SeaKlear Natural Stain Remover or SeaKlear Stain Klear is used to lift a stain, the application should be followed up with SeaKlear Metal Klear to capture the metals or tannins and take them to the filter. SeaKlear Metal Klear can be added 15 minutes after SeaKlear Natural Stain Remover or SeaKlear Stain Klear. The filter should be backwashed or cleaned 24 hours after the stains lift, to give SeaKlear Metal Klear time to remove the stain particles to the filter. Once the stains have been lifted and the containment has been removed by the filter, promptly backwash or rinse out the filter to prevent the stain from returning to the pool.

Tip: To test whether SeaKlear Natural Stain Remover will work on a stain, rub a vitamin C tablet on the stain. If the tablet lifts or lightens the stain, SeaKlear Natural Stain Remover will work.

The SeaKlear Metal & Stain Product Comparison Chart explains which surfaces each product works best on and the issue the product will resolve. It also provides proper dosage information.

SeaKlear Metal & Stain Product Comparison Chart

	SeaKlear Natural Stain Remover	SeaKlear Stain Klear	SeaKlear Stain Prevention & Remover—Professional Strength	SeaKlear Metal Stain Control	SeaKlear Metal Klear
Stain Type					
Copper	Best	Good	Better	-	-
Other Metals	Best	Better	Good	-	-
Organic	Best	Better	-	-	-
Cobalt	Best	Better	-	-	-
Scale	-	-	Best	Better	-
Metals in Solution					
Metals in Solution	--	--	--	Better	Best
Surface Type					
Vinyl	Best	-	-	-	Not a stain remover
Fiberglass	Best	-	-	-	
Plaster/Gunite	Best	Better	Good	Good	
Pebble Tec	Best	Better	Good	Good	
Other					
Sequester	-	-	-	Better	Best
Phosphate-Free	Yes	Yes	-	-	Yes
Requires Metal Klear	Yes	Yes	-	-	-
Test for Phosphates	-	-	Yes	Yes	-
Dose					
Stain Removal	2 lb per 20,000 gallons	2 lb per 20,000 gallons	1 qt per 20,000 gallons	1 qt per 10,000 gallons	2 qt per 10,000 gallons
Sequester	-	-	1 qt per 20,000 gallons	1 qt per 10,000 gallons	1 qt per 10,000 gallons
Maintenance	-	-	Better (6–8 oz per 10,000 gallons)	Good (6–8 oz per 10,000 gallons)	Best (6–8 oz per 10,000 gallons)

SeaKlear Metal & Stain Product Comparison Chart (cont.)

SeaKlear Natural Stain Remover	SeaKlear Stain Klear	SeaKlear Stain Prevention & Remover—Professional Strength	SeaKlear Metal Stain Control	SeaKlear Metal Klear
Features & Benefits				
<ul style="list-style-type: none"> • All-natural citric acid formula • More cost-effective and less caustic than ascorbic acid • Effectively removes organic, tannin, copper, iron and manganese stains • Excellent for spot treatment • Excellent for all surfaces • MUST be followed by SeaKlear Metal Klear 	<ul style="list-style-type: none"> • Excellent for tough, old stains on gunite, plaster and hard surfaces • Effectively removes copper, iron and manganese stains • Can be used as a spot treatment • MUST be followed by SeaKlear Metal Klear 	<ul style="list-style-type: none"> • Removes and prevents metal stains from iron, copper and other metals • Removes scale and controls scale buildup • Effectively removes stains in gunite, plaster, and Pebble Tec pools 	<ul style="list-style-type: none"> • Effective for removing the metals that cause stains • Prevents staining, controls scale 	<ul style="list-style-type: none"> • Phosphate-free formula prevents metal stains and is excellent for use in high-phosphate areas • Ideal for pools with salt systems • Excellent for preventing stains on all pool surfaces • MUST be used after SeaKlear Natural Stain Remover or SeaKlear Stain Klear



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