

CLEANING OF STAINLESS STEEL POOL GUTTERS AND BULKHEADS.

The materials used to construct your gutter/bulkhead system are low carbon stainless steel. The exterior finish is a #3 industrial polish. This results in a light grained horizontal finish. This finish can be duplicated with a 150 grit abrasive or 3M Scotch Brite pad #7447.

When cleaning with abrasive materials, rubbing or wiping should be in the same direction as the polish lines (grain). Cleaners that can be used for dirt accumulation are Ajax, Bon Ami, Ox Out or other similar cleaning products. Cleaners can be used with #7447 pads. For light accumulations, the pad without cleaner is recommended.

Exposed stainless steel should be cleaned to maintain its non-corrosive properties. If contaminants are allowed to accumulate for prolonged lengths of time, crevice corrosion and staining can occur. If any stainless steel surface is in contact with hydrochloric acids, rinse and neutralize the surface of the contact area. Submerged stainless steel will remain stain free for years. If the pool is drained for any length of time, cleaning of the now exposed stainless steel may be required.

For indoor installations, the natatorium air quality has a direct impact on the appearance of stainless steel, or for pools disinfected with chlorine based chemicals; the chloramines can accumulate as condensate on above water surfaces. Decomposing chloramines can form a solution that leads to corrosion of underlying metals in natatoriums where the air-handling units are not working or are undersized. For these installations it is especially important to have a diligent cleaning program.

The following procedures should take place to maintain clean and bright stainless steel:

1. Maintain the pool water pH in a neutral range of 7.4 to 7.6
2. Maintain a chlorine count of not less than .5 PPM.
3. Backwash filter per manufacturer instructions as needed.
4. For optimum appearance, wipe down exposed stainless steel surface daily to prevent water spotting or surface contamination.
5. Remove scum at waterline and above waterline with blending cloth semi-weekly.

The following procedure should take place yearly for a more thorough cleaning:

1. All contaminants from metal objects such as clips, buttons, hairpins, etc..., should be removed with proprietary phosphoric acid such as oakite composition #33. Scrub the surface and rinse with water.
2. Mix a solution of 10% nitric acid (42% industrial strength) and 90% water.

Handle the solution with extreme caution.

Nitric acid is highly corrosive. Wear rubber gloves and apron: footwear and goggles when handling this solution.

If skin comes in contact with this solution, rinse immediately with water. If burns occur, immediately contact a physician.

Do not use any steel products such as steel wool, steel tools, etc. on the surface of the stainless steel. The carbon from steel can be transferred to the stainless steel and cause rust.

3. Apply the solution with a brush or a 3m #7447 blending cloth to the stainless steel. Cover an area no larger than 4 sq.ft. And rinse completely with water.

Do not allow this solution to dry on the stainless steel.

4. Condition the water for swimming.



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TROUBLESHOOTING TIPS FOR RUSTING S.S. GUTTERS AND BULKHEADS

Gutters and Bulkheads are fabricated using T304L Stainless Steel. Stainless Steel, as the name implies, “stains less” than other steels, but it still may show some corrosion due to surface oxidation, if it is exposed to a corrosive environment.

SITUATION #1) Gutter, Bulkhead, and other similar S.S. items in the room, show signs of corrosion uniformly on surface :

This implies that there is a ventilation problem. The chloramines (gaseous version of chlorine) from the air above the pool surface are not being removed from the room and they are being deposited uniformly on the surface of the gutter and/or bulkhead.

SOLUTION : Follow the S.S. Cleaning Instructions to clean the Surface. Then either increase the ventilation in pool area or the frequency of “maintenance cleaning”.

SITUATION #2) Gutter and/or Bulkhead shows signs of corrosion intermittently on surface :

The leading cause of this is the “chlorides” that are left behind when the pool water is left to dry on the surface.

SOLUTION : Rinse the gutter and/or bulkhead at least once a week with clean FRESH water to prevent this build up. Touch up any small leftover spots with 3M Scotch Brite Pad #7447 (ref. S.S. cleaning instructions).

THINGS TO AVOID :

- 1.) STEEL. NEVER** allow any type of steel product (steel wool, steel brush, etc.) to come in contact with the surface. These can leave residual carbon particles behind in the surface, leading to rapid corrosion.
- 2.) EXPOSURE TO HCL.** If this pool has a tile deck and/or side walls, the tiles are usually cleaned with HCL (hydrochloric acid). ANY exposure to HCL needs to be rinsed off **IMMEDIATELY AND COMPLETELY**. Failure to do so will result in the surface of the stainless steel becoming etched and will lead to rapid corrosion. The surfaces may then need to be completely mechanically abraded to remove this surface contamination.



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NOTE : The best way to maintain a rust free surface is to have a weekly maintenance schedule to rinse off the surface with clean FRESH water and then touch up any rust spots that may be occurring (ref. S.S. cleaning instructions). The longer a surface is allowed to have corrosion on it, the tougher it will be to clean. If a pool is drained, the newly exposed stainless steel, that was previously below the surface of the water, may need to be thoroughly cleaned before it is filled back up.