

STAINLESS STEEL CARE GUIDE

Stainless steel products cannot be regarded as completely maintenance free. Low maintenance depends largely on the care given during the first year. Proper cleaning must always be done immediately after install.

All our products are made of marine grade 316L stainless steel that holds up very well in harsh environments such as, oceanfront and commercial environments. Incidental saltwater exposure will cause corrosion to any metal including 316L stainless steel if not kept reasonably rinsed off and cleaned. However, 316L stainless steel will hold up in these environments given an appropriate amount of care.

LA Railings can provide powder-coating services which can protect your materials creating a professional coat on top of your materials which will block most of those issues while also providing the color finish you want to your posts and rails - which are the most important part of the guardrail structure. Unfortunately, per technical reasons fittings or tensioners and cables can't be powder-coated.

AFTER INSTALL, CLEANING & GENERAL MAINTENANCE

Initial Cleaning - Immediately After Install

It is extremely important to not walk away from the install until you thoroughly clean your new railing. Cleaning should only be done with a mild car wash soap. We recommend *Meguiar's Deep Crystal*. You need to use a two-pronged approach to achieve appropriate cleaning. Initial washing is necessary to remove all foreign matter from the stainless steel surfaces including oil from tools and hands. This will ensure your stainless steel railing has immediate exposure to Oxygen to continue the development of a strong Chromium Oxide Passive layer.



1. Work one section at a time, no more than 20 foot lengths.
2. Rinse the railing thoroughly and remove any visible foreign matter including labels. Power washing is an excellent rinse, but not necessary.
3. Recommended: In a handheld spray bottle or garden sprayer, fill with fresh water and add 1 oz. of car wash soap per gallon (or equivalent for small sprayer). Seal and shake contents.
4. Immediately spray the soap and water mixture generously on the railing.
5. In a bucket of warm water, add car wash soap in the ration of 1 oz. per gallon.
6. Wipe down the railing with a soft rag or sponge saturated in the soapy water from the bucket. (Do not use abrasive or textured cleaning pads).
7. Thoroughly rinse the railing with clean fresh water.

Field Passivation (Passivation Fluid is Not a Standalone Cleaner)

If additional work (construction, painting, etc.) is taking place in close proximity to the railing, take care not to use any cleaners on work areas that may damage stainless steel and rinse railings with fresh water often to maintain a clean surface. If potentially damaging cleaners are splashed on railing, you must completely repeat step one. Acids are very damaging to stainless steel surfaces, including citric acid if not used properly. If you know acids or strong chemical have come in contact with the railing, you must immediately wash your railing and we recommend treatment with *CitriSurf® 77 Passivation Fluid*. Follow instructions for field passivation below.

IMPROPER USE OF PASSIVATION FLUID MAY CAUSE IRREVERSIBLE DAMAGE TO YOUR STAINLESS STEEL SURFACES.



Field Passivation Instructions

1. Wash railing per above instructions.
2. Use passivation fluid only in localized areas. This is not a cleaner but a spot treatment.
3. Spray *CitriSurf 77* on the area(s) to be treated in an amount necessary to cover the spot, but not excessively to the point of heavy dripping.
4. Let sit 20 minutes and if stain persist spray again and scrub with a soft rag until stain is gone.
5. Rinse thoroughly after passivation is complete.
6. Repeat washing instruction above for entire railing to insure no over spray of unintended remnants of *CitriSurf 77* is left on the surface.



7. Rinse railing and area thoroughly after use.

8. Use of Polish: A marine polish may be applied to your stainless steel product after cleaning, particularly any hand rail or guard rail material. We do not recommend immediate application of polish after cleaning as you want oxygen to interact with the chromium and other elements in your stainless steel product. Best practice is to rinse the stainless steel product often during the first month and clean again as needed or after 30 days. Then you can apply a marine polish. We recommend *Prism* polish as it has no abrasives. Other marine polish may be used as long as it has no abrasive. Applying paste polish to wire rope will be labor intensive due to the tendency to collect in gaps and produce a haze. We recommend a spray polish for the wire rope, such as *Flitz Stainless Steel and Chrome Polish*.

NEVER USE PASSIVATION FLUID WITHOUT THOROUGHLY CLEANING ALL SPRAYED SURFACES.

Continuous Maintenance

Advice is often sought concerning the frequency of cleaning, and the answer is quite simply “clean the metal when it is dirty in order to restore its original appearance.” As a rule of thumb, it is always good to rinse with clean water whenever you are cleaning other adjacent surfaces such as a deck. The best

thing for stainless steel is fresh clean water. If sand and salt are blowing onto the railing and cables these must be cleaned off periodically. Allowing salt to collect on the cables and surfaces will create rust staining. You may apply a nonabrasive marine polish to railings (tube and fittings) for added protection. We recommend *Prism* polish.

MAINTAINING YOUR STAINLESS STEEL

Extra Care in Working (Construction) Environments

Working environments create aggressive conditions. Proper cleaning must be done immediately after installation of an LA Railings/West Railings product and should be repeated as often as needed if there is long exposure to working environments. Cleaning must be done immediately after exposure. Leaving a new installation without cleaning and then exposing it to a working environment will cause a high potential for corrosion. Be very mindful of the kind of work taking place around your stainless steel and protect the railings if possible. Chemicals to clean paint or epoxy are particularly damaging to stainless steel.

Work Site Cleaning Solutions, Beware!

Most simple household cleaning solutions, when used in accordance with their makers' instructions, are safe for incidental contact with stainless steel, but if used incorrectly, they can cause discoloration and corrosion on the surface of stainless steel by affecting the protective elements of the metal. Strong acid and chemical solutions (e.g. hydrochloric acid, muriatic acid, methyl ethyl ketone or "spirits of salts") are sometimes used to clean masonry, tiling and heavy paint cleanup, but they should never be permitted to come into contact with your stainless steel. It is safe to assume that anything you would not clean the aesthetic surfaces of a fine automobile with should not come in contact with your stainless steel railings. If contact of such a corrosive solution should happen, the solution must be removed immediately by copious water flushing and cleaning with a mild automobile (car wash) detergent. Anything containing a harsh acid or chemical coming in contact with stainless steel will potentially cause reactions that can lead to corrosion.

Use of Iron Tools or Cutting in Proximity of Stainless Steel

The use of bare Iron tools such as crescent wrenches, pliers, channel locks and Allen wrenches should be avoided. Use tools with chrome plating. If such tools are used, the Iron deposits, though not visible, will rust and potentially cause the stainless steel in contact with it to rust. Cutting anything with a power saw in the proximity of your stainless steel railing will contaminate the area causing Iron particles to be airborne, rusting wherever they land. Grinding will also have the same effect. Any contaminated surfaces should be treated with copious water flushing and cleaning with a mild automobile (car wash) detergent.

Use of Fasteners with Stainless Steel

All fasteners should be 316L stainless steel if possible. Mixing carbon steel and plated fasteners will cause corrosion where they meet the stainless steel. Nearby steel items, either attached to or over hanging, can cause corrosion to spread. Mixing metals can cause "electrolysis" to occur, creating corrosion.

Saltwater Environments

We recommend frequent cable rail washing in saltwater environments to prevent buildup. The main elements that cause environmental buildup are salt, dirt and Iron. The typical color of environmental buildup ranges from light brown to a reddish tint due to a combination of salt and Iron. The cable railing needs washing when buildup is visible. Proximity to saltwater is a major factor in how fast environmental deposits will buildup and how frequent washing will be needed. The closer you get to saltwater, the greater the frequency of washing! Just like maintenance cleaning for windows, cars, boats and powder coated metal components, washing may be required every 2-3 months to keep your cable rail systems looking like new. In saltwater environments, we recommend powder-coating of the posts and rails, the most important parts of your guardrail structure. This additional process is not a guarantee against discoloration, but it does provide the greatest protection for your stainless steel system. The treatment is relatively low cost for most systems. If you are on the ocean front, please entertain the possibility of powder-coating your hardware before installation.

ENVIRONMENTAL AWARENESS

A clean, freshly machined and polished stainless steel part will acquire a protective oxide layer from exposure to Oxygen in the atmosphere. Under ideal conditions, this protective oxide film completely covers all surfaces of the part and improves with exposure to the air (Oxygen). In actual practice, however, contaminants such as dirt and dust carry particles of Iron that may be transferred to the surface of the stainless steel parts. If not removed, these foreign particles can reduce effectiveness of the original protective oxide layer and cause surface discoloration if not occasionally washed off.

During the installation, a microscopic amount of free Iron may be worn off tools and transferred to the surface of the stainless steel parts. Under certain conditions, a thin coating of oxide (surface discoloration) may appear on the part. This is actually corrosion of the Iron deposits from tools or contaminants, and not corrosion of the stainless steel. If left untreated, the particles of Iron may become embedded and cause an attack of the part itself. If you see work going on adjacent to your property or see other hazards in the area such as big storms, you should at least clean the railing with fresh clean water.

This document was edited by LA Railings based on an original provided by our trusted supplier Atlantis Rail Systems which provides cable railing hardware and supplies to our company for more than a decade.