

GRAB BARS, FLIP-UP RAILING, & SEATING

Caring for Stainless Steel

What is Stainless Steel?

Stainless steel, also known as inox steel, is a steel alloy with a minimum of 10.5% chromium content by mass. It is well known as an extremely hardy metal requiring little upkeep and its comparative low initial and maintenance costs with other materials. In addition, stainless steel gives a clean, modern look to any design and installation. Stainless steel is commonly used for its special qualities. It does not readily corrode, rust, or stain with water as ordinary steel is prone to do. However, it is not entirely stain-proof in low-oxygen, high-saline, or poor air-circulated environments. This is in contrast to carbon steel, which rusts readily when exposed to air and moisture and will start to flake and fall away. Stainless steel prevents corrosion on its surface by blocking oxygen diffusion and prevents corrosion from spreading into the metal's internal structure. Elcoma metal Grab Bars can be used indoors or outdoors in wet and dry environments without worry!

Properties of Stainless Steels.

When exposed to oxygen, the chromium in the steel will form a passivation (chemically protective) layer on the surface which is thin enough to be seen by the naked eye and leaves the metal lustrous and smooth as before. This layer is impervious to water and air, and when scratched will quickly "heal" itself.

Elcoma uses SAE 304 stainless steel, also known as A2 stainless steel or 18/8 stainless steel. 304 steel does not easily conduct heat or electric current and is a non-magnetic metal and contains between 17.5% and 20% chromium content and 8% nickel. 304 steel is subject to pitting and crevice corrosion when exposed to high levels of chloride and to stress corrosion cracking at temperatures above 60°C. It is resistant to potable water with up to ~200mg/L at standard temperatures; this resistance drops to ~150mg/L above 60°C.

304 stainless steel should not be used in the presence of sulfuric acid. All stainless steel is resistant to phosphoric acid and will be damaged by hydrochloric acid.

300 series stainless steels are unaffected by any weak bases including ammonium hydroxide, even in high concentrations and at high temperatures. In contrast, stronger bases such as sodium hydroxide at high concentrations and high temperatures are likely to experience etching and cracking, especially with solutions containing chlorides such as sodium hypochlorite.

How do you Care for Stainless Steel?

While stainless steel is a popular industry standard, it is not 100% stain or rust proof. Regular maintenance is required to keep stainless steel clean and free of contaminants. In most applications,

stainless steel will not rust or stain even after years of use. However, in environments including marines, high polluted areas, near highways, or locations with high chlorine content, the corrosive elements present will necessitate proper care and maintenance for continued Grab Bar upkeep.

The following lists some basic guidelines for caring for your Elcoma Grab Bars:

- **Do** clean frequently with soap and water. Any glass-safe cleaner is safe. Apply and scrub with a cotton cloth to avoid abrasions.
- **Do** use a coating to help safeguard the stainless steel, such as a high-quality car wax for added beauty and protection.
- **Do** remove discoloration or rust spots as soon as they appear with either a brass, silver, or chrome cleaner. **Irreversible pitting will develop under rust that remains on stainless steel for any period of time.** Apply a mild abrasive cleaner such as Bon Ami, Ajax, or an equivalent cleaner with a damp cotton cloth, wiping in the direction of the finish grain. Rinse thoroughly and wipe dry. Stains which resist the above treatment may require scouring in the direction of the grain with stainless steel wool and a mild abrasive cleaner in a creamy paste form. If scraping is required, use stainless steel pads, sponges, wood, or plastic tools. **Note:** Indoor pool rails and ladders require particularly frequent maintenance due to chlorine vapors.
- **Do** always rinse after cleaning with clean hot water.
- **Don't** use coarse abrasives like sandpaper or steel wool on stainless steel. These can cause rusting to occur.
- **Don't** clean with mineral acids or bleaches.
- **Don't** leave stainless steel in contact with iron, steel or other metals which can cause contamination leading to rusting or corrosion.
- **Don't** store near any chlorine products.
- **Don't** clean with cleaners containing chloride, hydrochloric acid (used to clean after tile or concrete installation), concentrated soap residue (causes rust-like discoloration), or high iron content water (can leave a rusty residue).
- **Don't** allow moisture buildup between bars and the installed surfaces.

What Contaminants can Effect Stainless Steel?

- **Dirt** - Dirt and soil can consist of accumulated dust and other contaminants from many sources both human and environmental. These contaminants will vary in effect on appearance, corrosion, and ease of removal. It may be necessary to identify the contaminant in order to properly care for the Grab Bars. Often gentle soap and warm water will be sufficient. **Avoid** steel brushes or wool except in extreme circumstances as particles can become embedded in the surface, leading to rust.
- **Fingerprints and Stains** - These can result from normal use in consumer and architectural applications and are the most common surface contaminants. Fortunately, these usually only have a cosmetic effect and are easily removed. Fingerprints may be removed with a glass cleaner or a gentle application of soda ash and water paste, followed by a warm water rinse.
- **Shop Oil and Grease** - Shop oils, which may contain grease, grit, and chips of metal, commonly

produce surface soiling after many shop operations. Greases and other contaminants may also soil surfaces in food preparation and other household and commercial situations. These soils may be corrosive and may not allow a continued passivation surface barrier, meaning that periodic removal is necessary for proper maintenance. Initially, warm water with soap or detergent may be tried, or a combination of water, detergent, and a solvent. The removal of oils and greases from stainless steel surfaces by immersion in chemical solvents is frequently used with cold-formed or machined parts laden with lubricants. This process consists of bringing liquid solvent in contact with the steel surface and allowing for dissolution: for example, washing a surface with trichloroethylene or a similar liquid or stirring a batch of small parts in a container of solvent. Non-halogenated solvents such as acetone, methyl alcohol, ethyl alcohol, methyl ethyl ketone, benzene, isopropyl alcohol, toluene, mineral spirits, and turpentine work well. Many of these solvents are widely used as cleaners, but a wide range of blends and compounds exist on the market. Use caution when using a solvent cleaner and contact the supplier with any questions about use on stainless steel.

Caring for Teak Wood

Over time, shower seating may begin to lose its original lustrous appearance and natural coloration. To help you to keep your wooden surfaces looking like new, here are some easy steps to take to maintain that vibrancy.

Periodically clean teak with a sponge or a soft bristle brush using a cleaning solution with ¼ cup (2 oz.) of mild liquid soap in a gallon of lukewarm water (100°F / 38°C). Rinse thoroughly.

Teak will naturally weather to a soft grey patina color over time when exposed to the elements. This process could take up to several years, depending on the climate. If you desire this natural finish, do nothing to the teak furniture other than periodic cleaning as described above.

Mildew may form on teak; regular cleaning of furniture will help to prevent its formation. If mildew does develop, add ¼ cup bleach to the cleaning solution. Apply to the affected area and scrub with a soft bristle brush, then rinse thoroughly. Repeat if necessary.

If you want to retain the original teak appearance, apply a high grade teak wood sealer before the product weathers. Be aware that sealing will become a periodic maintenance task. Some teak sealer manufacturers recommend applying teak oil prior to sealing, which can intensify the color and grain appearance of the wood. If the teak has already weathered and you wish to restore the original finish, apply teak wood cleaner that is designed to restore weathered teak.

Caution: Do not get teak oil, teak sealer, or teak cleaner on fabric.

Caring for Vinyl Seating

Vinyl is an incredibly durable material, and it holds up well to water exposure. Because of its durability, vinyl seating is a popular choice in many different applications. While vinyl is designed to hold up well to wear and tear, it does have its limits. Time itself can take a major toll on vinyl if you don't care for it properly. It is important to clean your vinyl well on a regular basis, not just with water, but with a vinyl cleaner.

What to use?

- **Cleaner** - Many stores sell commercial vinyl cleaners. We recommend using one of these cleaners on your vinyl seats. Many people attempt to use other types of household cleaners for various reasons, including cost. However, a cleaner specifically formulated for vinyl will be better for your seats in both short and long term use. For example, bleach is often used on vinyl, but it is too harsh and will cause it to break down over time, becoming more easily damaged by day to day wear and tear. With bleach, you also risk bleaching any fabrics on or near the vinyl seating.
- **Water**- Use clean, fresh water to clean your seats. Distilled water is the best because it lacks the impurities found in other sources of water that will stick around in the small crevices. If distilled water is not available, be sure to at least use tap water over lake, river, or salt water. The dirt and minerals found in bodies of water will, like the dirt and particles that you are cleaning away will start to do, wear down the vinyl like fine sandpaper. While it might remove visible contamination, it will damage the seat in the long run.

Caring for Solid Phenolic Surfaces

Everyday cleaning needs no more than a quick wipe with a damp sponge. The surface is naturally resistant to dirty fingerprints, grease, grime, and scuff marks. Below are a few basic steps to follow to keep your surfaces nice.

- Wash the surface with a mild dish-washing liquid or a powdered detergent with warm water and a soft cloth. Rinse with warm water and dry with a dry soft cloth.
- For hard to remove spots, use an all purpose bathroom cleaner, follow the manufacturer's instructions, rinse with warm water, and dry with a soft cloth.
- For very stubborn stains, make a paste with baking soda and water. Take caution, as the paste will be mildly abrasive. Work carefully to prevent damage to the surface. Dip a soft bristle brush into the paste and gently rub the spot pressing very lightly in a circular motion. Rinse the surface with warm water and dry with a soft cloth.
- Finally, after trying everything else, if spots still remain, use an undiluted household bleach. **Be very careful** to protect your skin - it is recommended to wear rubber gloves when handling bleach cleaners. Apply the bleach to the spot and let stand **NO MORE THAN NINETY SECONDS**. Rinse several times with plenty of warm water. Dry with a clean soft cloth.

NOTE: Do not use cleaners that contain aggressive acids or abrasives such as Lime-A-Way, Soft Scrub, Tilex, or other similar products.

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