

## Cleaning Colored Stainless Steel

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### Helpful Hints for Cleaning Light Interference Colored (LIC) Tiles, Panels, and Sheets

#### CLEANING COLORED STAINLESS STEEL

##### General Cleaning Do's & Don'ts:

- It is always a good idea to test the cleaner on a sample to make sure it will not harm the surface. Always follow the cleaning product manufacturer's instructions for application and surface rinsing.
- Never use abrasive products or cleaning agents with abrasive components.
- Always use chloride-free, pH neutral products

##### Cleaning adherent or hardened grime deposits (not containing adhesives)

Adherent deposits can range from hydrocarbon or oil and dirt mixtures to bird droppings. Degreasers can effectively loosen deposits containing hardened hydrocarbons or oil. Test in a low visibility spot before use. Follow manufacturer's application and rinsing instructions. **MILD ABRASIVES ARE NOT SUITABLE** for **COLORED** or **MIRROR-POLISHED** finishes.

- Use an acid free liquid degreaser that is designed for use on stainless steel.
- Use a pH neutral, acid free cleaning products.

##### Removing adhesives

If possible, contact the adhesive manufacturer and obtain their advice. The cleaning products that are necessary to remove specific adhesives can vary considerably. Solvents are generally used in combination with a soft bristle plastic brush and a soft clean cloth for applying the solution. After using the solvent, it is usually best to wash the stainless steel with a mild detergent solution to remove any residual solvent.

- Remove the tape, adherent stickers, strippable film and other deposits by hand. Avoid the use of abrasives or brushes that could scratch the surface. Plastic scrapers may be used to gently remove deposits without scratching the surface.
- Initially try rubbing alcohol, a citric acid cleaner, or a product that combines these ingredients. Other less hazardous solvents and adhesive removers may be tried.

##### Heavy fingerprints, grease, or oil

Hydrocarbon solvents are necessary for complete removal of heavier grease and oil deposits. This may include alkaline formulations with surfactant additions. It is always a good idea to test the cleaner on a sample to make sure they will not harm the surface. Follow the manufacturer's application and rinsing instructions.



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- Use an oil-free citric acid cleaner that is designed for grease removal.
- Hot water power washing with a mild detergent, oil-free citric acid cleaner, or a degreasing solution designed for this purpose can cut through many grease and oil deposits.
- Apply an acid free, liquid degreaser that is specifically designed for use on stainless steel.

### Fingerprints on small areas

Use the same products that are used for cleaning larger surfaces. It is best to check the ingredients for anything that might be corrosive to stainless steel and to test any cleaner in a less visible spot before use.

- Dilute dishwashing detergent is typically a more effective degreaser than a window cleaner.
- Proprietary oil, hydrocarbon, and wax free stainless steel degreasers are effective and are generally less messy than a detergent and water solution.

### Light surface contaminants, such as dirt and light fingerprints on exterior applications

It is not uncommon to clean stainless steel when the windows are cleaned to keep it sparkling clean.

- Vinegar or ammonia-containing window cleaning products will remove light dirt and fingerprints from stainless steel.
- Liquid dishwashing detergent or automotive detergent can be used as long as the product does not leave a coating on the surface. Coatings can adversely affect appearance and corrosion performance over time. These products can remove heavier dirt deposits and fingerprinting than window cleaners. The detergent should contain a degreaser. Some liquid detergents contain chlorides. **USE CHLORINE / CHLORIDE FREE or pH NEUTRAL PRODUCTS.** If you become aware that a product has been used that contains chlorine or chlorides, it is important to thoroughly rinse off any residual detergent or it may increase the probability of corrosion.
- There are also proprietary spray-on industrial oil and wax free stainless steel fingerprint removers designed for use on stainless steel that do not leave a coating on the surface. These products will also remove light dirt deposits. Check the ingredients carefully and follow manufacturer's instructions.

### Water Spots

Resistant water spots are usually caused by using rinse water with a high contained-solids content and allowing water to dry on the surface. The water leaves mineral deposits on the surface when it dries.



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- There are proprietary cleaners designed specifically for removing these deposits from stainless steel.
- If rinse water is needed, use clean potable water, preferably with a low contained-solids content.
- Remove the water from the stainless steel surface with an air blower or it can be wiped dry with a chamois or similar product. If the rinse water will be allowed to dry on the surface, use de-ionized water.

### **Stainless Steel Cleaners**

Not all products whose labels identify them as a "stainless steel cleaner" are safe. Some contain chlorides or acids that can cause stainless steel corrosion. It is especially important to avoid any cleaner that contains hydrochloric acid (also called Muriatic acid). Other "stainless steel cleaners" contain coarse abrasives that will scratch the finish.

Do not assume that a product is appropriate because of its "stainless steel cleaner" label. Check the ingredients and, if necessary, test the cleaner on a low visibility spot before use.

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## **Report on Stainless Steel in Architecture, Building and Construction**

*This report excerpt was prepared by Catherine Houska, Technical Marketing Resources Inc., Pittsburgh, PA, USA, consultant to the Nickel Institute.*

Stainless steel is one of the most durable materials used in architecture, building, and construction. With appropriate grade and finish selection, design, fabrication, and maintenance, the appearance and properties of the stainless steel will remain unchanged over the life of the building. These properties make stainless steel a popular choice for buildings designed to last 100 or more years, aggressive environments, applications where security is a concern, and high traffic areas. Stainless steels are corrosion-resistant because they form a thin, protective passive film on their surface. This film forms spontaneously when chromium in the stainless steel reacts with oxygen in the air. If the film is damaged or removed during fabrication or polishing, it self-repairs quickly as long as the stainless steel surface is clean. Because stainless steels do not suffer general corrosion and become thinner, the term "corrosion allowance" has no meaning in stainless steel structural design. Atmospheric corrosion, tarnishing, pitting, crevice corrosion, embedded iron, erosion/corrosion, galvanic corrosion, and stress corrosion cracking can impact the performance and appearance of building materials.

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### **SHELTERED EXTERIOR APPLICATIONS**

Atmospheric dust frequently contains corrosive sulfides, marine salts, deicing salt, iron oxide, and other contaminants. If sheltered areas, such as building eaves, are not cleaned regularly, dust accumulates, creating a more aggressive corrosion environment. The presence of chlorides and moderate levels of humidity may facilitate corrosion of a susceptible stainless steel or other metals in sheltered applications. Sheltered locations, like building eaves, tend to have more moderate humidity levels than exposed locations, thereby adding to the corrosiveness of those environments.