



Handrail Solution's Guide to the Cleaning and Maintenance of Stainless Steel

Exterior

Like all surfaces, stainless steel requires cleaning to remove dirt and grime to keep them in pristine condition. The level of cleaning and maintenance depends primarily on the environment. In some exterior instances normal rain washing is sufficient, e.g. roofing, but more polluted or corrosive environments, e.g. coastal situations, the surfaces require regular washing to retain their good looks. The type of finish can also influence the cleaning requirements, and it is recommended that the rougher the surface the more regularly cleaning is required. For example, Stainless Steel Wire has a rough surface that harbours corrosive agents which causes discolouration relatively quickly. Regular cleaning is required to remove this.

Coastal situations – Discolouration or tea staining most commonly occurs within 5 kilometres of the coast and becomes progressively worse closer to the water. Note that in situations right on the seafront, it is recommended that cleaning is performed once a month.

Interior

Dirt and grease accumulate from many sources. They can usually be removed by routine cleaning using soap, ammonia or detergent and warm water. It should be noted that nearly all abrasive cleaners will scratch bright polished stainless steel surfaces. On other finishes the cleaners should only be used in the direction of the polish. A clean, dust and grit free cloth should be used to avoid scratching. In all cases the mildest cleaning procedure that will do the job efficiently should be used, e.g. wash down with warm water and washing up liquid followed by a wash of clean warm water only followed by wiping dry with a clean absorbent cloth. For textured and rigidized finishes a nylon bristled brush will remove any dirt and grime which may accumulate in the valleys of the textured finish. After initial installation, the stainless steel will require thorough cleaning to remove any adhesive – either from the protective coating or other building operations – that may have been left on the surface. If marks such as fingerprints etc are a continuous problem a light surface coating of baby oil, clear silicone wax polish or furniture polish such as Neopol will help prevent recurrence of this problem. Care should be taken on choosing such a product to be used on the surface of stainless steel if clothing is likely to come into contact with the surface.

Precautions

Harsh abrasives should never be used on any polished metal surface. Strong mineral acids such as hydrochloric and sometimes hydrofluoric acid are used to clean masonry, but these should never be permitted to come in contact with stainless steel or any other metal work. If this should happen, the acid solution should be washed off immediately with plenty of water. Pads of ordinary steel wool incorporating soap should be avoided – there is a danger that particles of plain carbon steel from the pads may be left behind after rinsing to give unsightly rust stains. Never use oil based commercial cleaners on the outside of a building. The residual oil film can result in unwanted iridescent colours on stainless steel which can only be removed by abrasive action. Most stainless steel installed at the construction site has a PVC protection film on it. This should remain on the steel until the last possible moment to protect the surface of the stainless steel from such problems as chemical and concrete splatters.

Cleaning Frequency

This will depend very much on the local environment of the building but experience indicates that the following frequency of cleaning is sufficient to maintain the good looks of stainless steel.

Environment	Type 304	Type 316
Seafront	Grade not recommended	Monthly
Coastal (within 5km of the coast)	Grade not recommended	6-12 months
Industrial and Urban	3-6 months	6-12 months
Suburban Rural	Annually or as required by experience	
Internal	As required to maintain appearance	



Cleaning Methods		
Requirement	Method	Comments
Routine cleaning (this is important in Coastal areas)	Soap, ammonia or detergent and warm water. 3M Citrus in an aerosol can is an effect cleaner. Sponge with cloth or soft brush then rinse with clean water and dry.	Satisfactory on all surfaces. Situations directly on the seafront require cleaning once a month. Uneven surfaces or surfaces with crevices are prone to trapping corrosive agents.
Fingerprints	Detergent and warm water or organic solvent.	Satisfactory on all surfaces. To minimise recurrence use an aerosol oil cleaner.
Oil Grease marks	Organic solvent, e.g. acetone, genklene.	
Stubborn spots Stains Light discolouration Hard water spots Scale and water marks generally	Mild abrasive detergents the Jif type. Rinse and dry.	Heavy scale can be removed by the use of a hot 10% phosphoric acid solution. Rinse with ammonia and water. Dry.
Heat tint or heavy discolouration	a. Jif, Chemico b. Scotchbrite	a. Satisfactory on all finishes except mirrored and coloured. b. Used on brushed finish along the grain only.
Neglected surfaces discolouration due to accumulated grime	Use an abrasive paste such as T-cut.	On all but bright finish and coloured. This cannot be done in patches but only as a whole.
Paint	Use a paint stripper e.g. Nitromors as directed by the manufacturer then rinse with clean water	Use of soft nylon or bristle brush on textured patterns.

Note: When using chemicals, cleaners etc recommended in this document that Manufacturer's instructions must be strictly adhered to.

