

Handle Maintenance

Stainless steel maintenance

In general the minimum care is needed to maintain stainless steel in its original condition, however, in certain conditions particularly where there is exposure to salt air, a routine cleaning programme will maximise performance and service life. The solutions to specific problems are shown in the table. A number of rules should be noted:

Do:

Use the mildest cleaning procedure that will do the job effectively.
Follow the polishing lines when using abrasive cleaners.
Rinse thoroughly after cleaning operation.
Wipe dry to avoid water marks.

Don't:

Use steel scrapers or knives in removing heavy dirt deposits. This may cause rust spots, use wood, plastic or stainless steel tools.
Allow chemical sterilisers, bleaching agents or any solution containing chlorides to remain in prolonged contact with stainless steel.

Colour coated maintenance

Organic colour coatings as applied by A.S. Hardware Ltd. should be cleaned and maintained on a regular basis. The frequency of such cleaning will depend on a number of factors which include the following:

The geographical location of the building..

The environment surrounding the buildings, i.e. marine, industrial, alkaline/acidic, etc.

Levels of atmospheric pollution.

Prevailing wind.

Protection of the building by other buildings.

Possibility of airborne debris causing erosive wear of the coating.

The best method of cleaning is by regular washing of the coating using a solution of warm water and mild detergent (e.g. 5% Teepol Solution). All surfaces should be cleaned using a soft cloth or sponge, using nothing harsher than natural bristle brushes.

In industrial environments the normal frequency of cleaning should be at not more than three monthly intervals. Should there be a high atmospheric pollution the period between cleaning should be reduced.

Where the atmosphere is deemed 'rural' or 'normal' then the period of cleaning may be extended to six monthly periods.

Brass and Copper Maintenance

Polished brass material will require polishing with a suitable metal polish, e.g. 'Brasso' or similar.

Where a stove lacquered finish is applicable then the surface should be given a regular dusting and wipe down with a damp cloth, followed when dry by a wax polish.

Lacquered finishes are not indestructible and if the finish breaks down or wears away then the metal should be maintained as for polished brass.

NORTH EASTERN GLASS LTD
The Glass Centre, Heaton Junction,
Shields Road, Newcastle Upon Tyne, NE6 2XT
Telephone 0191 276 4418
Fax 0191 276 6470
Aluminium Division Fax 0191 276 6729

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Technical Guidance on Removal and Prevention of Flash Rust on Stainless Steel.

Contrary to popular belief stainless steel is susceptible to rusting if it is not correctly maintained.

Flash rust or "film rust" is caused by small steel particles on the surface of stainless steel which when combined with moisture dissolve forming iron oxides that contaminate the surface giving the appearance of rust. Examples of this type of contamination occurring are sites where grinding dust may occur.

In addition local rust spots can also occur due to small droplets of seawater which evaporate and increase the salt and chloride concentration in the air forming a greater corrosive load. Local corrosion of this type can also lead to pitting. **Even using marine quality grade 316 stainless steel near a coastal environment can lead to rust spots or tea stains.**

In general stainless steel is not maintenance free although it does have an extremely thin and dense oxide film that enables it to display rust resistance behaviour. However if this layer is perforated and the film is unable to recover automatically, the exposed metal which will start to corrode as soon as it comes into contact with moisture. Ideally therefore the passive film should remain intact at all times.

Quite often damage to the stainless steel surface will not produce problems because naturally occurring oxygen in the atmosphere will self heal the film, but should the surface become contaminated then rust formation will spread.

Traditional methods of removing local rust formation are either with pickling fluids, which can be harmful to the environment, or by mechanical methods such as with sandpaper, stainless steel brushes, or scourers, which can lead to surface damage and so reduce the resistance to corrosion.

An alternative is Innosoft B570 which is an oxide-dissolving organic fluid which has a deep cleansing effect and gives very effective and efficient results, being gentle on stains and tough on oxides and dirt. Use of Innosoft B570 quickly restores the stainless steel to its original condition, and used in conjunction with Innoclean B560 neutraliser which deposits a nanolayer on the surface to provide protection against any potential new corrosion. For further information on the Innosoft and Innoclean products visit www.aalco.co.uk.

It is important to remember that a maintenance protocol will need to be established by regular cleaning and periodic reapplication of the nanolayer.