

## KEY METHODS FOR CLEANING STAINLESS STEEL

- The product referenced in this information sheet is understood to be suitable for stainless steel. However, no endorsement of the products or their manufacturers is implied and it is acknowledged that other manufacturing companies may provide products of equal or better quality.

The following companies manufacture proprietary names mentioned:- 'CIF' - Lever Brothers Ltd, 'Shiny Sinks' - Home Products Ltd, 'Ajax' - Colgate Palmolive Ltd, 'D7 Stainless Steel Polish' - Diversey Ltd, 'T-Cut' - Automotive chemicals Ltd and 'Solvol' Auto Chrome Metal Polish' - Hammerite products Ltd.
- Cleaning agents should be approved for use under the relevant environmental regulations and, in addition, prepared and used in accordance with the manufacturers or suppliers' health and safety instructions. Solvents should not be used in enclosed areas.
- Nylon abrasive pads should be adequate for dealing with most deposits. If a more severe treatment is needed to mask coarse scratches or physical damage on a surface, use the finest abrasive medium consistent with covering the damage marks.

With directional brushed and polished finishes, align and blend the new "scratch pattern" with the original finish, checking that the resulting finish is aesthetically acceptable. Silicon carbide media may be used, especially for the final stages of finishing. Avoid using hard objects such as knife blades and certain abrasive/scouring agents as it is possible to introduce surface scuffs and scratches. Scratching is particularly noticeable on sink drainer areas. There are usually superficial and can be removed with proprietary stainless steel cleaners or, alternatively, with a car paint restorer, such as 'T-Cut'.
- If wire brushes are used, these should be made of a similar or better grade of stainless steel. Ensure that all abrasive media used are free from sources of contamination, especially iron and chlorides.
- When cleaning a surface with any chemical preparation or abrasive medium, a trial should be done on a small, unobtrusive hidden or non-critical area of the surface, to check that the resulting finish matches the original.
- To avoid watermarks, use clean rinsing water, such as reasonable quality potable (tap) water. Drying marks may be avoided using an air blower or wiping with disposable wipes.
- Rust marks or staining on stainless steel is unlikely to be the result of corrosion to the stainless steel itself (similar marks may also be found on porcelain and plastic sinks). These marks are likely to result from small particles of carbon steel from wire wool or scouring pads become attached or embedded in the surface. In the damp environment of a sink, these iron particles rust and cause staining.

Rust marks may be removed using non-scratching creams or alternatively using an oxalic acid solution, where particles have been embedded in the surface. Special precautions are necessary with oxalic acid, as, although it may not 'burn' unprotected skin, it is poisonous, if ingested.
- Chloride-containing solutions, including hydrochloric acid-based cleaning agents and hypochlorite bleaches can cause unacceptable surface staining and pitting, and should not be used in contact with stainless steels. Under no circumstances should concentrated bleached contact decorative stainless steel surfaces. Hydrochloric acid based solutions, such as silver cleaners, or building mortar removal solutions must not be used in contact with stainless steels.

Hypochlorite containing bleaches must be used in the dilutions suggested in the manufacturers' instructions and contact times kept to a minimum. Thorough rinsing after use is very important. A frequent cause of staining and micro-pitting of stainless steels is splashing with undiluted bleach solutions and mortar cleaners.

Soaking stainless steel sinks and cookware in dilute bleach solutions for long periods e.g. over night is not advisable. Similarly, common salt added during cooking or concentrated salt/vinegar mixtures may cause pitting over a period of time. It is good practice to wash stainless steel after food preparation and cooking.
- Heavy tinting (oxidation) of stainless steel surfaces is unlikely to be encountered in normal use. Normally repeated cleaning with non-scratching creams should remove burn marks from stainless steel cookware, but in exceptional cases, (e.g. after a repair requiring welding or fire damage) it may be necessary to clean these areas using nitric acid- hydrofluoric acid pickling pastes or a nitric acid passivation solution.