HOW TO CLEAN STAINLESS STEEL

Changing how food is served.

Stainless steel is one of the easiest materials to clean and keep clean.

The reasons it's easy to clean stainless steel are simple to see; they lie in the nature of the metal itself.

1. It's hard, tough surface. Stainless steel will work harder, that is, the more it is used, the more resistant to wear it becomes. Stainless steel will not develop rough spots that harbor bacteria and soil.

2. High-corrosive resistance. Stainless steel is practically untouched by the corrosive attacks of moisture, detergents, food acids, blood, salts and other corrodents connected with food. This means that stainless steel always has a bright surface free from oxides that can affect the flavor of foods.

The secret of maintaining stainless steel is frequent, scheduled cleaning that will prevent build-up of surface deposits. Surface deposits, if allowed to remain for long periods of time can harm stainless steel. Stainless steel thrives on exposure to air; under certain conditions, the lengthy deprivation of oxygen by heavy soil deposits can cause localized pitting or staining.

Neglecting the material in this manner is definite abuse, which even stainless steel is not immune.

Two Basic Rules:

1. Clean frequently, and on a fixed schedule.

2. Select the simplest method.

To remove ordinary dirt and food residue from stainless steel equipment that operates at low temperatures, use ordinary soap and water and apply with a sponge, fiber brush or cloth. To hasten action, add either soda ash, baking soda, borax or any of several non-abrasive commercial cleansing agents.

To remove splatter or condensed vapor which have "baked" onto the equipment, the treatment outlined above is often sufficient. In other cases, a gentle to vigorous polishing action may be necessary.

First try a paste made with water and ammonia as the liquid and either magnesium oxide, finely powder pumice or French chalk as the solid. You can also use one of several commercial cleaners listed in the following table.

Rub as gently as possible in the direction of the polishing marks on the steel, using a soft cloth. For more resistant deposits, use a stainless steel scouring sponge or stainless steel wool of the finest possible texture.

What *Not* to Do:

Do not use common steel wool, scouring pads, scrapers, wire brushes, files or other steel tools, since these can mar the stainless steel. These particles will eventually rust and stain the surface, and you may have to refinish it.

Slightly darkened areas sometimes appear on stainless steel surfaces where heat has been applied during fabrication or in service.

These are caused by thickening of the protective surface of stainless steel, and are not harmful. Removal calls for energetic scouring, again using a stainless steel wool or scouring pad, combined with a scouring powder or one of the heat-tint removers listed in the table.

Three Rules will Prevent Heat Tinting:

1) Use only enough heat to do the job efficiently.

2) Do not apply heat to empty equipment.

3) Avoid concentrating heat on a small area.

*****Caution is Advised*****

In sterilizing stainless steel equipment, pay particular attention to agents containing chlorine compounds such as potassium hypochlorite. These compounds may break down and release free chlorine, or hydrolyze to form hydrochloric acid.

Stainless steel resists attack by such compounds for up to two hours. Severe localized pitting may occur from longer exposure. For safe use of these agents, keep contact time short, flush thoroughly with water, and operate equipment normally between applications. Using these precautions, the sterilization process can be repeated any number of times.

Cleaners and Their Effect on Stainless Steel

1. Tightly adhering deposits of "baked on" spatter, oil, grease, weather stain, dyes or other light discoloration may be removed with any of the following cleaners:

Cleaning Agent	**Method of Application**	**Effect on Finish**
Grade FFF Italian pumice whiting or bon ami	scour or rub with damp cloth	satisfactory for all finishes; use light pressure on no. 7
Liquid NuSteel	scour or rub with small amount on damp cloth	satisfactory for all finishes, if rubbing pressure is light
Paste NuSteel or Temp	scour or rub with damp cloth	Satisfactory for no. 4 finish; will scratch no. 7
Household cleaners such as Old Dutch, Sunbrite, Wyandotte, Bob-O, Gold Dust and Sapolio	Rub with damp cloth	Will scratch no. 4 finish slightly
Grade F Italian Pumice	Rub with damp cloth	Will scratch no. 4 finish slightly
Cooper's stainless steel polish	Rub with damp cloth	Satisfactory for no.4

Allen stainless steel polish	Rub with damp cloth	Scratches considerably but leaves mirror reflection
Best Effect Chemical Co. cleaner & Passivator	Rub with damp cloth	May scratch no.4 finish slightly

2. Heat tint or heavy discoloration with the following:

Cleaning Agent	**Method of Application**	**Effect on Finish**
Allen stainless polish	Small amount on damp cloth remover	Excellent heat tint
Birdsall's "Staybright"	Rub with damp cloth	Very good for heat tint removal; does not scratch no. 4 finish but does scratch no. 7 finish
Wyandotte or Bob-O	Rub with damp cloth	Good for heat tint removal
Oxalic acid	Swab or immerse; always follow with 5% sodium carbonate or neutralize rinse	Good discoloration remover
Best Effect Chemical Co. Cleaner & Passivator	Rub with damp cloth	May scratch no 4 finish, but leaves clean surface

3. The following detergents and solvents are excellent removers of grease, oil and fatty acids, where swabbing or rubbing is not practical.

Cleaning Agent	**Effect on Finish**
4 to 6% solution of (sodium Metasillcate) (Trisodium Phosphate) (Sodium Metaphosphate) (Sodium Pyrophosphate)	All excellent removers of grease, oil, and milkstone
5-15% caustic soda (hot or cold)	Will remove grease and milkstone

4. The following organic solvents may be used for removing oils and grease deposits:

Cleaning Agent	**Effect on Finish**
Carbon-tetrachloride, Naphtha, Trichlorethylene Acetone, Kerosene, Gasoline, Ether, Alcohol, Benzene	No affect on finish, however, take all precautions against fire

Notes: Ordinary wool or steel brushes should never be used on stainless steel surfaces. Particles of steel may become imbedded in the stainless steel surface, and rusting of these particles will eventually appear as stains. Use stainless steel wool or sponge on stainless steel equipment. Heat tint removers will usually scratch stainless steel surfaces. This, however, is necessary in removing heat tint by hand. Oakite, a fibrous material, may be used in place of metal sponges or cloth pads for applying cleaners and polishes. This material is effective in aiding in removal of milkstone.

For heavy hard water deposits, 15-20% (by volume) nitric acid is very effective. Acid treatment should be followed by a thorough water rinse.

The action of soldering fluxes should be neutralized immediately with a 5% sodium carbonate solution.

Soap and water followed by a water rinse will not harm stainless steel.

The above information was taken from a pamphlet by Mr. Richard E. Paret, stainless steel specialist, American Iron and Steel Institute.