

Quality Department

Advices for the maintenance of stainless steel...

...in order to have joy at these high-grade material for a long time.

Consecutively we elaborate on this material, which is also referred to as high-grade steel.

For our products we use the stainless steel X5CrNi18-10 (according to EN 10 088-2) whose surface can be polished, matted or satin.

According to normal use, this steel will be consistent against water, steam, humidity, low organic and anorganic acids. Stainless steel is used particularly for household appliances, household articles, cabinets, kitchen and for food industry.

Initial cleaning:

After assembling or placing the unit in position, it must be cleaned to remove construction and/or assembly dirt.

Remove the self-adhesive plastic protection foil from the stainless steel surface as soon as protection is no longer required. Also remove protective layers of paper, remains of labels, tapes etc. as these could lead to corrosion.

For initial cleaning mostly abrasive cleaning agents (with soft polish-ingredients) or low acid cleaners are used. Acid cleaners always must be free from hydrochloric acid, which could cause discolouring or pitting corrosion.

Realisation and appliance of cleaning the stainless steel surfaces must be execute according to instructions from producers of different cleaning agents. For cleaning only use soft flannels. Persistenter soils have to be removed intensive with soft card webs. Cleaning residues rinsing with cold fresh water. For drying the surface use soft cloths (e. g. lint-free kitchen paper as well).

Paint is to be removed with adequate organic solvent cleaner.

Any lime or plaster splashes on the surfaces, which are still wet can be removed carefully using a rubber or a wooden scraper. Any dry lime or plaster splashes can be removed using diluted phosphoric acid and then rinsing with cold and tidy water.

For cleaning do not use normal iron-tools (scraper, steel-wool), because corrosion can be the result.

Under no circumstances should be used cement remover (for tiles) or diluted hydrochloric acid.

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Everyday cleaning:

Non-abrasive cleaning agents must be used to clean the stainless steel surfaces (e. g. standard cleaning liquids).

Grease and oily pigment dirt can be easily removed with

- general cleaning agents
- neutral cleaning agents
- alkaline cleaning agents.

Heavy oily dirt (hardened oils and grease) and soiling with tar can be removed with solvent cleaning agents and non-abrasive emulsions (attention: but not for coloured coated surfaces).

Mechanical cleaning agents for stainless steel:

Agent	Adequate	Not adequate
Brush products.	Non stiff-bristled brushes with plastic bristles, original bristles or brushes stainless. Not for coloured coated surfaces. Do not use stainless steel bristles for engravings, such as QR codes.	Brushes with non-alloy steel wire. Grit-bristled brushes. Plastic bristles with grit.
Fabrics.	Fabrics made of natural and man-made fibres such as cleaning wool and woven fabrics (stitched and woven goods, cleaning cloths, scrubbing cloths, fringe material, fleece. Cleaning fabrics made of micro-fibres are also particularly suitable for removing fingerprints from stainless steel surfaces.	
Plastic fleece.	Only without abrasive grain.	Generally abrasive plastic fleece.
Steel wool.	Only steel wool stainless. Not for coloured coated surfaces. Do not use s/sl steel wool for engravings, such as QR codes.	Normal steel wool must not be used. By using normal steel wool the stainless steel surfaces will be damaged with the consequence of loss by rust.
Abrasive paper.	Suitable to only a limited extent with fineness of grain in addition to Korn 400. Not on coloured coated surfaces of stainless steel! Do not use for engravings such as QR codes.	With fineness of grain to Korn 400.

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Agent	Adequate	Not adequate
Other.	<p>Natural leather (washleather), artificial leather, artificial fleece, sponges, sponge cloths, kieselgur, magnesia, magnesium carbonate, slurry chalk, polish vienna chalk, polishing compound parisien red.</p> <p>Check, if it is usable on coloured coated surfaces of stainless steel. Do not use for engravings such as QR codes.</p>	<p>Carborundum (silicon carbide), corundum, emery, silica, feldspar, pumice.</p>

Chemical cleaning agents for stainless steel:

Agent	Comment
General cleaning agents.	Particularly effective for light oily dirt.
Neutral cleaning agents.	For surfaces soiled with grease and oil (fingerprints); also suitable as washing up liquid.
Alcohol cleaning agents.	See general cleaning agents.
Alkaline cleaning agents.	Especially for heavy grease and oil dirt (hardened oil).
Abrasive alkaline cleaning agents.	For heavy grease soiling and deposits of rust, grime and stains due to water spottings of limy water. To be effective, the agents must be harder than soil, but softer than stainless steel in order not to damage the surface. But: Do not use for engravings such as QR codes.
Solvent cleaning agents.	Depending on the type, especially good for the remove of: Grease, oil, wax, adhesives, paint, varnish.
Non-abrasive emulsion cleaning agents.	Specially for heavy grease soiling, wax, paint and tar. Better than non abrasive alkaline cleaning agents, but worse than solvent cleaning agents.
Abrasive emulsion cleaning agents.	See abrasive alkaline cleaning agents, but better cleaning effects in order to remove tar and heavy oil dirt.

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Agent	Comment
Disinfection cleaning agent.	Effect on morbidic (pathogenic) germs is different depending on disinfectant substance. Use products which are listed by the German Association for Hygiene Products (DGHM).
Chloric cleaning agents.	Work detergent and disinfectant. Long-term effect with high concentrations can damage the material. The pH-value must not fall under 8, because hydrochloric acid is generated which destructs the substance. The effect is pitting corrosion.
Acid cleaning agents.	Removes calcification, rust, fat and light soiling with grease. These cleaning agents must be non halogen. Hydrochloric acid or hydrofluoric acid must not be included. These acids damage the surface. Attention for coloured coated surfaces of stainless steel!
Detergents for high pressure cleaner.	By building the foam the drain of the cleaning agent on the surface will be constricted. Its residence time will be stretched.
Cleaning agents for simultaneous conservation.	Advisable for small soilings. Conservation protects the stainless steel surfaces against rust and other harmful substances. On coloured coated stainless steel surfaces cords or spots can be formed which damage the look. Attention for coloured coated surfaces of stainless steel!