

Protection, cleaning and care of stainless steel products

In the canteen kitchen the following stainless steel is used: Material number: 1.4301 Stainless steel

1.4301 is also called:
"18/10";

Chrome-nickel steel
"Nirosta"; V2A

1. Properties of stainless steel (W-No. 1.4301)

1.1. What distinguishes "Nirosta" (W-No. 1.4301)?

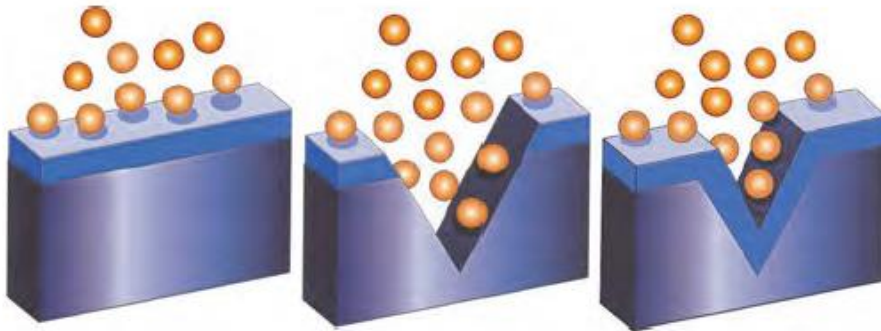
Stainless chrome-nickel steel is characterised by the following features:

- High hygiene due to pore-free surface (dirt and grease can be washed off easily)
- Resistant to environmental pollution (water, organic acids,...)
- Very corrosion-resistant even after decades of intensive use
- Easy to clean
- Insensitive to moisture
- Non-magnetic
- 100% recyclable
- Not scratch-resistant: The visibility of the scratches decreases with increasing use, however.

→ optimum material for kitchens, sanitary areas and laboratories

1.2. How does chrome-nickel steel protect itself against corrosion?

Stainless steel (W-No. 1.4301) owes its corrosion resistance to its thin, transparent passive layer, which is the result of the reaction of oxygen (from air or water) with the alloy component chromium. Surface damage is not a problem either, since the passive layer spontaneously rebuilds under the influence of oxygen → even after decades of intensive use, the original corrosion resistance is given.



1.3. How can the passive layer be destroyed?

Reducing (i.e. oxygen-consuming) attack agents, such as substances containing hydrochloric and sulphuric acid, chlorides and seasoning concentrates (vinegar essences, saline solutions) can under certain circumstances lead to chemical damage or disruption of the passive layer, making the material vulnerable and possibly leading to corrosion.

2. General instructions for use and care

- Stainless steel can also corrode (rust) if handled incorrectly → Observe the following instructions
- After each cleaning, the stainless steel surface should be rinsed with plenty of clear water.
- Scratches from objects made of conventional steel (black plate, iron pan, wire washer, wire brush,...) can cause problems: As a result of scratching, iron particles that begin to rust easily deposit on the stainless steel surface.
- In order to avoid major damage, it is important to detect the onset of corrosion at an early stage.

2.1. Initial cleaning / assembly

- Iron particles which originate from working with conventional steel in a stainless steel environment or which are deposited on the "Nirosta" surface by flying sparks, welding splashes, chips or grinding dust must be removed immediately to prevent punctual corrosion - the iron particles can break through the passive layer locally - → the removal of lime or cement splashes should therefore be carried out with a wood chip instead of a spatula.
- Never apply aggressive agents to the stainless steel surface. Such means include:
 - Aggressive silicone remover
 - Cement film remover, which can reach the surface near the stainless steel product, e.g. in the course of tile cleaning.
 - Hydrochloric acid (also weak solutions), which is frequently used for acidification of adjacent masonry or tiles.

2.2. Every day or regular cleaning / maintenance

- Do not use cleaning agents containing chlorine or hydrochloric acid.
- Avoid contact with bleach or silver cleaning agents.
- Aggressive special cleaning agents (e.g. for combi steamers) are not suitable.
- Only use sponges (ferrite-free) or microfibre cloths recommended for stainless steel! Steel wool or aggressive cleaning sponges are unsuitable.
- Separate cleaning utensils should be used for stainless steel surfaces, because cleaning accessories that have already been in contact with "normal" steel can lead to foreign iron contamination and corrosion on the stainless steel surface.
- To avoid traces of lime, always wipe dry (especially in regions with hard water).
- A regular basic cleaning (every 1-2 weeks) with a special stainless steel cleaning agent should be carried out.



Rinse off cleaning agent with plenty of clear water and wipe dry if possible.



Always wipe in grinding direction, not crosswise to it



Do not use abrasive sponges or hard objects to remove stubborn dirt.



Do not use chlorinated cleaners, bleaching agents or strong acids for cleaning.

3. Solution for the removal of rust marks on stainless steel furniture

- Use a special stainless steel cleaner (e.g. "FL 1000 D" from Meturgen) to remove traces of flash rust very easily.
- Apply the cleaner with a spraying device or a cloth, let it work for 45 minutes and then rinse very well with clear water (it is also possible to use a high-pressure cleaner).
- The cleaner is only completely washed away when foam formation is no longer visible.
- If you want to be 100% sure that there are no detergent residues left, you can also check the draining water with PH strips.



This cleaning process can be carried out both by the customer's own cleaning personnel and by a service employee (against payment).