GUIDE: HOW TO CLEAN FH PRODUCTS

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1.0 Rules for cleaning

- Always use products following **directions and concentrations** as **stated on labels**.
- **Do not mix** products.
- **Do not mix detergents and disinfectants**: the detergent might **neutralise** the disinfectant.
    - Detergents and disinfectants **can be used together only if** they are part of a product with combined effect (products that contain both types of agents), meaning that
    → these products are ready-made and sold like that.
- Do not use blended products that have been open for a long time: these could have lost effectiveness because → the components could have separated.
- Before using cleaning products, personnel must **carefully read the label** or instructions for use.
- Using a cleaning product incorrectly can cause **permanent damage** to treated surfaces.

2.0 A few things to watch out for

- **Ammonia, bleach, chlorine and chlorhexidine products:**
always use a diluted solution to avoid damage to the plastic and ensure effective cleaning.
→ disinfection with chlorine: typically at a concentration of 1,000 ppm and 10,000 ppm in the case of blood and body fluid stains.
- **Never leave steel damp or wet from cleaning fluid or even water:** the surface should be **rinsed** with a damp cloth to remove residue **and then dried thoroughly**.
- **Avoid any contact on all materials with acidic** (muriatic/chloric acid) or **alkaline** (sodium hypochlorite/ bleach/ bleach) products.
→ **also pay attention to the vapors of these substances.**
- **Take care when using steel wool pads** or similar instruments to **remove solid residues** (plasters, adhesive tapes, etc.).
→ this includes **abrasive pads** like scotch-brite pads: be aware that these mechanical methods can **create scratches** on the surface that cannot be remedied.
- Products that can **scratch the surface** of parts such as VIM®, ATA® and others **are not suitable for cleaning**.
- **Avoid contact** of all products with **concentrated acids**, both mineral and organic, **oxidising agents, ethers, esters, acetones, halogenated and aromatic hydrocarbons** (e.g. petrol).

3.0 Disinfection tips

Disinfection using a cloth

Disinfecting surfaces by wiping creates a simultaneous and synergetic cleaning effect. Disinfection with a cloth is therefore also **the most effective method**. Direct contact ensures even and targeted coverage of dirt on the surface.

Application:
For proper application, coarse impurities must be removed in advance with a disposable cloth soaked in disinfectant. Apply constant light pressure while cleaning and disinfect the surface and leave no gaps.

Disinfection using a spray

Spray disinfection is easy to handle because, unlike wipe disinfection, it is less labour-intensive. Hard-to-reach surfaces are simply sprayed, and application and drying time are reduced.

Implementation:
With spray disinfection, **surfaces** must be small, clean of coarse dirt and **remain dry at the end of the procedure**. The spray must completely cover the surface. The surface must remain moist during the application time. Solvent-sensitive surfaces should not be considered for this disinfection method.

4.0 CLEANING and MAINTAINING stainless steel

Patchy oxidation, limescale deposits and rust can occur on stainless steel surfaces if these are not properly cleaned and maintained.
The following are tips and warnings to prevent this from happening.

The type of steel used for the construction of our trolleys and accessories is of the **best quality AISI 304** (often called 18/10 Nickel-Chrome).
AISI 304 stainless steel is resistant to the most common sanitising products on the market and used in the healthcare sector. This means being able to act decisively against viruses and bacteria, and it also means being able to repeat cleaning operations several times a day, without risking damage to surfaces.

Stainless steel 18/10 AISI 304, is among the materials that best resist corrosion by chemical agents and is a metal that prevents bacterial proliferation.
Thus: stainless steel is the perfect material for use in healthcare, particularly in operating theatres.

It is wrong, however, to think that stainless steel is indestructible and will not corrode: it must

be kept strong and 'fit' by treating it with due care.

Stainless steel is defined as such because it resists corrosion thanks to a thin oxide film which forms at molecular level on its surface.
This film, formed by the oxygen absorbed when the metal is exposed to air, becomes a natural protective barrier against normal atmospheric agents.

It is clear, therefore, that anything preventing the formation or permanence of this film on the surface drastically reduces its resistance to corrosion and cohesion when welding parts.

Stainless steel can also suffer considerable damage if it is not treated with the necessary precautions.
Changes in the chemical-physical nature of the environment in which it may be found, can cause very serious damage in a very short time.
Its **resistance and durability are closely linked to proper use, good maintenance and the use of suitable cleaning products** and materials to preserve its original characteristics.

MAIN CAUSES OF OXIDATION AND CLEANING ADVICE

Metallographic analyses carried out in the past on equipment with damages demonstrated unequivocally that certain substances or actions, not necessarily of an extraordinary nature, can cause problems and damages to stainless steel surfaces.

Here are some examples:

- Ferrous residues left on damp surfaces (not dried), brought into circulation by products used for cleaning surfaces. (scrapers, sanding pads, etc.).
- Chlorine or ammonia-based detergents that have not been properly rinsed.
- Chlorine-based cleaning products, such as bleach or similar, must be avoided at all costs, as they can have serious corrosion effects if not rinsed thoroughly and quickly.
- Contact with, even just vapours, acid (muriatic/chloric acid) or alkaline (sodium hypochlorite/ bleach/ washing machine) or ammonia products, used directly or contained in common detergents, for cleaning and sanitising floors, tiles and washable surfaces, may have an oxidising/corrosive effect on stainless steel (in healthcare it is forbidden to treat surgical instruments and stainless steel equipment with these products): these products are perfectly fine for tiles, floors or other materials, but should be avoided altogether on stainless steel.
- Do not use cloths or sponges soaked in normal chlorine or ammonia based detergents without properly neutralising and rinsing the area with a neutral detergent.
- Very important: the use of iron wool pads or similar instruments for removing solid residues (plasters, adhesive tapes, etc.) can leave microscopic particles that detach from them and remain on the surface, triggering a rapid, irreversible corrosion process through contact,

which is difficult to clean up if action is not taken quickly (a ferrous particle left on the surface takes a few hours to cause serious corrosion).

- Avoid high temperatures because these alter the surface colour appearance of Inox 18/10 - AISI304 steel.

THE GOLDEN RULE

1. **Always thoroughly clean** stainless steel surfaces using a
   - **damp cloth**
   - with **soap and water**
   - or common non-abrasive and non-chlorinated detergents;
2. **Rub** in the direction of the satin finish;
3. **Rinse well** with a damp cloth and **dry thoroughly**.
4. **In case of doubt, please contact the cleaning product manufacturer** to inquire whether the product is suitable for the specific material.

CLEANING PRODUCTS

There are specific products supplied by various detergent and cleaning material companies, which are used to clean and protect stainless steel surfaces.

The **best products** for cleaning 18/10 AISI 304 stainless steel are

- those **based on ammonium**, e.g. quaternary ammonium. A widely used product is SURFA' SAFE SH produced by Laboratoires Anios;
- the new products containing **Hi-speed H202** (active ingredient is 1.5% hydrogen peroxide).

Many companies produce specific products for cleaning steel, among them are HENKEL, SOILAX, DIVERSEY, LEVEL, BENCKISER.

Any product should be used strictly in accordance with the manufacturer's instructions!

5.0 CLEANING: powder coated steel and aluminum

For effective cleaning, **all detergents with a neutral pH value can be used**. **Disinfectants** are also permitted.

→ **CAUTION:** Always wipe the surface with a damp cloth to **remove residue and then dry it thoroughly**.

6.0 CLEANING: chromed steel

What to avoid:

- **Abrasive products:** abrasive sponges, steel wool, or harsh detergents can scratch the chrome surface.
- **Sodium chloride (salt):** salt can cause stains and corrosion on steel.
- **Fabric softener:** fabric softener can leave a film on the surface and dull its shine.
- **Hydrochloric acid-based products:** these products can severely damage chrome.

What to use:

- **Warm water and mild soap:** the gentlest and safest way. Dampen a soft cloth with warm water and mild soap, gently rub the surface and rinse with clean water. Dry immediately with a soft cloth to avoid water spots.
- **Baking soda:** for tougher stains, create a paste with baking soda and water. Apply to the surface, let it sit for a few minutes, then gently scrub and rinse. Baking soda is a great natural abrasive for removing stubborn stains.
- **Chrome cleaner:** there are specific products available for cleaning chrome. Read the instructions carefully before use.

Additional tips:

- **Clean regularly:** cleaning chrome regularly helps prevent dirt and stain buildup.
- **Dry immediately:** after cleaning, always dry the chrome with a soft cloth to avoid water spots.
- **Gentle formula:** avoid harsh products that could scratch the surface.
- **Degreasing action:** it is important that the product is able to remove grease and fingerprints.
- **Polishing effect:** a good product should leave the surface shiny and streak-free.
- **Protection:** some products offer additional protection against stains and fingerprints.

7.0 CLEANING: plastic parts

For cleaning plastic parts, **warm water** (up to 70°C / 158°F) with **diluted neutral cleaning products**, slightly alkaline or slightly acidic, can be used.
Ajax®, Ariel®, Dato®, Henko®, Vernel®, etc. are just a few household cleaning products that, **diluted at 2%** in water, are well suited for cleaning various components.

It is well known that pure alcohol is an "enemy of plastic". But, when diluted as in spray-on products or wipes, it does not constitute a big problem.
The important thing when using these diluted alcohol products is

- Use the product and leave it on for about a minute;
- Use a damp cloth (just water) and remove the product;
- Use a dry cloth and dry all surfaces.

We **recommend** keeping trolleys with ABS plastic worktops **away from direct sunlight**.

We recommend to always test a hidden spot on the surface to be treated.

8.0 New generation detergents and disinfectants

For some time now, **new detergent-disinfectants** such as those containing **Hi-speed H2O2** have appeared on the market: in these the active ingredient is **hydrogen peroxide at 1.5 %** (per 100 g of product).
This type of detergent-disinfectant is **suitable for all materials** such as aluminum, steel and plastics as long as it is **used in the dilution specified** in the technical information sheet by each manufacturer.

9.0 Sanitization

Autoclaving and dry steam cleaning methods are not recommended for all our products.

Gas sterilization techniques in which **ethylene oxide and carbon dioxide** are employed can be used as long as the **temperature of 65°C / 149° F is not exceeded**.

Let us repeat an important recommendation: always test the product on a hidden spot of the surface to be treated.