

Features

Avesta spray pickle gels are used to restore larger stainless steel surfaces that have been damaged by working operations such as welding, forming, cutting and blasting. The gel also removes welding oxides, the underlying chromium-depleted layer, micro-slag particles and other contaminants that may cause local corrosion. To assist pickling, this process may sometimes be combined with some form of simultaneous mechanical treatment, for example brushing.

After pickling, the workpiece should be thoroughly rinsed with tap water. The best results are achieved by using a high-pressure water jet. This operation instantly passivates the steel surface. In this way the surface is passivated quicker – otherwise the passivation reaction may take up to 12 hours.

Avesta spray pickle gels follow the recommendations of ASTM A-380 A.1 and BS CP-312.

Products and equipment

- **Avesta BlueOne Spray Pickle Gel 230** is a new unique patented pickling spray that creates a better working environment. BlueOne makes it possible to pickle virtually without the toxic nitric fumes that are normally formed during pickling. For optimum results and maximum reduction of NO_x emissions, the BlueOne spray pickle gel should be used at temperatures ranging from 10 to 25°C.
- **Avesta GreenOne Spray Pickle Gel 220** is a new spray that makes it possible to pickle bright or sensitive surfaces without dulling or damaging the finish.
- **Avesta Spray Pickle Gel 215**, replacing Gel 214, is a new, improved product that has been developed for use with standard steel grades such as ASTM 304 and 316. The superior adhesiveness of this new gel, which is less aggressive than Gel 204, contributes to lower consumption, making it more economical.
- **Avesta Spray Pickle Gel 204** is the original spray with an all-round consistency and pickling effect that makes it suitable for most applications.
- **Avesta Spray Pickle Pump SP-25** is a low-pressure membrane pump made of acid resistant parts adapted for spraying Avesta pickling gels and chemicals.
- **Avesta-BML Neutralising Facility** is a batch working facility for treatment of pickling acids and rinse water.

Characteristics

USAGE

The spray gel is recommended for the spraying of larger surfaces.

CONSISTENCY

The spray gel has a thixotropic consistency that facilitates the application even on difficult surfaces.



SHELF LIFE / HANDLING

The products have a shelf life of one year when stored properly. Exposure to high temperatures, such as in direct sunshine, should be avoided, as this may damage the product.

The treatment should take place indoors if possible, since the process is sensitive to weather conditions as rain, strong sunlight and low (< +10°C) or high temperature (> +35°C). Degreasing with Avesta Cleaner 401 prior to pickling is strongly recommended. Any remaining dark spots (smut), after pickling, can be removed by using Avesta Passivating Agent 601.

SAFETY

Avesta First Aid Spray 910 should be readily available when using the spray gel to deal with acid splashes on the skin or in the eyes.

The formation of toxic nitric fumes can be reduced by 70 – 90% by using BlueOne Spray.

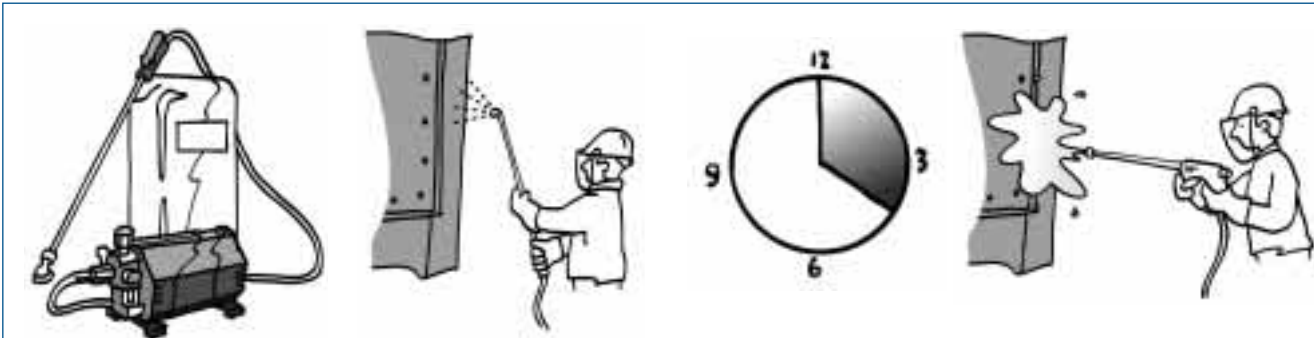
PICKLING TIME

The reaction time varies between 30 min and 4 hours depending on the stainless steel grade, temperature and contamination.

CHEMICAL PROPERTIES

Composition	Hydrofluoric acid (HF) Nitric acid (HNO ₃) Binder
Form	Liquid gel
Density	1.20 – 1.30 kg/l
pH	0
Flammable	No

Instructions for use



1. Apply the gel with an acid-resistant pump, e.g. Avesta Pump SP-25. Degrease prior to pickling.
2. Stir the solution first and then apply evenly over the whole surface.
3. Leave the fluid to work 30 minutes to 4 hours.
4. Remove pickling residues by using a high-pressure water jet. The waste water should be treated before discharge.

Neutralisation and disposal

The waste water produced by pickling contains acids and should be treated with Avesta Neutralising Agent 502 or with slaked lime to a pH-value of 7 – 10 before discharge. The neutralisation agent also precipitates heavy metals, and the resultant sludge should be sent for deposition according to local regulations.

Avesta-BML Neutralising Facility is a system for batch-wise treatment of 5 m³ per four-hour period of pickling acids, cleaners and rinse water.

Packaging

Avesta spray pickle gels are supplied in 18 kg, 30 kg, 220 kg and 1 170 kg polyethylene drums/containers, UN-approved for hazardous goods.

Other information

For further information, see also "Avesta Pickling Handbook", "Avesta Guidelines for Planning and Designing a Pickling Workshop" as well as Material Safety Data Sheets (MSDS) for the products.

Storage

Avesta spray pickle gels should be stored indoors at room temperature. Containers must be kept properly closed, in an upright position and inaccessible to unauthorised persons.

The products are perishable and should not be kept in storage longer than necessary. They have a maximum shelf life of one year when stored at room temperature.

Worker safety

Avesta First Aid Spray 910 should be readily accessible to all those who work with pickling. It comes in a handy 200 ml spray can and the content has been optimised to decontaminate small acid-splashes of pickling paste/gel.

Protective clothing. Users should wear acid resistant overall, gloves and rubber boots. Goggles or face mask should be used and, if necessary, suitable respiratory protective devices (chloride type filter).

Information given in this brochure may be subject to alteration without notice.

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