

Duplex Pickling Spray 250

A unique, stronger pickling spray.

Duplex materials are a combination of austenite and ferrite material. The oxide scale for the materials are different, which makes it more difficult to pickle. We have developed a stronger Duplex Pickling Spray that is specially made for the pickling of the Duplex grades and other high-alloyed stainless steel.

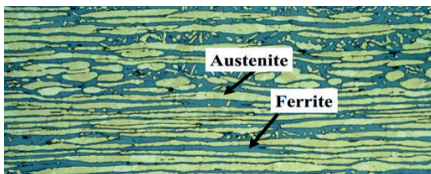


Photo: Duplex mixed structure



Photo: Usage of Duplex Pickling Spray 250 on LDX 2101[®] welded with Avesta FCW-2D 2205 Considered a difficult combination to pickle.



220kg drums



30kg drums

Photos: Available in several packages (Sizes may differ from markets)

Standard applications

The pickling spray restores stainless steel surfaces that have been damaged during fabrication operations such as welding, forming, cutting, grinding and blasting. It removes weld oxides, the underlying chromium depleted layer and other defects that may cause local corrosion.

AVESTA Duplex Pickling Spray 250 is tailor-made for spray pickling of larger surfaces of duplex and other high-alloyed stainless steel.

Features

- » Excellent pickling results on Duplex grades
- Typical pickling parameters

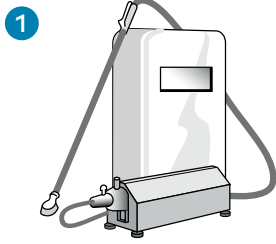
Pickling product	AVESTA Duplex Pickling Spray 250		
Material (EN)	LDX 2101 (1.4162)	2205 (1.4462)	2507 (1.4410)
Welding method	FCAW	FCAW	GMAW
Temperature	16-18 °C	16-18 °C	16-18 °C
Pickling time	60 min.	100 min.	150 min.
Consumption	7 m ² / kg		

- » Low consumption of pickling product/m²
- » Pickling at lower temperatures.
Can be used for pickling of also standard stainless grades such as 304 (1.4301), 316 (1.4401) at lower temperatures, when pickling with standard pickling spray is difficult to perform

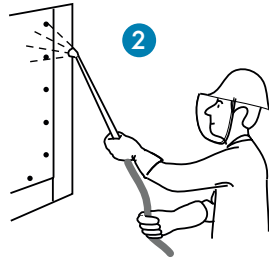


Before After
Photos: Pickling of steel grade 321 (1.4541) Temp 5°C with pickling time 90 min.

Instructions for use



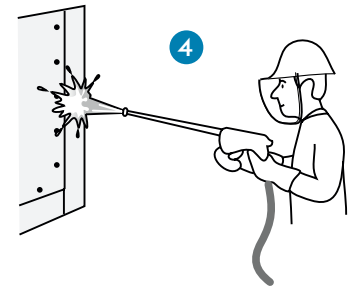
1. Apply all chemicals by using an acid resistant pump like Avesta SP 25. Start with pre-cleaning to remove oil and grease by using Avesta Cleaner 401 and then rinse off with water.



2. Stir the pickling spray before usage. Apply with SP 25 and spray evenly over the entire surface.



3. Typical reaction time for high alloyed steel grades like 2205 (1.4462) is 100 min. at 20 °C and 50 min. at 30 °C. The pickling time may vary for the same steel grade depending on surface finish and welding method.



4. Rinse off the pickling residuals by using a high-pressure water jet. Use deionized water for the final rinsing of sensitive surfaces. The waste water should be neutralized before discharge.

Packaging

Avesta Duplex Pickling Spray 250 is supplied in 20, 30 kg and 220 kg polyethylene containers or 1200 kg IBC polyethylene containers. Availability of different packages sizes may differ between markets.

All packing material follows the UN regulations for hazardous goods.

Storage

Avesta Duplex Pickling Spray 250 should be stored indoors at room temperature. Containers must be kept properly closed, in an upright position and inaccessible to unauthorized persons.

The product is perishable and should not be kept in storage longer than necessary. The spray may decompose during storage and hence need to be stirred before usage. It has a maximum shelf life of two years when stored at room temperature. Exposure to higher temperatures (>35 °C) may damage the product and reduce the shelf life.

Worker safety

Avesta First Aid Spray 910 (available only on some markets) or Hexafluorine® should be readily available to all who work with pickling to use as a first rinse to decontaminate small acid splashes of pickling spray, followed by Calcium Gluconate Gel or Solution to be used as a first aid to treat the HF acid burn.

Protective clothing. In general, users should wear acidresistant overalls, gloves and rubber boots. Face visor should be used and, if necessary, suitable respiratory protective devices.

Special conditions may apply from one country to another. Consult our website where updated Safety Data Sheets can be found.

Passivation

To further improve the result we recommend a passivation after pickling using Avesta FinishOne Passivator 630, which is a safer-to-use acid free passivation method

Waste treatment

The wastewater produced when pickling contains acids and should be treated with Avesta Neutraliser 502 or with slaked lime to a pH-value of 7-10 before discharge. Heavy metals from stainless steel are precipitated as a sludge, and should be sent for deposition according to local regulations.

Empty containers (HDPE) must be cleaned and can then be recycled according to local regulations.

Other information

For more information, please visit our website:

www.voestalpine.com/welding, where you can find Safety Data Sheets and other useful information.



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