TECHNICAL DATA SHEET (TDS) AND INSTRUCTIONS FOR USE

METOX POL 511

Electropolishing Solution

Brightening and passivation with METOX 600 in DC mode

Product Description

METOX POL 511 is a phosphoric acid-based polishing solution developed for electropolishing stainless steel surfaces and weld seams with the METOX 600 electrochemical weld cleaning machine in DC mode.

It removes micro-peaks on the surface in a controlled manner to obtain a bright, smooth surface and passivates the surface at the same time. On the smoothed surface, bacterial adhesion and dirt accumulation are reduced, cleaning becomes easier and corrosion resistance increases.

Features and Benefits

- **Bright surface:** Gives surfaces a bright, uniform appearance within seconds after welding and fabrication.
- **Hygienic surface:** Minimises bacterial adhesion and dirt accumulation by reducing roughness.
- **Passivation:** Re-forms the chromium oxide layer in the same operation as polishing.
- **Safer use:** Contains no HF or nitric acid; the corrosion inhibitor protects the equipment.
- **Compatibility:** Compatible with DC electropolishing machines, primarily METOX 600.



1 kg and 5 kg packages

Packaging

Metox POL 511 is supplied in 1 kg and 5 kg polyethylene packages. Availability of package sizes may vary between markets.

Storage

- Store in a cool, dry place in the tightly closed original container at 5 °C to 40 °C.
- Do not place in direct sunlight or near heat sources. Do not return used solution to the original container.

Areas of Use

- Food, dairy, beverage, pharmaceutical and chemical equipment and hygienic process lines
- Stainless steel tanks, pipes and fittings requiring electropolishing
- Decorative and architectural stainless steel surfaces requiring brightness
- Industrial kitchen and medical equipment

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Technical Properties

Property	Value
Product type	Electropolishing solution
Appearance	Blue, clear liquid
pH	< 1
Relative density (20 °C)	≈ 1.6 g/cm³
Flash point	Not applicable (non-flammable)
Solubility in water	Fully soluble
Compatible machine	METOX 600 (DC)
Shelf life	12 months in original packaging

Instructions for Use

Metox POL 511 is used with the carbon brush in the DC (polishing) mode of the METOX 600 machine.

1. First clean the weld with METOX KTS 501 and rinse with water.
2. Connect the METOX 508 earth clamp to the workpiece on a clean metal surface.
3. Set the METOX 600 machine to DC (polishing) mode; dip the METOX 502 carbon brush into the METOX POL 511 solution.
4. Move the brush over the surface with regular strokes without pressing; repeat until the desired brightness is reached.
5. At the end of the process, rinse the surface with plenty of water; apply a neutraliser if necessary. Clean the brush and accessories with water.

Waste Treatment

- The used solution is acidic and may contain metals dissolved from the stainless steel; it must be adjusted to pH 7–10 with Metox N-3000 or slaked lime before discharge and disposed of in accordance with local regulations.
- Empty containers (HDPE) should be cleaned and can then be recycled in accordance with local regulations.

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