TECHNICAL DATA SHEET (TDS) AND INSTRUCTIONS FOR USE

# METOX KTS 501

## Electrochemical Weld Cleaning Solution

Phosphoric acid-based electrolyte for METOX 500 / 600 machines

## Product Description

METOX KTS 501 is a phosphoric acid-based weld cleaning solution specially formulated for use with METOX 500 and METOX 600 electrochemical weld cleaning machines. It removes heat tint, light surface oxides and rust formed on stainless steel surfaces after TIG and MIG welding.

The solution acts as the electrolyte between the carbon brush and the workpiece; it passivates the surface in the same step as cleaning, restoring corrosion resistance. It is a safe alternative to weld cleaning gels and contains no hydrofluoric acid (HF) or nitric acid.

### Features and Benefits

- **Fast cleaning:** Removes the blue–purple–yellow heat tint around the weld seam within seconds.
- **Simultaneous passivation:** Re-forms the chromium oxide layer in the same operation as cleaning.
- **No surface damage:** Unlike grinding, it removes no material and leaves no marks, shade differences or dullness.
- **Safer use:** Contains no HF or nitric acid; the corrosion inhibitor protects the equipment.
- **Compatibility:** Compatible with electrochemical machines, primarily METOX 500 and METOX 600.




*1 kg and 5 kg packages*

## Packaging

Metox KTS 501 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

- TIG and MIG welded 304/304L, 316/316L, duplex and ferritic stainless steel parts
- Stainless steel equipment in the food, dairy, beverage, pharmaceutical and chemical industries
- Tanks, pipes, industrial kitchens and architectural stainless steel applications
- Spot work and on-site repairs

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## Technical Properties

| Property | Value |
|---|---|
| **Product type** | Electrochemical weld cleaning solution |
| **Appearance** | Red, clear liquid |
| **pH** | < 1 |
| **Relative density (20 °C)** | ≈ 1.1 – 1.25 g/cm³ |
| **Flash point** | Not applicable (non-flammable) |
| **Solubility in water** | Fully soluble |
| **Compatible machines** | METOX 500, METOX 600 |
| **Shelf life** | 12 months in original packaging |

## Instructions for Use

Metox KTS 501 is used with the carbon brush in the cleaning mode of METOX 500 / METOX 600 electrochemical weld cleaning machines.

1. Remove oil, dust and coarse dirt from the area to be cleaned; the electrochemical reaction does not work properly on an oily surface.
2. Connect the METOX 508 earth clamp to the workpiece on a clean metal surface.
3. Fit the METOX 502 carbon brush to the METOX 503 brush holder and dip the brush into the METOX KTS 501 solution.
4. Switch on the machine and move the brush over the weld seam with regular strokes without pressing; the discolouration visibly disappears.
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.