

# TECHNICAL DATA REPORT

HS 3981

## F-3981

### Electrolytic Cleaner for Ferrous Alloys

**DESCRIPTION:**

Tan granular blend of heavy duty alkaline powders.

**PURPOSE:**

To remove grease, lube oils, buffing compounds, fingerprints and light rust from ferrous alloys by electrolytic or immersion methods. Can be used as a non-electrolytic cleaner for zinc and copper alloys at reduced concentration, if slight metal attack can be tolerated.

**HOW TO USE:**

**Electrolytic Method:** Add **F3-981** at the ratio of 40 - 100 gram per litre of tepid, agitated water. Operate tank between 80 - 90°C, with a voltage of 6 - 12 V, either cathodic or anodic. Rinse with clean, overflow or spray, hot or cold water.

**Immersion Cleaning:** Add **F-3981** at the ratio of 40 - 100 gram per litre of tepid, agitated water. Operate tank between 80 - 90°C. Rinse with clean, overflow or spray, hot or cold water.

For immersion cleaning of zinc and copper alloys, use **F-3981** at the ratio of 15 - 40 gram per litre. Operate tank between 60 - 70°C maximum. Rinse with clean, overflow or spray, hot or cold water.

Maintain the cleaning efficiency of the tank by periodic additions of **F-3981** according to the cleanliness of the work coming from the tank or by analysis of the strength of **F-3981**.

**MAIN USERS:**

Plating plants, overhaul of jet engines by 4-stage cleaning process.

**ADVANTAGES:**

- 1) Non-flammable in powder or solution form.
- 2) Free of chromates and phenols.
- 3) Readily soluble in hard or soft water at recommended concentrations.
- 4) Rinses readily from parts with hot or cold water.
- 5) Will not attack ferrous metals, magnesium alloys, stainless steels, brass, bronze or monel alloys when used as directed.
- 6) Concentration is controlled by simple titration.
- 7) Can be used on titanium parts when diluted to 5% and used at 70 - 75°C.
- 8) Does not require post neutralisation rinse.
- 9) Excellent wetting and penetrating agent.
- 10) Biodegradable surfactants.

**PRECAUTIONS:**

**F-3981** is an extra heavy-duty product and operators should wear goggles or face shield, rubber apron and gloves to avoid burns from accidental splash-back of the cleaning solution during cleaning operations. In case of accidental contact with the skin or personal clothing flush with plenty of water. For eye contact, flush with water for at least 15 minutes and seek medical attention. Read Material Safety Data Sheet.

Avoid contact of **F-3981** solutions with copper and copper bearing alloys. **F-3981** will complex copper, which plates out on ferrous metals as a brown film, resembling rust. **F-3981** will attack and destroy soft metals such as aluminum, zinc (galvanized iron) or tin. Do not let **F-3981** come in contact with these metals.

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## SPECIFICATIONS:

Physical form .....	Tan dustless powder
Rinsing .....	Complete
Foaming .....	Low
pH @ 100 g/l .....	12.5
Solubility .....	Complete in hard or soft water
Biodegradable .....	Yes