



Technologies

TECHNICAL BULLETIN

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TURCO 4181-L

JET ENGINE CLEANING COMPOUND

1. DESCRIPTION:

TURCO 4181-L is an amber liquid compound formulated to remove rust, paints, lube oils, drawing pastes, cutting oils and protective oils from ferrous substrates and some alloys by immersion methods.

TURCO 4181-L is highly alkaline and should not be used on tin, aluminium, zinc or any alloy containing these metals as the major constituents.

TURCO 4181-L will not attack metals such as magnesium alloys, stainless steels, or Monel alloys when used as directed.

TURCO 4181-L can be used on titanium alloys when diluted to a concentration of 12-15% with water at 70°C.

2. FEATURES:

TURCO 4181-L offers these features:

1. Approved by Pratt & Whitney, General Electric and Rolls Royce.
2. Supplied in liquid form.
3. Can be dispensed by automatic dosing equipment.
4. Readily soluble in tap water at recommended concentrations.
5. Concentration is controlled by simple titration.
6. Readily rinses from metal with tap water.
7. Non-flammable.
8. Does not require post neutralisation rinse.

3. USE INSTRUCTIONS:

Tanks: Tanks and associated equipment may be fabricated from stainless steel.

Pre-Cleaning: Heavily soiled parts should be pre-cleaned to remove excessive oils and shop soils to reduce excessive contamination of the **TURCO 4181-L** bath. Your Henkel Sales Representative can recommend a suitable pre-cleaner based upon the type of soils involved and your pre-cleaning operations.

Charging Tanks: **TURCO 4181-L** may be transferred to tank and used as at 50 – 75% water. Charge tank with $\frac{3}{4}$ the required amount with cool clean water. Start mechanical agitation and slowly add **TURCO 4181-L** to agitated tank. Add balance of cool clean water to operating level.

Processing Parts: Maintain tank at 82°C to 93°C. Immerse parts completely for 15 to 60min with mechanical agitation. Rinse with warm to hot water, overflowing rinse is preferred.

NOTE: When processing titanium alloys, dilute to 12-15% with water. Operate tank from 70°C to 76°C for 15 – 30minutes. Higher concentrations and higher temperature may attack titanium alloys.

CONTROL:

Procedure:

1. Obtain a sample from the tank and allow to cool to room temperature.
2. Pipette 25 mL of the sample into a 250 mL volumetric flask and dilute to the mark.
3. Mix well and pipette 20 mL of the diluted sample into a 250 mL beaker.
Add 100 mL DI water.
4. Titrate to pH 11.4 with 1.0 N Sulphuric Acid (**DANGER!! WARNING Check MSDS**).

Calculation : ml of 1.0N sulphuric acid x 6.05 = % v/v **TURCO 4181L**

DISPOSAL INFORMATION: Dispose of spent solution per local, state and regional regulations. Refer to your Henkel Material Safety Data Sheet for additional disposal information.

DANGER! Contact may cause severe burns to skin and eyes.

TURCO 4181-L contains sodium hydroxide. Avoid contact with eyes, skin and clothing. Do not take internally. Use with adequate (equivalent to outdoor) ventilation.

Protective clothing, such as a chemical face shield or goggles, boots and apron made from alkali resistant materials should be worn when handling and using this product. A NIOSH – approved respirator should be worn during mist conditions.

3. USE INSTRUCTIONS: (continued)

Add product to cold water with care to prevent local pockets of steam. Keep containers sealed when not in use. Transport and store in closed containers below 54°C.

Hazardous carbon monoxide gas which can form upon contact with food and beverage products in enclosed spaces can be fatal. Follow appropriate tank entry procedures (see ANSI Z117-1-1977).

Before using this product refer to container label and Henkel Material Safety Data Sheet for additional storage, handling, precautionary and first aid information.

DISCLAIMER

Any information given is, to the best of our knowledge, the best currently available, with respect to our products and their use, but it is subject to revision as additional knowledge and experience is gained. Such information is offered as a guideline for experimentation only and is not to be construed as a representation that the material is suitable for any particular purpose or use. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use. This information is not a license to operate under nor is it intended to suggest infringement of any patent. We guarantee a uniform quality standard for this product. The only conditions and warranties accepted by Henkel in relation to this product or process are those implied by either Commonwealth or State statutes.