

## TURCO<sup>®</sup> 5578

### ALKALINE CLEANER AND ETCHANT FOR TITANIUM, COLUMBIUM AND TANTALUM ALLOYS

#### DESCRIPTION:

TURCO 5578 is an off-white, powdered compound formulated to clean and etch titanium, columbium and tantalum alloys by sprays or immersion systems.

TURCO 5578 readily removes mill soils, marking inks, lube oils, cutting oil and fingerprints at a low concentration and will evenly etch titanium at higher concentrations.

TURCO 5578 is an effective etch prior to adhesive bonding, diffusion bonding, painting, welding and brazing.

#### FEATURES:

TURCO 5578 offers these features:

1. Boeing Approved
2. Nonflammable in powdered or solution form
3. Suitable for use in spray or immersion systems
4. Readily rinses from alloys with hot water
5. Easy to control solution by simple titration
6. Free of chromate, phenols and hydrofluoric acid
7. Does not cause pitting, cracking, stress corrosion or hydrogen embrittlement when used as instructed.

#### USE INSTRUCTIONS:

**Tanks:** Tanks and associated equipment must be fabricated from stainless steel.

**Cleaning:** For spray and immersion systems, add TURCO 5578 to clean, cold agitated water at the ratio of 45 to 120 g/L of water, by broadcasting small amounts onto the top of the water. Never dump large quantities into water since heat is liberated and local pockets of steam may be generated. Clean parts at 80°C to 95°C. Contact time is dependent upon the type and amount of soil to be removed.

**Etching:** For spray and immersion systems, add TURCO 5578 to clean, cold agitated water at the ratio of 360 to 480 g/L of water, by broadcasting small amounts onto the top of the water. Never dump large quantities into water since heat is liberated and local pockets of steam may be generated. Clean parts at 80°C to 95°C. Contact time is dependent upon type and amount of soil to be removed. At 360 to 480 g/L of water, nominal etch rate for titanium is 0.5 to 2 mils/hour/side.

**Rinsing:** Rinse parts with tap water at 80°C to 95°C, by either spray or immersion systems followed by a 5% by volume nitric acid rinse at room temperature. A third spray rinse with D.I. water at 80°C is

recommended for cleaning/etching operation on parts that require thermal treatment in excess of 450°C or when adhesive bonding is required.

**NOTE:** For optimum results, all solutions should be made-up with D.I.water.

## **CONTROL:**

A laboratory test procedure is available upon request.

## **DISPOSAL INFORMATION:**

Dispose of spent solution per local, state and regional regulations. Refer to your TURCO MATERIAL SAFETY DATA SHEET for additional disposal information.

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

TURCO 5578 contains sodium hydroxide and petroleum distillate. 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 and gloves, boots and apron made from alkali resistant materials should be worn when using and handling this product. A NIOSH-approved respirator should be worn when handling dry powder.

Always add TURCO 5578 in small quantities to cold, agitated water by broadcasting powder onto the top of the tank. Never dump large quantities into tank, since heat is liberated and local pockets of steam may be formed.

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

Transport and store in closed containers at temperatures below 55°C away from acids and reactive metals.

Before using this product refer to container label and TURCO MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.

## **NOTICE:**

*The above information and recommendations concerning this product are based upon our laboratory tests and field use experience with this or similar products. However, since conditions of actual use are beyond our control, any recommendations or suggestions are made without warranty, express or implied. Manufacturer's and seller's sole obligation shall be to replace that portion of the product shown to be defective. Neither shall be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.*

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