



# **TURCO<sup>®</sup> 4316**

## **HEAT SCALE CONDITIONING COMPOUND**

### **DESCRIPTION:**

TURCO 4316 is a light yellow, granular, caustic compound developed to condition heat scale and thermal oxides on ferrous metals, stainless steels, magnesium and titanium alloys prior to pickling.

TURCO 4316 produces the same results as obtained by conventional molten salt baths at lower temperatures and at a lower cost per part.

TURCO 4316 should not be used on reactive metals, aluminum, copper, nickel or cadmium alloys.

### **FEATURES:**

TURCO 4316 offers these features:

1. Supplied in readily soluble, powdered form
2. Bath operates at lower temperature than molten salt baths
3. Readily rinses from parts with cold water
4. Bath controlled by titration
5. Nonflammable in granular form or in solution

### **USE INSTRUCTIONS:**

**Tanks:** Tanks and associated equipment should be fabricated from stainless steel, and equipped with mechanical agitation. Air agitation may be used for mixing purposes, but should not be used for production, since it may generate excessive sludge. A lid should be provided to reduce heat losses.

While mixing add a sufficient amount of TURCO 4316 slowly, with caution, to provide a final concentration of 760 to 775 g/L. Continue agitation until granules are dissolved. Discontinue air agitation when all granules are dissolved.

**NOTE** A Considerable amount of heat is generated when TURCO 4316 is mixed with water.

Always sprinkle granules liberally on top of water. Never dump large quantities of TURCO 4316 into water, since local build-up of heat may cause steam to be generated. Do not add water to TURCO 4316 bath when temperature is above 95°C.

**Operating Temperature:** Operate tank from 140 to 145°C for optimum performance.

**Processing:** For optimum results, immerse parts in TURCO 4316 for 10 to 15 minutes for oxides formed below 650°C, 40 to 50 minutes for oxides formed above 650°C.

Refer to TURCO Technical Data Bulletins #35, #495 and #496 for complete processing information regarding pretreatment, scale conditioning and pickling solutions for various metals.

**Rinsing:** Rinse parts in cold over-flowing water for 3 to 5 minutes. Ferrous alloys should be protected from corrosion after pickling. Your TURCO Sales Engineer can recommend a suitable corrosion preventive compound based upon your production requirements.

## **CONTROL:**

A laboratory test procedure is available upon request.

## **DISPOSAL INFORMATION:**

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

### **DANGER! Contact with skin or eyes causes severe burns.**

TURCO 4316 contains sodium hydroxide and chromate. 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, gloves, apron and boots, made from alkali-resistant materials should be worn when handling and using this product. A NIOSH-approved respirator should be worn when handling granular material.

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.)

Store and transport in closed containers at temperatures below 55°C.

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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