BONDERITE C-AK 4316 L AERO
LIQUID CONDITIONING COMPOUND
(Known as TURCO 4316-L)

Issued 2/17/2017

INTRODUCTION:

BONDERITE C-AK 4316 L AERO (Known as TURCO 4316-L) is a light yellow, liquid, caustic compound developed to condition heat scale and thermal oxides on ferrous metals, stainless steels, magnesium and titanium alloys.

BONDERITE C-AK 4316 L AERO produces the same results as obtained by conventional molten salt baths at lower temperatures and at a lower cost per part.

BONDERITE C-AK 4316 L AERO should not be used on caustic reactive metals, such as aluminum, copper, nickel or cadmium alloys.

FEATURES:

- Supplied in ready to use, liquid form
- Bath operates at lower temperature than molten salt baths
- Readily rinses from parts with cold water
- Bath controlled by titration
- Nonflammable

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.

Charging: Fill tank with BONDERITE C-AK 4316 L AERO to working volume, allowing 5% to 10% for thermal expansion.

WARNING! Fast additions of water to near boiling solutions can cause a violent reaction. Add water cautiously and slowly to mechanically well agitated solution.

Operating Temperature: Operate tank from 140 to 145ºC for optimum performance.

Processing: Immerse parts in BONDERITE C-AK 4316 L AERO for 10 to 15 minutes for oxides formed below 650ºC, 40 to 50 minutes for oxides formed above 650ºC for optimum results.

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

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CONTROL:

Apparatus:
1. pH meter
2. 205402 - Beaker, 250 mL
3. Volumetric Flask, 100 mL
4. 205943 - Pipet, 10 mL

Reagents:
1.0 N Sulfuric Acid

Procedure:
1. Pipet 10 mL sample into a 100 mL volumetric flask.
2. Dilute to the mark with DI water.
3. Pipet 10 mL from the solution into a 250 mL beaker containing 50 mL DI water.
4. Titrate with 1.0 N sulfuric acid to pH 11.

Calculation:
mL of 1.0 N sulfuric acid X 5.80 = oz/gal BONDERITE C-AK 4316 L AERO

Maintenance:
Maintain bath concentration at 90-180 oz/ gal

DISPOSAL INFORMATION:

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

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PRECAUTIONARY INFORMATION:

BONDERITE C-AK 4316 L AERO 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 equipped with a mechanical filter should be worn for mist conditions.

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.)

Damaged by Freezing - Store and transport in closed containers at temperatures between 50°F and 130°F.

Before using this product refer to container label and HENKEL SURFACE TECHNOLOGIES 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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