

TURCO[®] ALUMINETCH #3

CLEANER-LIGHT ETCHANT FOR ALUMINUM ALLOYS

DESCRIPTION:

TURCO ALUMINETCH #3 is a white, granular mixture formulated to clean soils and lightly etch aluminum by immersion methods.

TURCO ALUMINETCH #3 solution has a low surface tension which causes a uniform wetting of the metal surface and produces a smooth matte finish on extrusions, structural shapes, aircraft components, truck bodies and similar aluminum parts.

FEATURES:

TURCO ALUMINETCH #3 offers these features:

1. Nonflammable in powder form or in solution
2. Readily mixes with cold water at recommended dilutions
3. Produces minimal amount of soft, non-caking sludge
4. Operates from 50°C to 70°C
5. Produces uniform etch rate from 0.05 to 0.10 mils per minute on most aluminum alloys
6. Easily controlled by simple titration

USE INSTRUCTIONS:

Equipment: Tanks and associated equipment may be fabricated from mild steel or stainless steel. Stainless steel is preferred.

Avoid adding large quantities of material at one time as this may generate localized pockets of steam. Mix thoroughly. Maintain temperature in the range 50°C to 70°C.

Cleaning-Etching: Normal immersion is from 3 to 5 minutes. However, heavily soiled parts should be precleaned. Your TURCO Sales Engineer can recommend a suitable pre-cleaner based upon your production requirements.

Etch Rate: A 60 g/L solution of ALUMINETCH #3 at 55°C to 65°C will have an etch-rate of approximately 0.05 mils per minute. The etch rate will be fairly constant until the amount of dissolved aluminum reaches approximately 12 g/L. When the aluminum in the solution reaches 12 g/L, it becomes necessary to increase the concentration of TURCO ALUMINETCH #3 in order to maintain the same etch rate. The following procedure will maintain an approximately uniform etch rate:

1. 12 g/L dissolved aluminum per gallon - Increase TURCO ALUMINETCH #3 concentration to 67.5 g/L.
2. 24 g/L of dissolved aluminum per gallon - Increase TURCO ALUMINETCH #3 concentration to 75 g/L.

3. 36 g/L of dissolved aluminum per gallon - At this point it is generally more economical to dump the bath and recharge with fresh TURCO ALUMINETCH #3.

Rinsing: Rinse parts with warm water immediately after removal from the TURCO ALUMINETCH #3 bath.

Deoxidizing/Desmutter: After rinsing, parts should be immersed in a deoxidizer/desmutter bath. Your TURCO Sales Engineer can recommend an appropriate chromated or non-chromated deoxidizer/ desmutter. Following the deoxidizer/desmutter bath, parts should be rinsed with cold water and dried.

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 may cause burns to skin and eyes.

TURCO ALUMINETCH #3 contains sodium hydroxide and phosphate. 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 handling and using this product. A NIOSH-approved respirator should be worn when handling dry powder, or during mist conditions.

Never "dump" product into tank. Always add product to lukewarm, agitated water with care, since heat is liberated and local pockets of steam may be generated. Keep containers sealed when not in use. Transport and store in closed containers below 55°C.

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

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.

Rev. 6/99(Sup. 3/93)
TDB #928