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Product View: DEOXIDIZER HX-357
Description: Specially Designed for Heat Exchangers
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Technical Process Bulletin

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DEOXIDIZER HX-357
Specially Designed for Heat Exchangers

1. Introduction:

DEOXIDIZER HX-357 Makeup and DEOXIDIZER HX-357 Replenisher are concentrated liquid products formulated for deoxidizing or controlled etching of aluminum and its alloys.

2. Operating Summary:

<u>Chemical:</u> DEOXIDIZER HX-357 Makeup	<u>Bath Preparation per 100 Gallons:</u> 1.5 to 3.0 gallons
<u>Operation and Control:</u> DEOXIDIZER HX-357 Titration	18 to 36 points
Bath Temperature	90° to 120° Fahrenheit (32° to 54° Celsius)
Immersion time	2 to 10 minutes

3. The Process:

A complete process sequence normally consists of the following steps:

- A. Acid conditioning/deoxidizing
- B. Rinse
- C. Conversion coat
- D. Rinse
- E. Seal
- F. Oven dry

4. Materials:

DEOXIDIZER HX-357 Makeup

DEOXIDIZER HX-357 Replenisher
Testing Reagents and Apparatus

5. Equipment:

The tanks for the DEOXIDIZER HX-357 bath may be constructed of 300 Series stainless steel (Type 316L preferred) or lined with polyethylene or similar acid-resistant material.

6. Treating with the DEOXIDIZER HX-357 Processing Solution:

Buildup:

Fill the tank three-fourths full with cold water. For each 100 gallons of working volume, add 1.5 to 3.0 gallons of DEOXIDIZER HX-357 Makeup depending on desired concentration. Add sufficient water to bring the solution up to the working level, mix thoroughly and heat to operating temperature.

Operation:

Time: 2 to 10 minutes.

Temperature: 90° to 120° Fahrenheit

7. Testing and Control:

Never pipet by mouth, use a pipet filler.

DEOXIDIZER HX-357 Titration:

Pipet a 10 ml sample into a beaker or Erlenmeyer flask which contains approximately 50 ml of distilled or deionized water. Add 8 to 10 drops of Indicator Solution 11. Fill the automatic buret to the zero mark with Titrating Solution 11. While stirring the sample, slowly add Titrating Solution 11 from the automatic buret until the solution turns blue.

Replenishment:

For every 1 point lacking in titration, add 0.075 gallon of DEOXIDIZER HX-357 Replenisher per 100 gallons of bath.

8. After Treatment:

After the work has been treated in the DEOXIDIZER HX-357 bath, it should be thoroughly rinsed in cold water. The rinse should be continuously overflowed to avoid contamination.

9. Storage Requirements:

The active components of DEOXIDIZER HX-357 Makeup and Replenisher will begin to precipitate below 30° Fahrenheit. If this should happen, move the product to a warm place and stir until fully dissolved. DEOXIDIZER HX-357 Makeup and Replenisher are acidic and should be stored in a cool place away from alkaline materials and materials containing chlorine.

10. Waste Disposal Information:

Applicable regulations covering disposal and discharge of chemicals must be consulted and followed.

Disposal information for DEOXIDIZER HX-357 Makeup and Replenisher is given on the Material Safety Data Sheet for each product.

The processing bath is acidic and contains fluoride. Waste treatment and neutralization may be required before discharging.

The processing bath and sludge can contain ingredients other than those present in the chemical as supplied and an analysis of the solution and/or sludge may be required prior to disposal.

11. Precautionary Information:

When handling the chemical products used in this process, the first aid and handling recommendations on the Material Safety Data Sheet for the product should be read, understood and followed.

The processing bath is acidic and may cause irritation of the skin and eyes. Do not get in eyes, on skin or on clothing. In case of contact, follow the recommendations on the Material Safety Data Sheet.

Operators should be equipped with rubber gloves, aprons and face shields. Operators should not breathe the vapors or processing bath vapors.

Testing Reagents and Apparatus

(Order only those items which are not already on hand)

<u>Code</u>	<u>Quantity</u>	<u>Item</u>
592477	..... 1	Buret Assembly, 25-ml Automatic
592488	..... 2	Flask, Erlenmeyer, Glass, 250-ml
595193	..... 1	Indicator Bottle, clear plastic, 4 oz
592402	..... 1 qt	Indicator Solution 1l (Bromphenol Blue)
592494	..... 1	Pipet Filler
592492	..... 2	Pipet, Volumetric, Glass, 10-ml
592427	..... 1 gal	Titration Solution 1l (0.1N NaOH)

* Includes one more than actually required, to allow for possible breakage,

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Henkel Technologies
32100 Stephenson Highway
Madison Heights, MI 48071
Telephone: 248-583-9300
Fax: 248-583-2976

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Henkel Technologies
32100 Stephenson Highway
Madison Heights, MI 48071
Telephone: 248-583-9300
Fax: 248-583-2976

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