



Cal Deox-O

Acid Salt – Deoxidizer

Cal Deox-O is a mixture of dry, granular, free-flowing acid salts and wetters which are dissolved in water and used either electrolytically or as an immersion acid pickle to remove rust, scale or oxidation from aluminum, steel, iron, zinc die castings, copper and copper alloys. The solution is used at temperatures ranging from ambient to 150°F.

EQUIPMENT

Deox-O solutions must be contained in acid-resistant tanks such as polypropylene, polyethylene, PVC or rubber lined steel.

Heated solutions should be ventilated.

Quartz immersion heaters should be used for heating the solutions.

SOLUTION MAKE-UP AND USE

Some experimentation should be performed prior to charging the production tank with properly prepared sample parts using various concentrations of **Deox-O** solution, immersion times and temperatures. The sample parts should be prepared by thoroughly cleaning and degreasing the surfaces with the appropriate Cal Pac Cleaner.

Deox-O is used at 4 to 16 ounces per gallon of water. Lower concentrations are used with zinc and copper surfaces and for lightly rusted steel surfaces. The activity of the solution will be enhanced by elevated temperatures up to 150°F.

Deox-O is used at 4 to 8 ounces per gallon of water for electrolytic use with reverse current and temperatures up to 150°F for 3 to 5 minutes.

SOLUTION MAINTENANCE

Small periodic additions of the **Deox-O** salts are made to the solution to maintain the desired degree of activity. The solution is disposed of only when its effectiveness is reduced by the accumulation of dissolved metals, dirt, oil, grease, etc.

The strength of the solution may be determined by the following burette titration procedure:

Burette Titration Procedure:

1. Take a sample of the solution and cool to room temperature.
2. Pipette 10 ml of the sample into a clean 125 ml Erlenmeyer flask. Add 10 ml of D.I. water.
3. Add 8 to 10 drops of Phenolphthalein Indicator.
4. Titrate with 1.0N Sodium Hydroxide to a definite pink color.
5. Concentration of **Deox-O (oz/gal)** = ml of 1.0N Sodium Hydroxide x 1.73.

Dropping Bottle Test Procedure:

1. Use a 10 ml graduated cylinder to measure sample.
 - a. Use 5.0 ml sample if target concentration is above 8 oz/gal.
 - b. Use 10.0 ml sample if target concentration is 8 oz/gal or less.
2. Transfer sample to a 125 Erlenmeyer flask.
3. Add 10 ml water.
4. Add 4 to 6 drops Methyl Orange Indicator.
5. Swirl until mixed. The color should be reddish.
6. Add 12.0 N Sodium Hydroxide (NaOH) solution drop wise. Swirl between drops.
7. When a drop changes the solution to a yellow color, the end point is reached.
8. If a 5.0 ml sample was used, concentration of **Deox-O (oz/gal)** = number of drops of 12.0 N Sodium Hydroxide x 0.533
9. If a 10.0 ml sample was used, concentration of **Deox-O (oz/gal)** = number of drops of 12.0 N Sodium Hydroxide x 0.267

CAUTION

The **Deox-O** salts and solutions are acidic. They may cause skin and eye irritation. Eye protection, rubber gloves and a rubber apron must be worn when working with **Deox-O** and its solutions.

Avoid prolonged contact with skin.

In case of contact with skin or eyes, flush freely with running water for at least 15 minutes. For eyes, get medical attention.

Avoid contact of **Deox-O** and its solutions with alkaline materials.

Do not mix **Deox-O** or its solutions with any other chemicals or solutions.

Before using **Deox-O** the **MATERIAL SAFETY DATA SHEET** furnished by Cal Pac Chemicals Co. Inc. must be read and the specific instructions and precautions followed to assure correct use and personal safety.

PACKAGING

500 pound (net) non-returnable containers.

IMPORTANT NOTICE! For Industrial Use Only

The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: seller's and manufacturer's only obligation shall be to replace such quantity of the product as proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. **Neither seller nor manufacturer shall be liable either in tort or in contract for any loss or damage, direct, incidental or consequential, arising out of the use or the inability to use the product.**