

## **E-Pik™215**

### **Dry Acid Salts**

General purpose metal activator and deoxidizer containing fluoride. Used at room temperature on steel, copper, brass and zinc.

**E-Pik 215** is a free-flowing mixture of dry acids and is more convenient and safer to use than liquid mineral acids. It does not produce the undesirable fumes given off with strong acids. It is dissolved in water and used at ambient temperatures to remove light to medium surface rust from steel and to activate steel surfaces prior to blackening with **Insta-Blak** blackening solutions. Heavily rusted surfaces may require elevated temperatures of 150°F to 170°F. No venting required when used at ambient temperatures. It is used following the water rinse after cleaning the steel surfaces with **EPI's E-Kleen** alkaline soak and electro cleaners.

**E-Pik 215** is more moderate in its action on steel surfaces than mineral acids and produces a uniformly active surface.

**E-Pik 215** is also used to activate zinc plated surfaces, die cast zinc surfaces, copper and copper alloy surfaces prior to blackening, oxidizing, antiquing, chromating or other finishing.

#### **EQUIPMENT REQUIRED**

**E-Pik 215** solutions must be contained in acid-resistant tanks and containers. Polypropylene, polyethylene, PVC or rubber-lined steel are suitable. If heaters are required they must be teflon coated.

#### **SOLUTION MAKE-UP**

Steel	- activation	- 8 oz/gallon, 30 to 60 second immersion
	- rust removal	- 16 to 32 oz/gallon 2 to 10 minutes immersion
Copper and its Alloys	- deoxidizing	- 8 to 16 oz/gallon 30 to 60 seconds immersion
Plated and die cast zinc	- deoxidizing	- 4 to 8 oz/gallon 30 seconds to 2 minutes immersion

Residual **E-Pik 215** solution must be removed with a thorough cold-water rinse prior to further finishing.

## **SOLUTION CONTROL**

The strength of the solution is maintained by small periodic additions of **E-Pik 215** salts. The solution is dumped only when its effectiveness is diminished by accumulation of metals, dirt, oil, etc. The strength of the solution may be determined by burette or dropping bottle method.

### **Burette Titration Procedure**

1. Take a sample of the solution and cool to room temperature.
2. Pipette 25 ml of the sample into a clean 250 ml Erlenmeyer flask.
3. Add 50 ml D.I. water.
4. Add 5 drops 0.1% Methyl Orange Indicator.
5. Titrate with 1.0 N Sodium Hydroxide from orange to yellow color.
6. Concentration of **E-Pik 215** (oz/gallon) = ml of Sodium Hydroxide x 0.69.

### **Dropping Bottle Test Procedure**

1. Use a 10 ml graduated cylinder to measure out 5.0 ml of the **E-Pik 215** solution and transfer to a 150 ml beaker.
2. Add 10 ml water and 4 to 6 drops of Methyl Orange indicator.
3. Add the 12.0 Normal Sodium Hydroxide solution dropwise to the sample. Count the drops while swirling the sample solution.
4. The endpoint will be marked by a change in color from red to yellow.
5. The number of drops of 12N Sodium Hydroxide used is a measure of the concentration of the **E-Pik 215** solution:

Concentration of **E-Pik 215** (oz/gallon) = (number drops 12N Sodium Hydroxide) x 1.8

A test kit for the above procedure is available from **EPi** and contains:

- |        |  |
|--------|--|
| 1 each | 125 ml dropping bottle of 12N Sodium Hydroxide     |
| 1 each | 2 fl oz dropping bottle of Methyl Orange indicator |
| 1 each | 150 ml polypropylene beaker                        |
| 1 each | 10 ml graduated cylinder                           |

### **Process for removing the laser scale from parts**

2 lbs./gal. @ 140°F. Soak parts for 3-5 minutes.

## **CAUTION**

The **E-Pik 215** salts may cause skin irritation. Avoid prolonged contact with skin. Do not get in eyes. In case of contact with skin or eyes, flush freely with water for at least 15

minutes. For eyes, get medical attention. Avoid breathing dusts or mists. When handling and working with solutions, wear glasses, goggles or face shield.

**Do Not** mix **E-Pik 215** or its solutions with alkaline materials or with any other chemical substances. The **Safety Data Sheet** furnished by **EPI** must be read and understood prior to working with **E-Pik 215** or its solutions.

### **PACKAGING**

50 lb, 100 lb and 400 lb 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.**

12/26/2024