

E-Kleen™ 129

Non-Phosphated Heavy-Duty Desmutter/Electrocleaner

E-Kleen 129 is a powdered product formulated for the heavy-duty electrocleaning and smut removal of steel and copper. It is non-phosphated, non-chelated and offers a controlled foam blanket during electrocleaning.

E-Kleen 129 offers high conductivity with heavy soil loading capacity. Under anodic electrocleaning, **E-Kleen 129** solution works effectively to remove loose carbon smut and metallic oxides from steel surfaces following acid pickling.

EQUIPMENT

Tanks should be constructed of mild steel or stainless steel. Racks, baskets and barrels must be compatible with other metal finishing solutions used thereafter. Do not use galvanized steel, bronze, copper, tin or aluminum. Immersion heaters may be of mild steel or stainless steel for longer life. Adequate forced ventilation must be provided. Use of separate mild steel electrodes other than using the tank itself is preferred.

SOLUTION MAKE-UP

Dissolve the powdered **E-Kleen 129** in warm water while stirring. When charging a production tank, pre-mixing in a partially filled tank is recommended.

The **E-Kleen 129** solution concentration is maintained with periodic additions of cleaner to replace that consumed by removing soils and by dragout. When making replenishments to a hot cleaning solution they should be made cautiously to avoid spattering of the solution due to heat being generated when the chemicals are dissolved.

The strength of the solution is determined chemically with either a burette titration or dropping bottle test. When the cleaning solution becomes excessively contaminated with soils, it should be dumped and a new cleaning solution made up.

OPERATING PARAMETERS

Prior to electrocleaning in **E-Kleen 129**, the parts should be soak cleaned with a suitable cleaner such as **E-Kleen 105** or **E-Kleen 152**.

E-Kleen 129:

Concentration: 8 to 16 oz/gallon
Temperature: 160 - 200°F
Time: 1 to 2 minutes
Voltage: 4 to 6 volts, anodic
Current Density: 50 to 100 amps/ft²

While working with copper or for removal of light smut and oxides from steel, use the lower end of the parameters recommended above. For heavy smut and oxide removal from steel, use the higher end of the parameters.

SOLUTION CONTROL

A. Titration Method

1. Take a sample of the **E-Kleen 129** solution from the bath with a beaker and allow to cool to room temperature.
2. Pipette 25 ml of the sample into a clean 125 ml Erlenmeyer flask. Add 25 ml of water.
3. Add 5 drops of Phenolphthalein Indicator to produce a pink colored solution.
4. Titrate with 1.0N Hydrochloric Acid (HCl) until the color changes suddenly from pink to colorless.
5. Calculation:

Concentration of **E-Kleen 129 (oz/gal)** = ml of HCl x 0.3 x Normality of HCl

B. Dropping Bottle Method (Test Kit available from **EPI**.)

1. Measure out 5 ml of the **E-Kleen 129** solution with a 10 ml graduated cylinder and add to a 250 ml beaker.
2. Add 4 to 5 drops Phenolphthalein Indicator to the solution.
3. Add dropwise 5N Sulfuric Acid solution while counting the drops and swirling the solution.
4. Stop adding the drops when the color suddenly changes from pink to colorless.
5. Calculation:

Concentration of **E-Kleen 129 (oz/gal)** = number of drops Acid x 0.2

CAUTION

THIS MATERIAL CONTAINS CAUSTIC SODA. MAY CAUSE SEVERE BURNS. Do not get in eyes, on skin or clothing. Avoid breathing dusts or mists. Do not take internally. When handling, wear goggles or face shield. While making up solutions, or adding powder to solution, add slowly to surface of solution to avoid violent spattering. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, call a physician.

Do not mix **E-Kleen 129** with acidic materials, or any other chemical substances. **Do not** work with **E-Kleen 129** without first reading and understanding the **MATERIAL SAFETY DATA SHEET** furnished by **EPI**.

PACKAGING

100 lb and 400 lb (net) in plastic lined, non-returnable containers. Keep lid on when not in use. Store indoors in a dry area.

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.**