

Achophos 11

Cleaner and Iron Phosphate for Steel, Aluminum, and Zinc

Achophos 11 is a liquid acidic cleaner-conditioner for ferrous metals, aluminum alloys, zinc coated steel, zinc die castings, copper, brass alloys and stainless steel alloys.

Achophos 11 has been formulated to remove shop oils, rust, heat scale, weld scale, white rust, flux residues, oxides and tarnishes. Achophos 11 solutions have also been used for removing buffing compounds from aluminum alloys. For such applications it is suggested that the operating concentration of the Achophos 11 be maintained between 3% to 6% (volume).

The Achophos 11 solution may also serve as a conditioner by converting the metal's surface into a metal-phosphate during the cleaning operation. Ferrous metals, aluminum alloys and zinc surfaces are the metal surfaces that can be converted into a metal-phosphate, which serves as a paint base.

Another important feature of Achophos 11 is that it is an energy-saver product. Because of its formulation, this product can be used to clean metals in temperatures ranging from 75°F to 160°F (24°C to 71°C).

Features & Benefits

Liquid concentrate	Easy additions
Cleans light soils and applies phosphate in one step	Reduces number of process steps

Operating Conditions

Concentration	2% – 40%
Temperature	75°F – 170°F (24°C – 77°C)
Time	As required
Equipment	Stainless steel, Polypropylene, Polyethylene, fiberglass or rubber lined tanks
Heaters	Stainless steel or nickel-plated



Cleaning
the Hard to Clean



Finishing
the Hard to Finish



Treating
the Hard to Treat

	piping
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Hand wiping application

1. Wipe surface with 1 to 3% (volume) solution of Achophos 11 at room temperature.
2. Let dry for 1 to 2 minutes.
3. Wipe with cloth.

For hand applications operator must wear rubber or vinyl gloves, goggles, and protective clothing.

Achophos 11 meets federal and military specifications TT-C-490 B, method VI and Mil-C-4687, type 11.

Titration Method

1. Pipette a 10 mL sample of Achophos 11 working solution into a 250 mL Erlenmeyer flask and dilute with 50 mL of water.
2. Add 3 to 5 drops of Phenolphthalein.
3. Titrate to pink end point with 1.0 N Sodium Hydroxide solution.
4. Record mL used.

Calculation

$$\text{Concentration} = \text{mL } 1.0 \text{ N NaOH} \times 0.61$$

Test Kit Method

1. Use 1/2 mL sample and fill bottle 1/4 full of water.
2. Add 2 to 3 drops Methyl Orange indicator.
3. Add 0.72 N Sodium Hydroxide dropwise until solution turns yellow.
4. Record the number of drops used.

Calculation

$$\text{Concentration} = \# \text{ Drops } 0.72 \text{ N NaOH} \times 0.85$$

Waste Disposal

Neutralize solutions of Achophos 11 to a pH between 6.0 to 8.0 with caustic soda or soda ash before discarding. In order to be completely informed on the latest waste disposal regulations for your area, please contact the local authorities.

Caution

Achophos 11 is a mildly acidic product. Wear protective clothing, gloves and goggles when handling this product. Flush exposed areas immediately with clean cold water. For eyes, flush repeatedly with water and call a physician.

WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

Our people. Your problem solvers.

For more information on this process please call us at

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