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Product Bulletin

Product Name: Ahcophos 12
Product Code: 2201020
Revision Date: May 7, 2025

Ahcophos 12

A liquid acidic cleaner/conditioner for ferrous metals, aluminum alloys, zinc coated steel, zinc die castings, copper, brass alloys and stainless steel alloys. Formulated to remove light oils, rust, heat scale, weld scale, white rust, flux residues, oxides, and tarnishes. Can also serve as a conditioner by converting the metal's surface into a metal-phosphate during the cleaning operation.

Features & Benefits

Cleans and phosphates	One step
Phosphates various metals	Ferrous metals, Aluminum alloys and Zinc surfaces

Operating Conditions

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

Hand Wiping Application

1. Wipe surface with 1 to 3% (volume) solution of Ahcophos 12 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.**

Titration Method

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Equipment Required	Chemicals Required
10 mL Pipette	0.05%w/v Methyl Orange Indicator
50 mL Burette	1.0N Sodium Hydroxide
Burette stands	
250 mL Erlenmeyer flask	

1. Pipet 10 mL of a cooled working bath sample into a 250 mL Erlenmeyer flask.
2. Add approximately 50 mL of water.
3. Add 3 to 5 drops of Methyl Orange indicator.
4. Titrate with 1.0 N Sodium Hydroxide to a yellow endpoint.
5. Record mL used.

Calculation

Concentration = mL 1.0 N NaOH x 0.826

*Note – Phenolphthalein indicator can be used with this same titration procedure and the endpoint is much easier to see. The color changes from clear to pink. However, if you decide to use phenolphthalein as the indicator the factor changes from 0.83 to 0.42.

Test Kit Method

Equipment Required	Chemicals Required
4 oz mixing bottle	4 oz 0.5%w/v Phenolphthalein Indicator
Syringe (3mL)	4 oz 0.72 N Sodium Hydroxide

1. Using syringe, transfer 2.0 mL sample into mixing bottle.
2. Add approximately 20 mL water to bottle.
3. Add 5 to 8 drops of Phenolphthalein indicator.
4. Add 12.0 N Sodium Hydroxide dropwise until solution turns pink. Solution should fully turn color and remain stable after swirling for 10 seconds.
5. Record the number of drops used.

Calculation

Concentration = # Drops 12.0 N NaOH x 1.61

Waste Disposal

For proper disposal options, contact our Aquapure representatives.

Caution

Ahcophos 12 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.

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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 203.756.5521 or email: techservice@hubbardhall.com

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