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Product Bulletin

Product Name: Aquaease S 100
Product Code: 2002047
Revision Date: January 8, 2024

Aquaease™ S 100

Aquaease S 100 is a powdered, alkaline, heavy duty soak cleaner, developed for cleaning ferrous metals, copper, brass, bronzes, magnesium, and titanium alloys in rack or barrel lines. Although Aquaease S 100 is of medium alkalinity, it will clean brass and bronze alloys without darkening them to the extent that cleaners of similar alkalinity can. Aquaease S 100 is formulated to operate effectively in hard or softened water. Its surfactant system coupled with an extremely versatile inorganic builder base results in a formulation that is effective at cleaning a variety of fabrication oils and lubricants from the metal substrates.

Aquaease S 100 may be used on aluminum substrates although it may produce a micro etch. Higher concentrations and higher working temperature will result in greater degree of micro etch.

Features & Benefits

Medium strength soak/electro cleaner	Operates at low temperature
Used on aluminum	Micro etch aluminum

Physical Data

Solubility in water	Appreciable
Appearance and odor	Off-white to brownish granular

Operating Conditions

Concentration	4 – 12 oz/Gal
Temperature	130°F – 200°F
Equipment	Mild steel tanks and heating coils

Note: The Aquaease S 100 may be operated as low as 130°F or perhaps lower for some cleaning applications. Because of the nature of the Aquaease S 100 formulation, it is recommended that newly made solutions be heated to 160°F to insure complete dissolution of the Aquaease S 100. Once the cleaner has been completely dissolved, then the temperature may be lowered. Replenishment additions, provided they are less than 2 ounces per gallon, may be added to the solution at operating temperature.

Operating Conditions as Electro cleaner (Anodic)
Although Aquaease S 100 was developed primarily as a soak cleaner, it may also be used as an electro cleaner in rack and barrel lines. Consequently, the soak cleaner S 100 may be carried directly into the anodic cleaner, which would be the Aquaease S 100.

Concentration	8 – 10 oz/Gal
Temperature	125°F – 180°F

Note: The lower operating temperatures (125°F to 135 °F) are recommended when electro-cleaning brass alloys.

Current density	20 – 40 amps/ft^2
Equipment	Mild steel tanks, heating coils and steel anodes
Ventilation	Required when used as an electro cleaner

Tank make up Procedure
Considerable heat is generated when Aquaease S 100 is dissolved in water. A new solution should be prepared by filling the tank half full of warm water (approx. 100°F, 37°C), and slowly adding Aquaease S 100 while continuously mixing. After the Aquaease S 100 has completely dissolved, the remainder of the cold water may be added. Heat or cool to desired operating temperature before use.

Note: When adding Aquaease S 100 to an operating solution, add slowly with a “sifting” type motion to avoid the chance for solution eruption.

Titration Method

1. Pipette 10 mL of Aquaease S 100 solution into 250 mL Erlenmeyer flask.
2. Add 50 mL of water and 4 to 5 drops Phenolphthalein indicator.
3. Titrate with 0.5 N Hydrochloric Acid until the solution turns to a clear end point.
4. Record mL used.

Calculation

Factor (oz/ Gal) 0.46
Factor (g/L) 3.40
Concentration = mL 0.5 N HCl x Factor

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Test Kit Method

1. Fill sample bottle ¼ full of water.
2. Using the syringe, transfer a ½ mL sample of cleaner into the sample bottle.
3. Add 5 to10 drops of Methyl Orange indicator.
4. Add 0.72 N Hydrochloric Acid dropwise until the color changes from yellow to an orange/red end-point.
5. Record the number of drops used.

Calculation

Factor (oz/Gal)	*0.60*
Factor (g/L)	*4.48*

Concentration = # Drops of 0.72 N HCl x Factor

Waste Disposal

Discharge to a permitted disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities.

Caution

Aquaease S 100 is an alkaline product and should be handled accordingly. Avoid skin and eye contact. Wear protective clothing, goggles and gloves. Flush exposed areas immediately with clean cold water. Contact a doctor promptly in case of injury. Consult SDS for details.

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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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