

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.



Cleaning
the Hard to Clean



Finishing
the Hard to Finish



Treating
the Hard to Treat

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

$$\begin{aligned}
 \text{Factor (oz/ Gal)} & \quad 0.46 \\
 \text{Factor (g/L)} & \quad 3.40 \\
 \text{Concentration} & = \text{mL } 0.5 \text{ N HCl} \times \text{Factor}
 \end{aligned}$$



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Test Kit Method

1. Fill sample bottle $\frac{1}{4}$ full of water.
2. Using the syringe, transfer a $\frac{1}{2}$ mL sample of cleaner into the sample bottle.
3. Add 5 to 10 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

$$\begin{aligned} \text{Factor (oz/Gal)} & 0.60 \\ \text{Factor (g/L)} & 4.48 \\ \text{Concentration} & = \# \text{ Drops of } 0.72 \text{ N HCl} \times \text{Factor} \end{aligned}$$

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.

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

1-800-648-3412

or techservice@hubbardhall.com

