Aquaease™ 2289

Aquaease 2289™ is an acidic soak, ultrasonic, spray cleaner that may be used for the removal of a variety of soils and oxides from aluminum, Stainless Steel, Monel, and other high nickel alloys. Aquaease 2289™ contains a high percentage of DfE acceptable surfactants and solubilizers designed to remove forming lubricants, machining oils, and light rust or scale from these substrates. It is also effective for lime scale removal.

Aquaease 2289™ will not remove heavy scale from Stainless Steel alloys. When used as recommended will not etch most aluminum, Stainless Steel, brass, copper, Monel, or other nickel alloys.

Aquaease 2289™ can be used for part-on-part burnishing and vibratory finishing of copper alloys, Stainless Steel, Monel, and other nickel-based alloys / substrates.

Features & Benefits

Highly concentrated	Can be used as a burnishing compound
High detergency	Readily dissolves metallic soaps
DfE approved wetting and solvent system	No chloride
Removes light rust and scales	Non-fuming
Safer than sulfuric acid	Contains no mineral acids

Physical Data

Specific gravity	1.09
Solubility in water	complete
Appearance and odor	light amber, clear, mild odor
pH 10% solution	1.0 to 2.0
pH concentrate	< 1.0

Operating Conditions

Concentration	5% – 15%
Temperature	Ambient – 170°F (77°C)
Ventilation	Required when heated or used in spray systems

When used for cleaning aluminum a concentration of 5% to 10% by volume at temperatures up to 170°F with dwell times of 5 to 10 min is recommended. These parameters will result in little or no etch on most aluminum alloys.

The dilution will depend upon the soils involved. The rate at which soils, rust, and oxides are removed can be affected by build-up of iron or other metallic salts in the working solutions. This may be compensated for to some extent by increasing the temperature and or the solution concentration.

For spray applications a concentration of 2% to 5% by volume with a temperature of 160°F to 170°F. is recommended.

When used as a burnish compound a concentration of 0.2% to 2% by volume is recommend. For the removal of heavier oxides concentration of 5% to 10% by volume may be required.

Equipment	Stainless Steel, Polypropylene, Polyethylene, Fiberglass, or rubber lined tanks
Heater	Stainless Steel or nickel-plated steel piping

Titration Method

1. Take a 25 mL sample of Aquaease 2289™ solution into a 250 mL Erlenmeyer flask and dilute to 50 mL with water.
2. Add 3 to 5 drops of Phenolphthalein.
3. Titrate to pink endpoint with 1.0 N Sodium Hydroxide solution. Calculation

   Concentration = mL 1.0 N NaOH x 1.5

Test Kit Method

1. Fill sample bottle 1/2 full of water.
2. Using the syringe provided, place a 1.2 mL sample into sample bottle.
3. Add 5 drops of Phenolphthalein indicator.
4. Add 1.0 N Sodium Hydroxide drop wise until solution turns light pink. Calculation

   Concentration = # Drops of 1.0 N NaOH

Waste Disposal

Neutralize solutions of Aquaease 2289™ to a pH of 6.0 to 8.0 with either caustic soda or soda ash before discarding. In order be completely informed on Neutralize solutions of Aquaease 2289™ to a pH of 6.0 to 8.0 with either caustic soda or soda ash before discarding. In order be completely informed on those latest waste disposal regulations for your area, please contact the local authorities.

Caution

Aquaease 2289™ is an acidic product; avoid skin, eye, and oral contact. Wear protective clothing, facemask, chemical goggles, and gloves when handling the product and it's made- up solutions. Flush exposed areas immediately with copious amounts of clean, cold water. Contact a doctor immediately in case of injury.

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

Hubbard-Hall holds certifications for **ISO 9001:2015**, Responsible Distribution, as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**[136].