



Better Chemistry. **Better Business.**

Aquaease™ 2289

Product Code: 2052101
Revised Date: May 26, 2015

Aquaease™ 2289 Heavy Duty Cleaner and Brightner

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

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



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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.
pH concentrate	<1

OPERATING CONDITIONS

5% to 15% (volume) - 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.

Temperature.....	room to 170 °F (77 °C)
Ventilation.....	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 degrees F with dwell times of 5 to 10 min. is recommended. These parameters will result in little or no etch on most aluminum alloys.

For spray applications a concentration of 2 to 5% by volume with a temperature of 160 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



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CONTROL PROCEDURE

TITRATION METHOD

1. Take a 25.0 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.
4. Record ml of sodium hydroxide used.

% by Volume Aquaease™ 2289 = # ML OF 1.0 N Sodium Hydroxide Used x 1.5(correction factor).

TEST KIT METHOD

Using the syringe provided, place a 1.2 ml sample into sample bottle and fill bottle 1/2 full of water, add 5 drops of phenolphthalein indicator. Add 1.0N NaOH solution drop wise until solution turns light pink.

% by volume Aquaease™ 2289 = # Drops 1.0N NaOH Solution

WASTE DISPOSAL

Neutralize solutions of **Aquaease™ 2289** to a pH of 6 to 8 with either caustic soda or soda ash before discarding. In order to 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 its made-up solutions. Flush exposed areas immediately with copious amounts of clean, cold water. Contact a doctor immediately in case of injury.



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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.