



# Aquaease<sup>®</sup> ACLF #3

Aquaease ACLF #3 is an acid cleaner and deoxidizer for aluminum, copper alloys, steel, and stainless steel surfaces. It contains a blend of inorganic acids, surfactants and solvents to remove heavy soils quickly and effectively. It may also be used to descale steel surfaces. Aquaease ACLF #3 is extremely free rinsing and may be used in soak or spray applications. It is safe when used as directed. All surfactants used in Aquaease ACLF #3 are biodegradable.

## Features & Benefits

Combination cleaner and deoxidizer	Quick and effective
Biodegradable surfactants	Removes heavy soils
Easy to use liquid	Can be metered in; Goes a long way

## Typical Applications

- Job shops that have aluminum or stainless steel parts
- On site truck washes for brightening aluminum
- Difficult to treat parts with heavy scale or oxide that needs to be removed
- Effective prior to conversion coating, anodizing, painting and plating processes

## Operating Conditions

Spray concentration	1% – 5%
Soak concentration	5% – 25%
Time	30 sec – 10 min
Equipment	Plastic containers must be used. Tanks should be vented.

In spray applications always work from bottom up on cleaning and rinsing operations. Do not allow product to dry on work surface. Aquaease ACLF #3 will etch glass, especially if allowed to dry. Do not use this product on chrome, tin, zinc, galvanized, or magnesium.



## Titration Method

1. Transfer 10 mL of working solution to an Erlenmeyer flask. Add 10 mL of tap water to the flask.
2. Add 5 to 8 drops of Phenolphthalein indicator to the flask and mix well.
3. Titrate solution with 1.0N Sodium Hydroxide until the solution turns pink.
4. Record mL used.

Calculation

$$\text{Concentration} = \text{mL } 1.0 \text{ N NaOH} \times 0.89$$

## Test Kit Method

1. Using syringe, add 1mL of working solution to sample bottle.
2. Fill sample bottle half full with clean water.
3. Add 3 to 6 drops of Phenolphthalein indicator and mix well.
4. While mixing, add 0.72 N Sodium Hydroxide solution dropwise until the solution turns pink.
5. Record the number of drops used.

Calculation

$$\text{Concentration} = \# \text{ Drops } 0.72 \text{ N NaOH} \times 0.29$$

## Waste Disposal

Discharge rinse water and spent solutions to a permitted disposal system. To be completely informed on the latest regulations for your area, please contact the local authorities.

## Caution

Strong acid. Avoid contact with skin or eyes. Not to be taken internally.

Read and understand OSHA Safety Data Sheet prior to using or working with this product. People handling and working with this product should be properly trained in safe handling of corrosive liquid acids. Eye wash and safety shower should be readily accessible in areas in which this product is used, handled and stored.



**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.

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## Our People. Your Problem Solvers.

For more information on this process,  
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