

# Aquaease™ PL FC

**Aquaease™ PL FC** is a moderately alkaline (pH 9 to 10)), chelated, low-foaming liquid cleaner for application in any of the following types of power spray machines: monorail conveyor, continuous belt, spiral washer, or cabinet.

Aquaease™ PL FC may be used to clean aluminum, steel and other ferrous metals, copper, brass alloys, bronze alloys, stainless steel, nickel, and nickel-clad stock. The Aquaease™ PL FC will clean a variety of metal processing lubricants; synthetic lubricants, sulfurized and chlorinated oils, lard oil based, etc. It is very effective at removing zinc phosphate and soap based lubricants from drawn steel substrates.

Aquaease™ PL FC was designed primarily to remove soap based lubricants and particulate residues from draw metal parts when a moderate pH (9 to 10) cleaner is desired. It can be used for in process cleaning between drawing operations or prior to heat treatment. Aquaease™ PL FC is free rinsing and leaves no films that will cause issues if parts are to be heat treated after washing.

Aquaease™ PL FC is also an ideal choice as the alkaline cleaner in iron and zinc phosphate lines. The cleaned surfaces are well suited for the production of the smoothest and finest phosphate coatings.

Aquaease™ PL FC can be used as a spray or immersion cleaner and is very effective when used with ultrasonics. It is also very effective when used for oblique barrel cleaning and bur removal.

## Features & Benefits

- Low foam.
- Liquid concentrate for ease of addition.
- Mixes readily with cold water.
- Contains no silicates, caustic, nitrates or nitrites.
- Silicate and nitrite free cleaners are ideal for use where heat-treating follows cleaning.
- Very effective at removing metallic soaps and metallic smuts from stainless steel and other substrates.
- Excellent ultrasonic cleaner.
- Biodegradable surfactant system.
- Moderate pH.
- Tends to split most oils from cleaner.



## Operating Conditions

Concentrations:	2 to 10% (volume) optimum 5% (vol.) for most applications
Temperatures:	150. to 180 F (49 to 82 C).
Equipment:	Mild steel tanks and heating coils
Spray pressure:	15 to 35 psi.

**Aquaease™ PL FC** may be operated at a wide temperature range, 120F to 200F. Low temperatures may be used for light soils, while higher temperatures are recommended for removing phosphates and lubes or heavy oils.

## Controls

### Test Kit Procedure

1. Using syringe, place 5 ml of Aquaease PL FC into Test Bottle.
2. Add ~20 ml of water.
2. Add 5 drops of Methyl Orange / Xylene Cyanole indicator.
4. Add drop-wise, 0.72N Hydrochloric Acid to a definite purple end point.

$$\% \text{ Volume Aquaease PL FC} = \text{Drops Hydrochloric Acid, 0.72N used} \times 0.392$$

### Titration Procedure

1. Using a 100 ml Graduated Cylinder, pour 100 ml of cleaner into a 250 ml Erlenmeyer flask.
2. Add 10 drops Methyl Orange / Xylene Cyanole Indicator.
4. Titrate with 0.5 N Hydrochloric to a definite purple end point.

$$\% / \text{ volume Aquaease PL FC} = \text{ml 0.5 N HCL} \times 0.36$$



## Caution

**Aquaease™ PL FC** is an alkaline product (pH of the concentrate being 9 to 10) and should be handled accordingly. **Read and thoroughly understand the material safety data sheet for Aquaease™ PL FC prior to handling or working with it.** Avoid skin and eye contact. Wear protective clothing, goggles, and gloves. If skin or eye contact does occur, flush exposed areas immediately with clean cold water for at least 15 min. Contact a doctor promptly if eye contact has occurred.

## Waste Disposal

Discharge rinse waters and spent solutions to a permitted wastewater treatment system. In order to be completely informed on the latest regulations for your area, please contact the local authorities. **Aquaease PL FC** does contain tetra potassium pyrophosphate.

**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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