

Ardrox[®] 6471

Alkaline Immersion Cleaner

PRIMARY APPLICATION

Ardrox[®] 6471 is a heavy-duty, liquid cleaner formulated to remove difficult soils in agitated parts cleaning tanks. It will remove heavy soils, grease, cosmoline and other production soils. Because it is inhibited, it can be used to clean aluminum aerospace parts prior to chemical processing. Ardrex 6471 is a blend of alkalies, silicates, and low foam wetting agents. It is not affected by hard water, and is safe on most metals.

CHEMICAL CHARACTERISTICS

chemical composition.....	surfactants, phosphates, silicates, caustic soda
physical form.....	liquid
odor.....	mild
specific gravity.....	1.128
bulk density.....	9.40 lbs/gal
viscosity.....	similar to water
flash point.....	none
foaming tendency.....	low at operating temperature
recommended diluent.....	water
maximum solubility.....	100%
behavior in hard water.....	stable
rinsability.....	good
biodegradable surfactants.....	yes
phosphate-free.....	no
normal working concentrations.....	8 – 12% by volume
normal working temperatures.....	130°F - 180°F
pH at working concentrations.....	11.5 – 12.0

APPROVALS

Boeing BAC 5749
 McDonnell Douglas DPM 6452

APPLICATION PROCEDURE

Ardrox 6471 is mixed with water at a concentration range of 8 gallons to 12 gallons for each 100 gallons of solution (8.5 to 12.8 titration points) and then heated from 130 F to 180 F. Parts are immersed for 15 to 30 minutes or longer, depending upon the soil. They are then removed, rinsed with fresh water, and dried. Mild steel equipment is acceptable.

NOTES ON USE

The instructions are based upon standard industrial use. Some production operations may require other operating instructions. The Chemetall Oakite Representative will recommend the best way to use this product based upon production requirements.

INITIAL CHARGE

Before charging the holding tank with Ardrox 6471, make sure it is clean and free of debris.

Fill the tank ½ full with room temperature water. Do not heat above 100° F. Slowly pour in the required amount of Ardrox 6471. Add more water to fill the holding tank to operating capacity. Heat the solution.

MAINTENANCE

The concentration (and occasionally the pH) of the Ardrox 6471 solution must be monitored to achieve the best results. Use the following titration procedure to determine concentration and replenish as indicated. Perform this at the start of every shift or more frequently if production is heavy.

Concentration:

1. Using a pipette, take a 10 ml sample of the Ardrox 6471 solution from the tank and place it in a beaker
2. Add 3 drops of Bromophenol Blue indicator to the sample
3. Fill a graduated pipette to the 5 ml mark with 0.1 N Hydrochloric Acid
4. Drop by drop, add it to the beaker, gently swirling, until the solution changes from blue to yellow. Note the number of ml used; these are called points of titration
5. Compare these points to the initial points of the table below

Initial Point	Initial Concentration (gal/100gal)
8.5	8
9.6	9
10.6	10
11.7	11
12.8	12
13.8	13
14.9	14
16.0	15

6. Add 0.94 gallons of Ardrox 6471 for each 100 gallons to bring the solution strength up 1 titration point

Note: For a nominal cost, Chemetall Oakite can supply the titration equipment and reagents needed to perform the above test.

Automatic Control: The Chemetall Oakite Electrodeless Conductivity/Concentration Control System and Chemical Metering Pump can be used to monitor and automatically maintain the concentration of this product using conductivity. Please contact the Chemetall Oakite Process Equipment and Engineering Department for specific recommendations.

pH:

Normally, the pH will remain stable. If problems occur and the concentration and temperature are within range, check the pH to verify that it is correct.

SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the Material Safety Data Sheets should be read and understood by all personnel in contact with these materials.

KEEP OUT OF REACH OF CHILDREN

STORAGE

Dry indoor storage at temperatures between 40°F and 100°F is recommended, away from any incompatible materials referenced in the Material Safety Data Sheets. All containers should be tightly closed when not in use.

SHELF LIFE

Product shelf life is 2 years.

DISPOSAL

Any disposal of the materials referenced in this document should be in accordance with all applicable federal, state, and local regulations.

The process solution can contain components other than those present in the materials as supplied. Analysis of process solutions may be required prior to disposal.

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