ARDROX® 6471

Liquid 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. Ardrox 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	Alkaline salts, surfactants, corrosive inhibitors
Appearance	Amber to yellow liquid
Odor	Mild
Bulk Density	9.40 lbs/gal
Flash Point	None
Foam Tendency	Low at operating temperature
Rinsability	Good
Biodegradable Surfactants	Yes
Phosphate-Free	No
Normal Working Concentrations	8 – 12% by volume
Normal Working Temperatures	130° – 180°F
pH	11.5 – 12.0

APPROVALS

Ardrox 6471 is approved by Boeing, & McDonnell Douglas. Speak to your Chemetall representative for a complete listing of approvals.

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 - 12.8 titration points) and then heated from 130º - 180ºF. Parts are immersed for 15 - 30 minutes or longer, depending upon the soil. They are then removed, rinsed with fresh water, and dried. Mild steel equipment is acceptable.

SOLUTION CONTROL

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 make 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

Automatic Control: The Chemetall 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 Process Equipment and Engineering Department for specific recommendations.

NOTES ON USE (See Safety Data Sheet)

The instructions are based upon standard industrial use. Some production operations may require other operating instructions. The Chemetall 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.

SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the 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 (4.4°C and 37.8°C) is recommended, away from any incompatible materials referenced in the Safety Data Sheets. All containers should be tightly closed when not in use.

SHELF LIFE

The shelf life for Ardrox 6471 is 3 years.

DISPOSAL

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

Chemetall US, Inc. ("Chemetall") warrants that this product or products described herein ("Product(s)") will conform on the date of delivery with its/their published specifications. The Products supplied by Chemetall and information related to them are intended for use by buyers and/or users having necessary industrial skill and knowledge. Buyers and/or users should undertake sufficient verification and testing taking all necessary precautions to determine the suitability of the Products for their own purpose. Buyer and/or user's use of Products are beyond Chemetall's control. Chemetall does not warrant any recommendations and information for the use of Products. CHEMETALL DISCLAIMS ALL OTHER WARRANTIES INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE IN CONNECTION WITH THE USE OF ITS PRODUCTS. A BUYER'S AND/OR USER'S SOLE AND EXCLUSIVE REMEDY SHALL BE EITHER THE REPLACEMENT BY CHEMETALL OF THAT PORTION OF THE PRODUCT WHICH IS NON-CONFORMING OR THE REFUND BY CHEMETALL OF THE PURCHASE PRICE FOR THE NON-CONFORMING PORTION, IN CHEMETALL'S SOLE DISCRETION. CHEMETALL SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE, EITHER DIRECTLY, INDIRECTLY OR BY WAY OF INDEMNIFICATION OR CONTRIBUTION, TO ANY PERSON FOR ANY DIRECT, INDIRECT, SPECIAL, ECONOMIC, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE PURCHASE AND/OR USE OF THE PRODUCT, WHETHER THE CLAIM OF SUCH LIABILITY SOUNDS IN CONTRACT, TORT OR OTHERWISE TO THE FULLEST EXTENT ALLOWABLE UNDER APPLICABLE LAW.

North American Headquarters
675 Central Avenue
New Providence, NJ
07974
Tel: 908-464-6900
Toll-free: 800-526-4473
Fax: 908-464-7914

Chemetall Canada
Kenview Blvd.
Suite 110
Brampton, Ontario
L6T 5E6
Tel: 905-791-1628
Toll-free: 877-311-1471
Fax: 905-791-1459

Chemetall Mexicana, S.A. de C.V.
Avenida El Tepeyac No. 1420-B
Parque Industrial O'Donnell-Aeropuerto
El Marqués, Querétaro
C.P. 76250, México
Querétaro Tel: +52 (442) 227 2000
Monterrey Tel: +52 (81) 8371 2517

Chemetall U.S.
1100 Technology Drive
Jackson, MI 49201
Tel: 517-787-4846
Toll-free: 877-941-3800
Fax: 517-787-5538

Chemetall U.S.
46716 Lakeview Blvd.
Fremont, CA 94538
Tel: 408-387-5340
Fax: 408-809-2883

www.ChemetallNA.com