

Technical Data

Kal-Gard[®] RA Solid Film Lubricant

**CURTISS -
WRIGHT**

Everlube[®] Products

Surface Technologies Division

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Product Description:

- Solvent Based
- Modified Epoxy-phenolic binder
- Oven Cured
- Contains Molybdenum disulfide (MoS₂), metallic oxides and corrosion inhibitors.
- Available in concentrate or diluted forms in quarts, gallons and 5-gallon containers.
- Approved/qualified to many aerospace and industrial specification; these listings can be verified at <http://www.everlubeproducts.com/specifications.php>. When requesting pricing or ordering of product, listing of the specification and revision is required to assure product certification compliance.

Suggested Uses:

- To reduce friction and wear
- Prevents corrosion
- Provides exceptional wear life, chip and abrasion resistance
- Superior resistance to solvents, fuels, lubricants, and corrosive chemicals

Typical Physical Properties:

Color and Appearance*	gray/black matt finish
Solids content (by weight)*	40% (minimum)
Density*	9.6 ± .5 lbs/gallon (1.15 kg/l)
Theoretical coverage**	540 square feet per gallon at ½ mil (0.0005") dry film thickness) 13.2 m ² /l @ 12.7 microns)
Pencil Hardness (ASTM D-3363)	>4H (gouge)
Operating temperature range	-365°F to 500°F (-220 to 260°C)
Flash point	16°F (-8.9°C) (Tag Closed Cup)
Shelf life	1 year from date of shipment, stored in a factory-sealed container at 40° to 100°F (4 to 38°C)
Volatile Organic Compound (VOC):	
Concentrate	695 grams/liter
Ready-to-apply	804 grams/liter

(Continued)

Recommended Application Procedures:

Application method	Spray (preferred), dip or dip/spin
Dry film thickness	0.2 to 0.5 mils (0.0002" to 0.0005") (5 to 13 microns)
Diluting solvents	642 solvent, 50/50 MEK/toluene, MEK Other solvent blends may also be suitable.***
Dilution ratios:	
Spray	2:1 to 3:1 (solvent:product) Adjust as needed.
Dip	Neat to 2:1 (solvent:product) Adjust as needed.
Dip/spin	Neat to 2:1 (solvent:product) Adjust as needed.
Cure cycle	1 hour minimum at 400° ± 25°F (204 ± 13°C)-part temperature***

Typical Functional Properties: (for reference use only)

Film Adhesion, ASTM D-2510, Method A	Pass
Thermal Stability, ASTM D-2511	Pass
Falex Endurance Life, ASTM D-2625, Method A	>450 minutes
Falex Load Carrying Capacity, ASTM D-2625, Method B	>2000 lbs. gage
5% Neutral Salt Spray, Federal Standard 791 Method 4001.2, Type II	Pass @ ≥ 100 hrs.
Fluid Resistance, ASTM D-2510, Method C	
1,1,1 Trichloroethane, MIL-T-81533	Pass
Anti-Icing Fluid, MIL-H-8243	Pass
Cleaning Compound, MIL-C-372	Pass
Trichlorotrifluoroethane, MIL-C-81302	Pass
Reagent Water, ASTM D-1193, Type III	Pass
Substitute Ocean Water, ASTM D-1141, Vol. 31	Pass
Hydraulic Fluid, Synthetic Hydrocarbon, MIL-H-83282	Pass
Turbine Fuel, MIL-T-5624, GD JP-4	Pass
Aircraft Lube Oil, Synthetic Base, MIL-L-23699	Pass
Silicone Based Damping Fluid, VV-D-1078	Pass
Low Temp Weapon Lube Oil, MIL-L-14107	Pass
Lubricant, Semi-Fluid, MIL-L-46000	Pass
Weapons Lubricant, Cleaner & Preservative, MIL-L-63460	Pass

Refer to Technical Data Sheet 3000-A for additional application information

* Lot Tests

** Based on 100% transfer efficiency at a dry film thickness of 0.0005 inch (12.5 microns).

***Contact Everlube Products Technical Service for additional options.

/kr: 12/5/01 Rev. 01/09/19