

Technical Data

Kal-Gard WL-88

MoS₂/Graphite, Solid Film Lubricant

**CURTISS -
WRIGHT**

Everlube® Products

Surface Technologies Division

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Product Description

Kal-Gard WL-88 is a thermally cured, MoS₂/Graphite based solid film lubricant with a silicate binder system. This coating is designed to provide lubrication in higher temperature applications, and to provide lubrication during forming applications of titanium, aluminum, and magnesium. Kal-Gard WL-88 provides a low coefficient of friction, very good wear life, and is RoHS compliant. Specifications for Kal-Gard WL-88 can be found at: <http://www.everlubeproducts.com/products>.

Features / Benefits

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| <ul style="list-style-type: none">• Excellent thermal stability• Low coefficient of friction | <ul style="list-style-type: none">• Very good wear resistance• Excellent lubricant for forming operations |
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Markets

- Aerospace
- Fasteners
- Mechanical Components
- Fabricated Metal Parts

Typical Applications

- Bearings, bushings, races, and cams
- Threaded connectors and disconnects
- Cold forging lubricant
- Stamping lubricant

Physical Properties

Lubricating Solid:	Molybdenum Disulfide/Graphite
Binder:	Silicate
Color and Appearance:*	Matte Gray Finish
Carrier:	Water Borne
Solids (by weight):*	40% to 44%
Density:*	11.9 ± 0.5 lb/gal (1427 ± 60 grams/liter)
Flash Point:	None (water-based)
Volatile organic compound	0 grams/liter (0 lb/gal)
Theoretical Coverage: ¹	550 ft ² /gal @ 0.5 mils (13.5 m ² /liter @ 12.7 microns)
Alternative or Repair Coatings:	For touch-up applications, Perma-Slik RAC works well with Kal-Gard WL-88.

Processing Information

Dry film thickness	0.3 to 1 mils (8 to 25 microns)
Dilution / Cleanup solvent:	Deionized water
Dilution Ratio:	As needed with deionized water
Cure Cycle:	Full Cure: 2 hr. @ 175°F (66°C) then 2 hrs @ 400°F (204°C) Forging Cure: 1 hr. @ 250°F (121°C)
Suggested pretreatment:	Grit Blast
Suggested application methods:	Spray
For additional information, please see Processing Bulletin #3002	

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	<u>ASTM Test Method</u>	<u>Value</u>
Corrosion Resistance		
Test Panel	ASTM B117	<48 hrs. @5% neutral salt spray
Test Panel Coating Method		0.5 mil on grit blasted steel panel
Abrasion Resistance	ASTM D4060	Fair
Coefficient of Friction	ASTM D2714	.02 to .04
Operating Temperature Range		-100°F to 750°F (-73°C to 399°C)
Load Carrying Capacity	ASTM 2625, Method B	<100,000 psi
Wear Life	ASTM 2625, Method A	>60 minutes

Additional Information

Isopropyl Alcohol or Ethyl Alcohol	Pass	Diethanolamine	Pass
Mineral Spirits or Paint Thinner	Pass	Hydrochloric Acid (10%)	N/R
Toluene	Pass	Sodium Hydroxide (10%)	N/R
Acetone	Pass	Distilled Water	N/R
Skydrol 500:	N/R	Jet Fuels (JP-4):	Pass
Hydraulic Fluids:	Pass	Trichloroethylene:	Pass
Anti-Icing Fluids:	Pass		

Note: Chemical Resistance may vary depending on the cure cycle. N/R = Not Recommended

Additional Information:

Shelf Life and Storage:

One year from date of shipment, stored in a factory sealed container between the temperatures, 40°F to 100°F. Coatings are thermally stable, but we do not recommend prolonged exposure outside of the specified temperature range listed above.

Packaging: Kal-Gard WL-88 is available in gallons and quarts

Warranty:

No representation or warranty is expressed or implied and all warranties including warranties of marketability and fitness for use are expressly disclaimed. Nothing herein shall be construed as permission of recommendation to practice a patented invention without a license.

* These tests are performed on each production lot

¹ Based on 100% transfer efficiency at a dry film thickness of 0.0005 inch (12.7 microns).

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