

Technical Data

Lube-Lok[®] 4306

MoS₂/Graphite, Solid Film Lubricants

Product Description

Lube-Lok 4306 is a thermally cured, MoS₂ based solid film lubricant with a high molecular weight phenolic binder system. This coating provides excellent chemical resistance, wear life, and performs best in higher load carrying applications. Lube-Lok 4306 is sold to a wide variety of aerospace specifications, which can be found at: <http://www.everlubeproducts.com/products>.

Features / Benefits

- Very good chemical resistance
- Good corrosion resistance
- Prevents galling and seizing
- Ideal for higher load carrying applications

Markets

- Aerospace/Defense
- Industrial Machinery
- Mechanical Components
- Fabricated Metal Parts

Typical Applications

- Bearings, gears, splines and cams
- Valve components
- Hydraulic fittings

Physical Properties

Lubricating Solids	MoS ₂
Binder	High Molecular-Weight Phenolic
Color and Appearance*	Matte Dark Gray Finish
Carrier	Solvent borne
Solids (by weight)*	28% to 32%
Density*	9.1 ± 0.5 lb/gal (1090 ± 60 grams/liter)
Flash Point	23°F (-5°C)
Volatile Organic Compound	760 grams/liter (6.34 lb/gal)
Theoretical Coverage ¹	409 ft ² /gal @ 0.5 mils (10 m ² /liter @ 12.7 microns)
Alternative or Repair Coatings	For touch-up applications, Perma-Slik G or Lubri-Bond 220 works well with Lube-Lok 4306.

Processing Information

Dry Film Thickness	0.2 to 0.5 mils (5 to 13 microns)
Dilution / Cleanup Solvent	6600 solvent, 4000 solvent or 1,4 Dioxane
Dilution Ratio	3:1 (Solvent: Product) by volume
Cure Cycle	90 min. @ 375° F +/- 25° F
Suggested Pretreatment	Grit Blast and/or Phosphate
Suggested Application Method	Spray/Dip Spin

For additional information, please see Processing Bulletin #3000-A

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Typical Functional Properties

	<u>ASTM Test Method</u>	<u>Value</u>
Corrosion Resistance		
Test Panel	ASTM B117	< 100 hrs. @ 5% Neutral Salt Spray
Test Panel Coating Method		0.8 mil on grit blasted steel panel
Abrasion Resistance	ASTM D4060	good
Coefficient of Friction	ASTM D2714	0.02 to 0.04
Operating Temperature Range		-300° to 450°F (-184 to 232°C)
Load Carrying Capacity	ASTM D-2625, Method B	< 100,000 psi
Wear Life	ASTM D-2625, Method A	> 300,000 cycles
Pencil Hardness	ASTM D-3363	4H+
Film Adhesion	ASTM D-2510, Method A	Pass

Chemical Resistance (ASTM D-2510, Method C)

Isopropyl Alcohol or Ethyl Alcohol	Pass	Diethanolamine	Pass
Mineral Spirits or Paint Thinner	Pass	Hydrochloric Acid (10%)	Pass
Toluene	Pass	Sodium Hydroxide (10%)	Pass
Acetone	Pass	Distilled Water	Pass
Skydrol 500 (room temperature)	Pass	Jet Fuels (JP-4)	Pass
Hydraulic Fluids	Pass	Trichloroethylene	Pass
Anti-Icing Fluids	Pass	Std. Test Fluids (TT-S-0735,Ty II)	Pass
Hydraulic Fluid, Petroleum (MIL-H-5606)	Pass	Oil, Aircraft Piston Engine	Pass
Oil, Aircraft Turbine Engine, MIL-L-23699	Pass	Hydraulic Fluid, Nonpetroleum	Pass
Damping Fluid, Silicone Base, VV-D-1078	Pass		

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

Additional InformationShelf Life and Storage:

One year from date of shipment, stored in a factory sealed container between the temperatures, 40° to 90°F. Coatings are thermally stable, but we do not recommend prolonged exposure outside of the specified temperature range listed above.

Packaging:

Lube-Lok® 4306 is available in 5-Gallon Pail, Gallon, Quart

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 or 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 (12.5 microns).

Issue Date: 03/14/03, Latest Revision Date: 10/16/03