Technical Data

Lube-Lok® 4856

Graphite, Solid Film Lubricant

CURTISS-WRIGHT
Everlube® Products
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Product Description

Lube-Lok 4856 is a graphite/tin/lead based solid film lubricant with a phenolic binder system. This coating is specifically designed to work to prevent metal to metal contact when used in the presence of conventional lubricants such as fuels, oils, greases or other fluid environments. Lube-Lok 4856 also offers very good thermal stability and good chemical resistance.

Features / Benefits

- Provides lubrication in wet environments
- Good thermal stability
- Good chemical resistance
- Prevents seizing and galling

Markets	Typical Applications
• Aerospace/Defense • Automotive • Mechanical Components • Industrial Machinery	• Spherical, sleeves bearings • Valve stems and hydraulic actuator parts • Pistons and cylinders • Oil seals and spline assemblies

Physical Properties

Lubricating Solid:	Graphite/Tin/Micronized Lead
Binder:	High molecular-weight phenolic
Color and Appearance:*	Matte, gray finish
Carrier:	Solvent borne
Solids (by weight):*	24% to 28%
Density:*	8.6 ± 0.5 lb/gal (1030 ± 60 grams/liter)
Flash Point:	23°F (-5°C)
Volatile organic compound	720 grams/liter (6 lb/gal)
Theoretical Coverage:[1]	465 ft²/gal @ mils (11.3 m²/liter @ microns)
Alternative or Repair Coatings:	The next generation Lead Free version of Lube-Lok 4856 is our Everlube 968

Processing Information

Dry film thickness	0.2 to 0.5 mils (5 to 13 microns)
Dilution / Cleanup solvent:	6600 or 4000 Solvent, or 1,4 Dioxane
Dilution Ratio:	Concentrate to 3:1 (Solvent to Product)
Cure Cycle:	90 minutes @ 375°F ± 25°F
Suggested pretreatment:	Grit Blast and/or phosphate
Suggested application methods:	Spray/Dip Spray

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

	ASTM Test Method	Value
Corrosion Resistance		
Test Panel	ASTM B117	<100 hrs. @5% neutral salt spray
Test Panel Coating Method		0.5 mil on grit blasted steel panel
Abrasion Resistance	ASTM D4060	Good
Coefficient of Friction	ASTM D2714	.02 to .04
Operating Temperature Range		-100° to 400°F (-73° to 204°C)
Load Carrying Capacity	ASTM 2625, Method B	<40,000 psi
Wear Life	ASTM 2625, Method A	<30 minutes
Film Adhesion	ASTM D-2510, Method A	Pass
Thermal Stability	ASTM D-2511	Pass

Additional Information

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:	Pass	Jet Fuels (JP-4):	Pass
Hydraulic Fluids:	Pass	Trichloroethylene:	Pass
Anti-Icing Fluids:	Pass	1, 1, 1 Trichloroethane, Mil-L-81533	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	Pass
Hydraulic Fluid, Mil-L-83282	Pass	Aviation Gasoline, Mil-G-5624, Grade 11	Pass
Turbine Fuel, Mil-T-5624	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: Lube-Lok 4856 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).

Issue Date: 12/10/02, Latest Revision Date: 10/16/03