

Technical Data

Everlube[®] 690

MIL Spec, MoS₂ Solid Film Lubricant

**CURTISS -
WRIGHT**

Everlube[®] Products

Surface Technologies Division

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Product Description

Everlube 690 is a thermally cured MoS₂ based solid film lubricant which utilizes a high molecular weight phenolic binder system. This coating was primarily developed to prevent galling and seizing for fasteners and fastening related applications. It is recommended for use with self-locking fasteners. Specifications for this product can be found at: <http://www.everlubeproducts.com/products>

Features / Benefits

- Excellent coefficient of friction
- Prevents galling and seizing
- Very good chemical resistance
- Ideal for higher load carrying applications

Markets

- Fasteners
- Industrial Machinery
- Fabricated Metal Parts
- Mechanical Components

Typical Applications

- Small to medium fasteners
- Guides, slides and tracks
- Threaded connectors and disconnects
- Bearings, gears, splines and cams

Physical Properties

Lubricating Solid	MoS ₂
Binder	High molecular weight phenolic
Color and Appearance*	Matte grey finish
Carrier	Solvent Borne
Solids (by weight)*	41% to 43%
Density*	9.6 ± 0.5 lb/gal (1150 ± 60 grams/liter)
Flash Point	21°F (-6°C)
Volatile Organic Compound	660 grams/liter (5.5 lb/gal)
Theoretical Coverage ¹	552 ft ² /gal @ 0.5 mils (13.5 m ² /liter @ 12.7 microns)
Alternative or Repair Coatings	For touch-up applications, Perma-Slik G or Lubri-Bond 220 works well with Everlube 690.

Processing Information

Dry Film Thickness	0.2 to 0.7 mils (5 to 18 microns)
Dilution/Cleanup Solvent	MEK or 50% Ethyl Alcohol and 50% Toluene (preblended)
Dilution Ratio (for spray)	1:3 (Product to Solvent by volume) Adjust as needed
Cure Cycle	1 hr @ 300°F ± 15°F (149°C ± 10°C) Part metal temp)
Suggested Pretreatment	Grit Blast and/or Phosphate
Suggested Application Methods	Dip Spin / Spray

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

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		0.5 mil on grit blasted steel panel
Abrasion Resistance	ASTM D4060	Good
Coefficient of Friction	ASTM D2714	.04 to .06
Operating Temperature Range		-100° to 325°F (-73° to 163°C)
Load Carrying Capacity*	ASTM 2625, Method B	> 200,000 psi
Wear Life*	ASTM 2625, Method A	> 60 minutes

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 temp)	Pass	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:

Everlube 690 is available in Gallons, 5-gallon pails, and quarts

Warranty:

No representation of 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).

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