

Technical Data

Esnalube™ 382

Water Based, MoS₂, Solid Film Lubricant

**CURTISS -
WRIGHT**

Everlube® Products

Surface Technologies Division

100 Cooper Circle | Peachtree City, GA 30269
T: 770.261.4800 | F: 770.261.4805 | 800-428-

Product Description

Esnalube 382 is a low VOC, thermally cured; MoS₂ based solid film lubricant with a silicate binder system. This coating is designed to provide anti-seize and anti-galling properties in fastener related applications. Esnalube 382 also provides an extremely low coefficient of friction, very good chemical resistance properties and performs best over a wide range of loads. Specifications for Esnalube 382 is 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.

Features / Benefits

- Excellent thermal stability
- very good chemical resistance
- Very good anti-seizing/anti-galling properties
- Ideal for higher load carrying applications

Markets

- Aerospace/Defense
- Mechanical Components
- Industrial Machinery & Equipment
- Fasteners

Typical Applications

- Virtually all fasteners
- Threaded connectors and disconnects
- Engine Fasteners
- Specialty nuts and washers

Physical Properties

Lubricating Solid:	MoS ₂
Binder:	Silicate
Color and Appearance:*	Matte Gray Finish
Carrier:	Water Borne
Solids (by weight):*	37% to 41%
Density:*	11.8 ± 0.3 lb/gal (1414 ± 36 grams/liter)
Flash Point:	None
Volatile organic compound	0 grams/liter (0 lb/gal)
Theoretical Coverage: ¹	458 ft ² /gal @ 0.5 mils (11.2 m ² /liter @ 12.7 microns)
Alternative or Repair Coatings:	For touch-up applications, Perma-Slik RMAC works well with Esnalube 382.

Processing Information

Dry film thickness	0.5 to 1 mils (13 to 25 microns)
Dilution / Cleanup solvent: ²	Ready to Apply, Clean up with water
Dilution Ratio:	n/a
Cure Cycle: ²	2 hr. @ 175°F then 2 hrs @ 400°F
Suggested pretreatment:	Grit Blast
Suggested application methods:	Dip Spin / Spray

For additional information, please see Processing Bulletin #3002-A

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	<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	Fair	
Coefficient of Friction	ASTM D2714	.04 to .06	
Operating Temperature Range		-300°F to 800°F (-184°C to 427°C)	
Load Carrying Capacity	ASTM D2625, Method B	>250,000 psi	
Wear Life	ASTM D2625, 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%)	N/R
Toluene	Pass	Sodium Hydroxide (10%)	N/R
Acetone	Pass	Distilled Water	N/R
Skydrol 500:	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:			
<u>Shelf Life and Storage:</u> 1 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.			
<u>Packaging:</u> Esnalube 382 is available in gallons and quarts			
<u>Warranty:</u> 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 (12.5 microns).

² Contact Technical Services for additional options

³ Specific chemicals tested per the specification requirements.

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