

## Technical Data

# Everlube® Products

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## Lube-Lok® S22-T

### MoS<sub>2</sub>/Graphite, Solid Film Lubricant

Product Description	
<p>Lube-Lok S22-T is a low energy cure, low VOC MoS<sub>2</sub>/graphite based solid film lubricant with an inorganic binder system. This coating was specially developed for titanium, aluminum, and magnesium forming applications. Lube-Lok S22-T helps to save energy and reduce tooling wear by reducing friction while improving heat transfer characteristics. This coating provides very good wear life, and performs best in higher load carrying applications.</p>	
Features / Benefits	
<ul style="list-style-type: none"><li>• Excellent wear life</li><li>• Excellent thermal stability</li><li>• Easily cleaned from part after forming</li><li>• Excellent lubricant for forming operations</li></ul>	
Markets	Typical Applications
<ul style="list-style-type: none"><li>• Industrial machinery</li><li>• Fasteners</li><li>• Fabricated metal parts</li><li>• Mechanical components</li></ul>	<ul style="list-style-type: none"><li>• Super-plastic titanium forming</li><li>• Stamping lubricant</li><li>• Cold forging lubricant</li><li>• Aluminum forming compound</li></ul>
Physical Properties	
Lubricating Solids:	MoS <sub>2</sub> / Graphite
Binder:	Inorganic
Color and Appearance:*	Gray finish
Carrier:	Water borne
Solids (by weight):*	28% to 32%
Density:*	10.6 ± 0.5 lb/gal (1271 ± 60 grams/liter)
Flash Point:	None (water based)
Volatile Organic Compound:	0 grams/liter (0 lb/gal)
Theoretical Coverage: <sup>1</sup>	350 ft <sup>2</sup> /gal @ 0.5 mil (8.6 m <sup>2</sup> /liter @ 12.7 microns)
Alternative or repair coatings:	For touch-up applications, Perma-Slik RAC works well with Lube-Lok S22-T.
Processing Information	
Dry Film Thickness	0.2 to 0.5 mils (5 to 13 microns)
Dilution/Cleanup Solvent:	Deionized water
Dilution Ratio:	Less than 10% by volume (recommended)
Cure Cycle (for forming):	30-60 minutes @ 175°F ± 25°F (79°C ± 14°C)
(other applications):	2 hours @ 175°F (66°C) then 2 hours @ 400°F (204°C)
Suggested Pretreatment:	Grit blast
Suggested application Methods:	Spray

For additional information, please see Processing Bulletin #3002

**Typical Functional Properties**

	<u>ASTM Test Method</u>	<u>Value</u>
Corrosion Resistance		
Test Panel	ASTM B-117	<48 hrs. @ 5% neutral salt spray
Test Panel Coating Method		0.5 mil on grit blasted steel panel
Abrasion Resistance	ASTM D-4060	Good
Coefficient of Friction	ASTM D-2714	0.04 to 0.06
Operating Temperature Range		-100°F to 750°F (-73°C to 399°C)
Load carrying capacity	ASTM D-2625, Method B	<100,000 psi
Wear Life	ASTM D-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%)	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 (4°C to 38°C). Coatings are thermally stable, but we do not recommend prolonged exposure outside of the specified temperature range listed above.

Packaging: Lube-Lok S22-T is available in quarts, gallons, and 5-gallon pails

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

<sup>1</sup> Based on 100% transfer efficiency at a dry film thickness of 0.0005 inch (12.5 microns).

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