# Technical Data

# Lube-Lok® 77S

## $MoS_2$/Graphite, Solid Film Lubricant

**Everlube® Products**
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| **Product Description** |
|---|
| Lube-Lok 77-S is a thermally cured, MoS2/Graphite based solid film lubricant with a high molecular weight phenolic binder system. This coating provides excellent wear resistance, an extremely low coefficient of friction, and performs best over a wide range of loads. Specifications for this product can be found at: http://www.everlubeproducts.com/products |

| **Features / Benefits** | |
|---|---|
| • Excellent wear resistance | • Contains no lead or antimony compounds |
| • Very good chemical resistance | • Ideal for higher load carrying applications |

| **Markets** | **Typical Applications** |
|---|---|
| • Mechanical Components | • Virtually all fasteners |
| • Industrial Machinery | • Dampers, tubes and tracks |
| • Fabricated Metal Parts | • Threaded connectors and disconnects |
| • Chemical Processing | • Rollers, brackets, and disc plates |

| **Physical Properties** | |
|---|---|
| Lubricating Solids | $MoS_2$/Graphite |
| Binder | High molecular weight phenolic |
| Color and Appearance:* | Dark gray finish |
| Carrier: | Solvent borne |
| Solids (by weight):* | 36% to 40% |
| Density:* | 8.5 ± 0.5 lb/gal (1020 ± 60 grams/liter) |
| Flash Point: | 55°F (12.8°C) |
| Volatile Organic Compound: | 750 grams/liter (6.25 lb/gal) |
| Theoretical Coverage:[1] | 444 ft²/gal @ 0.5 mils (10.8 m²/liter @ 12.7 microns) |
| Alternative or Repair Coatings: | For touch-up applications, Perma-Slik RAC or Lubri-Bond A works well with Lube-Lok 77-S |

| **Processing Information** | |
|---|---|
| Dry Film Thickness | 0.2 to 0.5 mils (5 to 13 microns) |
| Dilution/Cleanup Solvent | MEK, 600 Solvent or 642 Solvent |
| Dilution Ratio: | 3:1 (Solvent: Product) by volume |
| Cure Cycle: | 1 hr. @ 375° F +/- 25° F |
| Suggested Pretreatment: | Grit blast and/or phosphate |
| Suggested Application Methods: | Spray, Dip/spin |

| **Typical Functional Properties:** | ASTM Test Method | Value |
|---|---|---|
| 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 375°F (-73°C to 191°C) |
| Load Carrying Capacity | ASTM 2625, Method B | <100,000 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%) | N/R |
| Toluene | Pass | Sodium Hydroxide (10%) | N/R |
| Acetone | Pass | Distilled Water | Pass |
| Skydrol 500B (room temp) | Pass | Jet Fuels (JP-4) | Pass |
| Hydraulic Fluids | Pass | Trichloroethylene | Pass |
| Anti-Icing Fluids | Pass | Std. Test Fluids (TT-S-735, Ty II) | Pass |
| Hydraulic Fluids, Petroleum (MIL-H-5605) | Pass | Oil, Aircraft turbine engine (Mil-L-23699) | Pass |
| Dioxane | N/R | Xylene | N/R |
| Liquid Oxygen | N/R | | |

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 77S 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
[1] Based on 100% transfer efficiency at a dry film thickness of 0.0005 inch (12.5 microns).

Issue date: 6/20/16

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