

Technical Data



Everlube® Products

Surface Technologies Division

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Everlube® 853

Graphite, Solid Film Lubricant

Product Description

Everlube 853 is a water-based, thermally cured high temperature anti-gallant lubricant containing graphite with an inorganic binder. Everlube 853 is designed to lubricate under high temperatures in aviation and propulsion applications. It is ideally suited for fasteners to provide enhanced torque-tension properties and also provides good durability for severe industrial environments. This product does not contain molybdenum disulfide, lead, heavy metals or antimony compounds. Specifications for Everlube 853 can be found at: <http://www.everlubeproducts.com/products>.

Features / Benefits

- Excellent thermal stability
- Excellent low coefficient of friction
- K-factor similar to silver on fasteners
- Low VOC, "Green" coating, no heavy metals

Markets

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

Typical Applications

- Self locking fasteners
- Aircraft engine components
- Slides, guides, rails, pulleys, blade roots
- Bearings and cams

Physical Properties

Lubricating Solids	Graphite
Binder	Inorganic Binder
Color and Appearance*	Matte Gray Black Finish
Carrier	Water borne
Solids (by weight)*	25% to 29%
Density*	8.3 ± 0.5 lb/gal (995 ± 60 grams/liter)
Flash Point	None
Volatile Organic Compound	0 grams/liter (0 lb/gal)
Theoretical Coverage ¹	876 ft ² /gal @ 0.5 mils (21.4 m ² /liter @ 12.7 microns)
Alternative or Repair Coatings	N/A

Processing Information

Dry Film Thickness	0.3 to 0.7 mils (8 to 18 microns)
Dilution / Cleanup Solvent	May be thinned with Deionized Water less than 10% by volume
Dilution Ration (for spray)	See above
Cure Cycle	30 min. @ 150 to 200° F and 1 hr. @ 450 to 650° F
Suggested Pretreatment	Grit blast
Suggested Application Method	Spray

For additional information, please see Processing Bulletin #3027

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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		0.6 mil on grit blasted steel panel
Abrasion Resistance	ASTM D4060	Fair
Coefficient of Friction	ASTM D2714 (modified)	0.02 to 0.06
Operating Temperature Range		-100° to 1200°F (-73° to 649°C)
Load Carrying Capacity	ASTM D2714 (modified)	<40,000 psi
Wear Life	ASTM D2714 (modified)	>75,000 cycles @ 150 lbs load
Thermal Stability	ASTM D2511	Pass
Adhesion	ASTM D2510	Pass

Chemical Resistance (ASTM D-2510, Method C)

Isopropyl Alcohol or Ethyl Alcohol	Pass	Diethanolamine	N/R
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	Hydraulic Fluid, MIL-H-5606	Pass
Non-Petroleum Hydraulic Fluid, MIL-H-8446	Pass	Aircraft Turbine Oil, MIL-L-7808	Pass
Lube-Oil, Weapons, Semi-Fluid	Pass	Cleaning Compound, Small Arms	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 853 is available in gallon, 5-gallon pail, gallon, and quart

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 (12.7 microns).

Issue Date: 12/10/02, Latest Revision Date: 8/21/23