

## Electrolube® EGF

### Eltinert F Grease

#### DESCRIPTION

**Electrolube®** The Eltinert series of contact lubricants have been developed to provide superior protection to electrical contacts under the most difficult conditions. These include extended periods at high temperatures and under corrosive chemical atmospheres. They are also ideal for the protection of noble metals, either in switches or connectors. **EGF** has outstanding high temperature performance with less than 1% weight loss in 24 hours at 150 °C. **EGF** is suitable for continuous use up to 200°C and for shorter periods up to 300 °C.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

#### FEATURES AND BENEFITS

- Excellent mechanical lubrication, greatly reduces friction
- Excellent electrical characteristics combined with very good plastics compatibility
- Excellent oxidation and chemical resistance; high protection in harsh environments
- Prevents and cures high contact resistance caused by silicone contamination

#### APPROVALS

Standard	Status
RoHS Compliant (2015/863/EU)	Yes

#### PRODUCT INFORMATION

Please contact your customer service representative for information on available package sizes.

**PHYSICAL PROPERTIES**

Category	Results
<b>Typical Properties</b>	
Color	White
Density (g/mL)	1.9
Temperature Range (°C)	-25 to 300
Vapor Pressure @ 20 °C (Torr) @ 250 °C (Torr)	1 x 10 <sup>-8</sup> 8 x 10 <sup>-2</sup>
Evaporation Weight Loss % 7 days @ 100 °C	0.8
Copper Strip Corrosion (IP154 / ISO 2160)	≤ 1b
Drop Point (IP32 / ISO 2176 (°C))	> 250
Cone Penetration Worked (ASTM D217, 60 Strokes @ 20 °C)	280
Consistency (NLGI)	2
Fließdruck (Flow Pressure) (DIN 51805, mbar @ -40 °C)	1100
Oil Bleed / Separation (IP121)	5 %
Plastic Compatibility ABS PC	Test Test
Thickener	Fumed Silica
UV Trace	No
<b>Base Oil Properties</b>	
Base Oil Type	Complex Ester
Pour Point (ASTM D 97 (°C))	-45
Flash Point (COC ASTM D 92 (°C))	230
<b>Electrical Properties</b>	
Dielectric Constant (ASTM D877/67 @ 250 °C)	2.1
Dielectric Strength (ASTM D877/67 @ 250 °C) (kV/mm)	40

Category	Results
<b>Base Oil Properties</b>	
Base Oil Type	PFPE
Base Oil Viscosity (Kinematic Viscosity (cSt))	
40 °C	345
100 °C	33
Base Oil Viscosity Index (ASTM D 2270)	135
Pour Point (ASTM D 97 (°C))	-25
Flash Point (COC ASTM D 92 (°C))	Not Determined
<b>Mechanical Properties</b>	
4 Ball Wear (mm)	1.071
Weld Load (kgf)	400

#### TYPICAL PRODUCT APPLICATION

Eltinert F grease (EGF) is non-melting and will not migrate from vertical contacts or surfaces. It has similar properties to the oil (EOF) but allows even greater protection from environmental conditions and is also recommended for applications involving heavy arcing.

The polar nature of these lubricants ensures good bonding to all metals, including gold. Although gold itself is not subject to environmental attack, gold plate is porous and attack can occur on the substrate metals, e.g., silver, copper or tin. Eltinert F prevents this attack and can allow the use of thinner gold plate.

Eltinert F fluorinated lubricants have two main areas of application:

1. As contact lubricants - particularly suitable for contacts involving gold and/or aggressive environments e.g., printed circuit edge connectors, plug connectors, rotary and sliding switches.
2. For the lubrication of plastics and rubbers, including those known to be particularly prone to solvent stress cracking.

The following plastics, normally regarded as prone to solvent stress cracking, are unaffected by Eltinert F at 70 °C: 'Noryl' (PPO/Polystyrene), Polystyrene, Impact modified polystyrene, ABS, Polycarbonate.

The following vulcanised rubbers showed minimal change in properties at 70 °C: Natural rubber, EPDM, SBR, Butadiene-acrylonitrile, Butyl.

**ADDITIONAL INFORMATION**

Oil separation in greases is a natural occurrence, and small amounts of separation are expected.

Typically, during long term storage, the oil and thickeners will slowly begin to separate. Separation can be accelerated by high temperatures and storage orientation.

If oil separation is observed, we recommend stirring gently with a stainless-steel blade/spatula, in the original packaging, until the grease shows a uniform color and consistency.

**Shelf Life:** 36 Months

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

**CONTACT INFORMATION**

[www.macdermidalpha.com](http://www.macdermidalpha.com)

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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