



## Renewable Lubricants, Inc.

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### **Bio-E.P.™ Graphite Grease**

NLGI #1



*"Biobased Lubricants that Perform Like Synthetics"*

Bio-E.P.™ Graphite Grease is a biobased, Extreme Pressure (EP) grease specially formulated for sliding surfaces and applications where extreme pressure exceeds the fluid film. This product provides exceptional EP performance where a solid film lubricant is required. In addition, it provides good anti-rust, anti-oxidation, and anti-wear protection. The specially designed low-toxic lithium thickener and calcium enhanced technology provides for improved water resistance, corrosion protection, and excellent pumpability in low temperature for automatic lubricating equipment. It contains no heavy metals or chlorine and is ultimately biodegradable<sup>1</sup>.

#### **Application:**

Bio-E.P.™ Graphite Grease is specifically designed for lubrication of sliding surfaces, slow moving rollers and bearings continually reversing under load in one direction and then another and a hydrodynamic lubricating fluid cannot be developed. Examples include: railroad tracks, gage faces, wheel flanges on locomotive and railroad cars, curved railroad tracks, chains, cables, hinge pins, fifth wheels, kingpins, chassis, and slideways.

#### **Typical Specifications:**

Color	Grey-Black
Graphite %	5.0
Penetration Worked ASTM D-217	310-340
Base Oil Viscosity @ 40°C, cSt ASTM D-445	43
Viscosity @ 100°C, cSt ASTM D-445	10.4
Pour Point ASTM D-97	-31°C
Viscosity Index ASTM D-2270	242
4-Ball Wear ASTM D-2266	0.50 - 0.60 mm
4-Ball EP ASTM D-2596	Weld 500 kg / LWI 55
Timken OK Load ASTM D-2509	55 lb.
Dropping Point ASTM D-2265	350 °F
Rust Test ASTM D-1743	Pass
Water Spray off ASTM D 4049	60% retained

Bio-E.P.™ Graphite Grease meets the Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for Environmentally Acceptable Lubricants (EALs), and should be used where **LOW TOXICITY**, **BIODEGRADABILITY** and **NON-BIOACCUMULATION** properties are required. It exceeds the acute toxicity (LC-50 / EC-50 >1000 ppm) criteria adopted by the US Fish and Wildlife Service and the US EPA. Bio-E.P.™ Graphite Grease is an **ENVIRONMENTALLY RESPONSIBLE** lubricant that is formulated from renewable agricultural biobased resources. We believe Earth's environmental future rests in the use of renewable materials.

**<sup>1</sup> Based on previous ASTM D-5864 studies and ASTM D-7373 Calculations, Bio-E.P.™ Graphite Grease is Ultimate/Readily Biodegradable >60% within 28 days in Aerobic Aquatic Biodegradation of Lubricants.**

STABILIZED by Renewable Lubricants\* is RLI's trademark on their proprietary and patented anti-oxidant, anti-wear, and cold flow technology. High Oleic Base Stock (HOBS) are agricultural biobased oils. This Stabilized technology allows the HOBS to perform as a high performance formula in high and low temperature applications, reducing oil thickening and deposits.

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<b><u>Availability</u></b>	<b><u>F.O.B. :Manufacturer</u></b>	<b><u>14 oz. Tube</u></b>	<b><u>35 lb Pail</u></b>	<b><u>120 lb Keg</u></b>	<b><u>400 lb Drum</u></b>
RLI Product Item #			87684	87685	87686