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Bio- E.P.™ Graphite Grease (RailTrac & Wire Rope) NLGI #1 & 2

STABILIZED™ by Renewable Lubricants

"Biobased Lubricants that Perform Like Synthetics"

Bio-E.P.™ Graphite Greases NLGI#2 and #1 are biobased, Extreme Pressure (EP) greases specially formulated for sliding surfaces and applications where extreme pressure exceeds the fluid film. The super high viscosity index of the Stabilized* HOBS naturally improves the thermal shear stability and load carrying capacity. These products provide exceptional EP performance where a solid film lubricant is required. In addition, they provide good anti-rust, anti-oxidation, and anti-wear protection. Their specially designed low-toxic, tacky lithium thickener and calcium enhanced additive technology system provides for improved water resistance, corrosion protection, mechanical stability and excellent pumpability in low temperature for automatic lubricating equipment. They contain no heavy metals or chlorine and are Ultimately/Readily Biodegradable[1]. (**Bio-E.P.™ Graphite Greases NLGI#1&2 are the best responsible environmental choice for replacing Cat. spec. 3% to 5% Moly EP Grease recommended in most heavy construction, mining, drilling, agriculture, and forestry equipment). Bio-E.P.™ Graphite Greases NLGI#1-provides the best pumpability performance in cold temperature and is highly recommended for** railroad tracks, gage faces, wheel flanges on locomotive and automatic lubrication systems, and wire rope applications.

Application:

Bio-E.P.™ Graphite Grease NLGI#1-2 are specifically designed for lubrication of sliding surfaces, slow moving journal, and roller, bearings continually reversing under load in one direction and then another and where a hydrodynamic lubricating fluid film cannot be developed. Sliding surface examples include: wire rope, pipe threads, rod threads, railroad tracks, gage faces, wheel flanges on locomotive and railroad cars, curved railroad tracks, chains, cables (wire rope), hinge pins, bushing, Truck fifth wheels, slideways, kingpins, and chassis, NLGI Classification LB.

Typical Specifications:

Grade	NLGI 2	NLGI 1
Color	Grey/Black	Grey/Black
Texture	Smooth & tacky	Smooth & tacky
Thickener Type	Lithium	Lithium
Graphite percent	5.0%	5.0%
Penetration Worked ASTM D-217	265-295	310-340
Base Oil Viscosity @ 40°C, cSt ASTM D-445	43	43
Viscosity @ 100°C, cSt ASTM D-445	10.4	10.4
Pour Point ASTM D-97	-31°C	-31°C
Viscosity Index ASTM D-2270	242	242
4-Ball Wear ASTM D-2266	0.40 - 0.50 mm	0.40 - 0.50 mm
4-Ball EP ASTM D-2596	Weld 500 kg / LWI 55	Weld 500 kg /LWI55
Timken OK Load ASTM D-2509	60 lb.	55 lb
Dropping Point ASTM D-2265	355 °F	350 °F
Rust Test ASTM D-1743	Pass	Pass
Water Spray off ASTM D 4049	>60% retained	60% retained
Product Item #	**87670**	**87680**

Bio-E.P.™ Graphite Grease NLGI#1&2 meet 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. They exceed the acute toxicity (LC-50 / EC-50 >1000 ppm/1000 mg/Lt) criteria adopted by the US Fish and Wildlife Service and the US EPA. Bio-E.P.™ Graphite Greases NLGI#2 and #1 are ENVIRONMENTALLY RESPONSIBLE Greases that are formulated from renewable agricultural biobased resources. We believe Earth's environmental future rests in the use of renewable materials.

[1] **Based on previous ASTM D-5864 studies and ASTM D-7373 Calculations, Bio-E.P.™ Graphite Grease** NLGI#1&2 are **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 Patented 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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Availability F.O.B. Manufacturer	35 lb. Pails	120 lb. Kegs	400 lb. Drums
RLI Product Item #	87684	87685	87686