

# SAFETY DATA SHEET

Issue Date: 15 May 2015

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Version 1

## 1. - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Name:** Bio-High Temp 180 E.P. Grease NLGI #2, (Multipurpose Lithium Complex)

### Other means of identification

**Product code:** 87611, 87613, 87614, 87615, 87616,

**CAS NO:** Mixture

**Synonyms:** None

### Recommended use of the chemical and restrictions on use

**Recommended Use:** Biobased Grease Oil, (Biodegradable), Compliant with EPA-VGP-EAL

### Details of the supplier of the safety data sheet

#### Supplier and Manufacture

Renewable Lubricants, Inc.

476 Griggy RD NE, P.O. Box 474

Hartville, Oh 44632

Phone: (330) 877-9982

Fax: (330) 877-2266

[www.renewablelube.com](http://www.renewablelube.com), [www.renewablelubricants.com](http://www.renewablelubricants.com)

### Emergency telephone number

**Emergency Telephone** (CHEMTREC) 1-800-424-9300. Outside the U.S. (703) 527-3887

## SECTION 2 – HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines OSHA Hazard Communication Standard (29 CFR 1910.1200) (see SDS Section 15).

### **Other hazard information:**

**HAZARD NOT OTHERWISE CLASSIFIED (HNOC):** None as defined under 29 CFR 1900.1200.

### **PHYSICAL / CHEMICAL HAZARDS**

No significant hazards.

### **HEALTH HAZARDS**

This material has no known hazards when used as directed.

### **ENVIRONMENTAL HAZARDS**

No significant hazards.

**NFPA Hazard ID:** Health: 0 Flammability: 1 Reactivity: 0

**HMIS Hazard ID:** Health: 0 Flammability: 1 Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### SECTION 3 - COMPOSITION/INFORMATION on INGREDIENTS

**No Hazardous Substance(s) or Complex Substance(s) required for disclosure.** As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

### SECTION 4 - FIRST AID MEASURES

<b>INHALATION</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>SKIN CONTACT</b>	Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.
<b>EYE CONTACT</b>	Flush thoroughly with water. If irritation occurs, get medical assistance.
<b>INGESTION</b>	First aid is normally not required. Seek medical attention if discomfort occurs.

### SECTION 5 - FIRE-FIGHTING MEASURES

#### EXTINGUISHING MEDIA:

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

#### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Sulfur oxides, Aldehydes, Oxides of carbon, Incomplete combustion products, Smoke, Fume

#### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** 536°F/280°C [EST. FOR OIL, ASTM D-92 (COC)]

**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D

**Autoignition Temperature:** N/D

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

#### PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for firefighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

#### SPILL MANAGEMENT

**Land Spill:** Scrape up spilled material with shovels into a suitable container for recycle or disposal.

**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

### SECTION 7 - HANDLING AND STORAGE

**HANDLING** Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator** This material is not a static accumulator.

**STORAGE:** Do not store in open or unlabeled containers.

### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**NOTE:** Limits/standards shown for guidance only. Follow applicable regulations.  
No biological limits allocated.

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## ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

## PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

### RESPIRATORY PROTECTION:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

### Hand Protection:

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

### Eye Protection:

If contact is likely, safety glasses with side shields are recommended.

### Skin and Body Protection:

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

### Specific Hygiene Measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### Typical information on basic physical and chemical properties

#### GENERAL INFORMATION

<b>Physical State:</b>	Solid
<b>Form:</b>	Semi-fluid
<b>Color:</b>	light green paste
<b>Odor:</b>	neutral odor
<b>Odor Threshold:</b>	N/D

#### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

<b>Relative Density (at 15.6 °C):</b>	0.90
<b>Flammability (Solid, Gas):</b>	N/D
<b>Flash Point [Method]:</b>	536°F/280°C [EST. FOR OIL, ASTM D-92 (COC)]
<b>Flammable Limits (Approximate volume % in air):</b>	LEL: N/D UEL: N/D
<b>Autoignition Temperature:</b>	N/D
<b>Boiling Point / Range:</b>	> 300°C (572°F) [Estimated]
<b>Decomposition Temperature:</b>	N/D
<b>Vapor Density (Air = 1):</b>	<1
<b>Vapor Pressure:</b>	< 5mm Hg at 72 °C [Estimated]
<b>Evaporation Rate (n-butyl acetate = 1):</b>	N/D

<b>pH:</b>	N/A
<b>Log Pow (n-Octanol/Water Partition Coefficient):</b>	N/D
<b>Solubility in Water:</b>	Negligible
<b>Viscosity:</b>	179 / 26 [Base oil]
<b>Pour Point</b>	-33°F / -36°C
<b>Dropping Point</b>	>590°F / >310°C
<b>Oxidizing Properties: See Hazards Identification Section.</b>	
<b>OTHER INFORMATION</b>	
<b>Freezing Point:</b>	N/D
<b>Melting Point</b>	N/D

**NOTE: Most physical properties above are for the oil component in the material.**

**Other information**

*The above data are typical values and do not constitute a specification.*

**SECTION 10 - STABILITY AND REACTIVITY**

<b><u>Reactivity</u></b>	Not applicable
<b><u>Chemical stability</u></b>	
<b>Stability:</b>	Stable under normal conditions
<b><u>Possibility of Hazardous Reactions</u></b>	
<b>Possibility of Hazardous Reactions:</b>	None under normal processing
<b>Hazardous polymerization:</b>	Hazardous polymerization does not occur
<b><u>Conditions to avoid</u></b>	
<b>Conditions to avoid:</b>	No special storage conditions required
<b><u>Hazardous Decomposition Products</u></b>	
<b>Hazardous Decomposition Products:</b>	None under normal processing
<b><u>Incompatible materials</u></b>	
<b>Incompatible materials:</b>	NA

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known or supplied information
<b>Eye contact</b>	Contact with eyes may cause irritation. May cause mild, short-lasting discomfort to eyes based on assessment of the components.
<b>Skin contact</b>	Acute Toxicity: Minimally Toxic, based on assessment of the components. Substance does not generally irritate and is only mildly irritating to the skin with prolonged exposure.
<b>Inhalation</b>	Acute Toxicity: Minimally Toxic, based on assessment of the components. Irritation: Negligible hazard at ambient/normal handling temperatures.
<b>Ingestion</b>	Acute Toxicity: Minimally Toxic, based on assessment of the components and structurally similar materials.
<b>Aspiration</b>	Not expected to be an aspiration hazard, based on physical and chemical properties of the material.
<b>Respiratory Sensitization</b>	Not expected to be a respiratory sensitizer, based on assessment of the components and structurally similar materials.
<b>Germ Cell Mutagenicity</b>	Not expected to be a germ cell mutagen, based on assessment of the components and structurally similar materials.
<b>Carcinogenicity</b>	Not expected to cause cancer, based on assessment of the components and structurally similar materials. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Reproductive Toxicity</b>	Not expected to be a reproductive toxicant, based on assessment of the components.
<b>Lactation</b>	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	Single Exposure: Not expected to cause organ damage from a single exposure. Repeated Exposure: Not expected to cause organ damage from prolonged or repeated exposure.

**OTHER INFORMATION**

**Product Information:** Product does not present an acute toxicity hazard based on known or supplied information. Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No known hazards to the aquatic environment

**Biodegradation:** Based on previous biodegradability studies, the product provides Ultimate Biodegradation Pw1 >60% within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants.

**Aquatic/Ecotoxicity: OECD 201, 202, and 203:** Based on previous studies, LC50/EC50 is greater than 1,000 ppm (1000 mg/L).

**Bioaccumulation:** No Potential to Bioconcentrate

**Soil Mobility:** Not Established

**Persistence and degradability:** Readily biodegradable >60% after 28 days

**Water Mobility:** The product is insoluble and floats on water. **WGK:** 1

### SECTION 13 - DISPOSAL INFORMATION

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

#### DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

#### REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

#### Waste treatment methods

**Disposal of waste:** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging:** Do not reuse container.

### SECTION 14 - TRANSPORTATION INFORMATION

<b>UN number</b>	ADR/RID Not regulated.
<b>ICAO</b> Not regulated.	IMDG Not regulated.
<b>UN proper shipping name</b>	ADR/RID Not regulated.
<b>ICAO</b> Not regulated.	IMDG Not regulated. Marine Pollutant: NO
<b>Transport hazard class(es)</b>	ADR/RID Not regulated.
<b>ICAO</b> Not regulated.	IMDG Not regulated.
<b>Packing group</b>	ADR/RID Not regulated.
<b>AIR</b>	IATA Not regulated.
<b>LAND</b>	TDG Not regulated.
<b>LAND</b>	DOT Not regulated.

### SECTION 15 - REGULATORY INFORMATION

#### International Inventories

**TSCA:** Listed in TSCA

**TSCA -** United States Toxic Substances Control Act Section 8(b) Inventory

#### Global Chemical Inventories:

<b>USA</b>	All components of this material are on the US TSCA Inventory or are exempt.
<b>EU</b>	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC.
<b>Japan</b>	All components are in compliance with the Chemical Substances Control Law of Japan.
<b>Australia</b>	All components are in compliance with chemical notification requirements in Australia.
<b>Canada</b>	All components are in compliance with the Canadian Environmental Protection Act and are Canadian DSL/NDL.
<b>Switzerland</b>	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
<b>China</b>	All components of this product are listed on the Inventory of Existing Chemical Substances in China
<b>Korea</b>	All components are in compliance in Korea.

**Philippines** All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

**TSCA:** All ingredients in this product are listed or exempt from listing on the TSCA Chemical inventory.

**CEPA:** All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.

**Proposition 65:** This product contains no chemicals know to the State of California to cause cancer, birth defects of other reproductive harm.

**Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**State Regulations (RTK)**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any know chemical substance on the SARA Extremely Hazardous Substances list.

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**SECTION 16 - OTHER INFORMATION**

Read and follow all label directions and precautions before using the product.

Made in accordance with implementation of GHS requirements

**NFPA:**

Health: 0

Flammability: 1

Instability 0

**HMIS health rating:**

Health: 0

Flammability: 1

Physical hazards 0

Personal protection B

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CARB = California Air Resource Board, CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Revision:**

Date	Revised Section
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15 May 2015	new
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