Safety Data Sheet (SDS)

Lithium Grease

SECTION 1*:* IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY /UNDERTAKING

1.1 Product Identifier

Material Name:	Lithium Grease
Product Code:	11300, 11302, 11304, 11309, 11310, 11315, 11316, 11328

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use:	Industrial grease
Uses advised against:	This product must not be used in applications other than recommended in section 1 without taking the advice from supplier/manufacturer

1.3 Details of supplier of safety data sheet

Supplier:	Plews, Inc. 1550 Franklin Grove Rd. Dixon, IL 61021
Telephone Number:	(800) 545 - 1689

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance of mixture

OSHA Hazard Communication Standard : This material is not considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200

2.2 Label elements

OSHA HCS 2012 : OSHA HCS 2012 : No significant hazard as per GHS

2.3 Other hazards

Health hazards: Not expected to be a health hazard when used under normal conditions. Prolonged or repeated skin contact without proper cleaning may clog the skin pores resulting disorders like acne/folliculitis. Used grease may contain harmful impurities/ harmful extraneous substances.

Safety hazard: Not classified as flammable but will burn

Environmental hazard: Not classified as environmental hazard under GHS criteria

Precautionary statements:

Prevention: Wear protective gloves while handling. Wear eye and face protection. Wash hand thoroughly after handling

Response: If on skin, wash with plenty of soap and water. Remove contaminated cloth and wash thoroughly before use. If skin irritation occurs, get medical advice. If in eyes, wash with water for several minutes, in case of contact lenses, remove and wash with plenty water. In case of irritation, get medical attention.

Storage: Store the product in well-ventilated area. Keep the container straight lid upside. Do not lay down upside down or do not keep container horizontally. This product has natural tendency to squeeze oil if not kept properly.

Disposal: Take expert advice of local regulatory agency for disposing this product.

Hazard not otherwise classified (HNOC): None as classified under 29 CFR 1900.1200

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as mixture and has no known hazards under GHS classification

Additional information:

As per 29 CFR 1910.1200 paragraph (i), formulation is considered as trade secret and therefore specific chemical names and their percentages of components used have not been disclosed. The details about their specific chemical names and their percentages may be provided on request to health professionals, authorized representatives of regulatory authority, employees concerned in accordance with applicable provisions of this paragraph.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information: Not expected to be health hazard if used under normal conditions

Inhalation: Under normal conditions of intended use, this material is not expected to be inhalation hazard. If some symptom exist, remove to fresh air. If not breathing, give artificial respiration. Get medical attention

Skin Contact: Remove contaminated clothes. Flush exposed area with plenty of water followed by washing by soap, if available. If persistent irritation occurs, obtain medical attention. If product is injected into or under the skin due to any reason, the victim, regardless of size or appearance of wound, victim should be brought immediately to medical attention for emergency surgical needs. Though the initial symptoms due to high pressure injection may be minimal / absent, early surgical treatment may significantly reduce the extent of injury.

Eye Contact: Immediately flush with large quantities of cool water for at least 15 minutes. Get medical attention.

Ingestion: In general no treatment is necessary unless large quantities are swallowed, however, it's advisable to take medical attention. Do not induce vomiting unless directed by medical personnel. Do not give anything by mouth by an unconscious person.

Self-protection for first aider: When administering the first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Suitable extinguishing media: Water Spray (fog), dry chemical, foam, or carbon dioxide, sand to extinguish flames.

Unsuitable extinguishing media: Water stream may splash burning liquid and spread fire.

5.2 Special hazard arising from the substances or mixture: Hazardous combustion product may include a complex mixture of airborne solid and liquid particulates and gases (smoke), carbon monoxide, unidentified inorganic and organic compounds**.**

5.3 Advice to firefighters: Proper protective equipment include chemical resistant gloves to be worn, chemical resistant suit is recommended when large contact with spill product is expected. Self-contained breathing apparatus (SCBA) must be worn when approaching a fire in confined area. Select the fire fighters clothing approved by relevant standard

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch and walk through spill area. Do not touch damaged container or spilled material unless wearing appropriate protective clothing/equipment. Ventilate the closed area.

6.2 Emergency procedures

Isolate the spill / leak area in all directions for about 50 meters (150 ft) for liquids and about 25 meters (75 ft.) for solids and semi-solids. Eliminate all ignition sources (no smoking, flares, sparks / flames in close vicinity). Keep unauthorize person away and ventilate closed space before entering.

6.3 Environmental procedures:

Use appropriate measures for containment of spilled material to the environment. Prevent from entering/ spreading to drain, water, river, ditches by using sand, earth, floor dryers or other appropriate barriers.

6.4 Methods and materials for containment and cleaning up

Shovel into suitable properly marked container for disposal or reclamation in accordance with local regulations.

6.5 Reference to other sections

Refer to section 8 – exposure control / personal protection and section 13- disposal considerations

SECTION 7: HANDLING AND STORAGE

7.1 General Precautions

Store in well-ventilated area, if risk on vapor inhalation is there. Use the information in this data sheet as input for risk management arising due to local conditions which help to manage safe handling of this product.

7.2 Precautions for safe handling

Avoid prolonged and repeated contact with skin. Avoid inhaling the vapors/mist. When handling the drums, kegs, pails etc., proper safety shoes, and other protective clothes, safety glasses etc. should be worn. Dispose appropriately any contaminated rags/material as per prevailing local allowable practices. Keep containers in closely tight and, cool and well ventilated areas.

7.3 Conditions for safe storage, including any incompatibilities

Keep containers tightly close, well-ventilated areas but covered, avoiding contact with rain or other water ingress possibilities. Keep the storage place cool preferably <120 °F / <50 °C. Higher temperature may create pressure buildup inside container and chances of container busting or leakage may occur under aggravated conditions. Keep away from other oxidizing and incompatible materials.

7.4 Specific End Use (s):

This material should not be used for any other purpose than the intended use as per section 1 without the expert advice.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Material	Source	Type	ppm	mg/m3
Lithium hydroxide mono hydrate	AIHA WEEL	Ceiling		1.8 mg/m3
Mineral Oil	ACGIH	TWA –vacated and TWA		5.0 mg/m3

Additional information:

Due to semi-solid nature of the product, generation of mist and dusts is unlikely to occur

Biological exposure index (BEI):

No biological limit allocated

PNEC related information:

Data not available

Monitoring methods:

Monitoring of the concentration of substances in the breathing zone of workers or in general workplace may be required to confirm the compliance with local governing authority.

8.2 Engineering measures/controls

Adequate ventilation systems may be needed to control concentrations of airborne contaminants above permissible threshold applicable limits.

8.3 Personal protective equipment pictograms

Respiratory: In case of insufficient ventilation, use suitable respiratory equipment

Eye/Face: Wear safety goggles

Skin/Body: Wear safety shoes and protective gloves

8.4 Environmental Exposure controls

Minimize release to the environment. Follow best practices for site management and disposal of waste as per local regulations

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on physical and chemical properties

Material description	
Appearance	Semi-solid
Color	Amber
Odor	Slight hydrocarbon
Odor threshold	Data not available
General properties	
Boiling point	No data available
pH	Not applicable
Specific gravity (15 ^{0}C)	0.87, 7.506 (lbs/gal)
Flash point, COC, ^{0}F/^{0}C	400 / 204
Upper/lower flammability limits	No data available
Auto-ignition temperature	No data available
Flammability	No data available
VOC, % wt., ASTM D-972	1
Vapor pressure @ ambient temp.	< 0.13 kPa (< 1 mm Hg)
Vapor density (air =1)	< 1
Explosive properties	Not classified
Oxidizing properties	No data available
Other Information	
Electrical conductivity	Though no data available, this material is not expected to be a static accumulator

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity :	No reactivity is expected under normal conditions of intended use. However, under high temperature or adverse operating conditions thermal / chemical decomposition of the product may be possible
10.2 Chemical Stability :	No hazardous reaction is expected under normal conditions of temperature and pressure
10.3 Possibility of hazardous reactions	Hazardous polymerization is not expected. Reacts with strong oxidizing agents.
10.4 Conditions to avoid	Extreme temperature and direct sunlight / heat /flame
10.5 incompatible materials	Strong oxidizing agents
10.6 hazardous decomposition products	Hazardous decomposition is not expected to form under normal conditions of storage

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Basis of assessment	Information given hereby is based on the components and the toxicology of similar products and the data indicated here are representative of the primarily base oil which is present in majority
Acute oral toxicity	Expected to be low toxicity ; LD 50 (rat) > 5000 mg/kg

Acute dermal toxicity	Expected to be low toxicity ; LD 50 (rat) > 3000 mg/kg
Acute inhalation toxicity	Not determined
Skin corrosion / irritation	Expected to be slightly irritating . prolonged/repeated contact with skin without adequate cleaning may clog the pores of the skin , may result disorder such as oil acne/folliculitis
Serious eye damage /irritation	Expected to be slightly irritating
Respiratory /skin sensitization	Not determined
Aspiration hazard	Not expected to be aspiration hazard
Germ cell mutagenicity	Not expected a mutagenic hazard
Carcinogenicity	Not considered to be carcinogenic as it contain severely hydrotreated mineral oils which are reported to be non-carcinogenic in lab animal studies. The class of oils used in making this product are not classified as carcinogenic by IARC

11.2 Material	**Carcinogenicity Classification**
Highly refined base oil blend (IP 346 < 3 %)	ACGIH group A4 ; not classified as human carcinogen
	IARC 3 ; not classified as to carcinogen to humans
	GHS / CLP , no carcinogenicity classification

Based on our raw material suppliers information/SDS , this material is not known to contain any chemical listed as a carcinogen or suspected carcinogen by OSHA Hazard Communication Standard 29CFR 1910.1200, IARC, or the National Toxicology Program (NTP).

SECTION 12: ECOLOGICAL INFORMATION

Basis of assessment	Eco-toxicological data has not been determined specifically on this product. The information given herewith are based on the information given on eco-toxicity of components and/or on similar products. the information given here are representative of the product as whole and not as individual components
12.1 Toxicity	Sparingly soluble mixture in aqueous media. Not toxic to fish but may coat gill structure and cause suffocation if spilled. This product may cause gastrointestinal distress in birds and mammals through ingestion.
12.2 Persistence and degradability	Expected to be not readily biodegradable. The major oil component expected to biodegrade over period of 100-120 days in aerobic environment at temperature above 70 F (21 °C), however finished product contain component that may persist in the environment.
12.3 Bioaccumulative potential	May contain component that bioaccumulate
12.4 Mobility in soil	Product is semi-solid in nature in most conditions and may absorb to soil and may not be mobile. It floats on water
12.5 other adverse effects	Product contain the components that have been classified non-volatile in nature and therefore not expected to release to environment in significant quantities.

SECTION 13: DISPOSAL INFORMATION

13.1 Waste treatment methods

Product disposal	Try to minimize the product waste by using best applicable practices. It is the responsibility of the waste generator to evaluate the waste classification and appropriate disposal methodology in accordance with the applicable regulation. Do not dispose in to environment, in drain or in river / ponds / water reservoirs.
Container disposal	To be disposed in accordance with local prevailing and allowable regulations.

SECTION 14: TRANSPORT INFORMATION

	Bulk shipping	Non-bulk shipping	Identification #	Hazardous class
US DOT	Not required	Not required	Not required	Not required
Canadian TDG	Not required	Not required	Not required	Not required
European	Not required	Not required	Not required	Not required
ADR, IMDG, IATA-DGR	Not classified as hazardous product for land, sea and air transport			

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Standard: This material is not considered hazardous in accordance with OSHA HAzCom 2012, 29 CFR 1910.1200.
US Inventory list: All components are listed or exempted
(TSCA 8b)
SARA (302/304): No products were found
SARA (311/312):
Classification: Immediate (acute) health hazard, delayed (chronic) health hazard

Component	Fire hazard	Sudden release of pressure	Reactive	Acute health hazard	Delayed health hazard
Base oil	No	No	No	No	Yes
Lithium 12 hydroxy Stearate	Yes	No	No	Yes	Not known

SARA (313) Toxic Release Inventory: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program

Massachusetts: None of the components are listed
New York: None of the components are listed
New Jersey: lithium hydroxide is listed
WHMIS: This product is not a controlled product ;

Canadian NPRI: none of the components are listed
CEPA toxic substance: none of the components are listed
Canadian inventory list: all components are listed or exempted
Ausralia Inventory (AICS) : All components are listed or exempted
China Inventory (IECSC) : All components are listed or exempted
Japan Inventory : Not determined
Korea Inventory : All components are listed or exempted
Malaysia Inventory (EHS Register) : Not determined
New Zealand inventory of Chemicals (NZIoC) : All components are listed or exempted
Philipines Inventory (PICCS) : All components are listed or exempted
Taiwan Inventory (CSNN) : Not determined

SECTION 16: OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
Health	1	1	0 = Minimal
Fire	1	1	1 = slight
Reactivity	0	0	2 = Moderate
Specific	None	N/A	3 = Serious

This safety data sheet contains the following revisions:

Revision Date: June 19, 2015
Supersedes: None
Plews, Inc. believes that the information and recommendations given hereby is based reported information based on the components and of similar products. The data indicated here are representative of the product as whole rather than for individual components. No warranty of fitness, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or process. Further, since the conditions and methods of use of this product and of the information referred to herein are beyond the control of Plews, Inc., Plews, Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.