



# SAFETY DATA SHEET

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

### Enhance™ Synthetic Blend Motor Oil SAE 5W-30

**PRODUCT USE:** Premium Passenger Car Motor Oil

**COMPANY IDENTIFICATION:** Enhance™ Lubricants, LLC  
1959 Bluff Road  
Columbia, SC 29201  
www.enhanceoil.com

**TRANSPORTATION EMERGENCY RESPONSE:** PERS – 800-633-8253

## SECTION 2: HAZARDS IDENTIFICATION

**CLASSIFICATION:** Not classified as hazardous according to 29 CFR 1910.1200 (2012).

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	80 - 90% wt
**If chemical name/CAS No is proprietary and/or weight % is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**		

## SECTION 4: FIRST AID MEASURES

**EYES:** Flush eyes with large amounts of water for at least 15 minutes until irritation subsides. If irritation persists, get medical attention.

**SKIN:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. If irritation persists, get medical attention.

**INGESTION:** If swallowed, do not induce vomiting. If victim exhibits signs of lung aspirations such as coughing or choking, seek medical attention.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

### **MOST IMPORTANT SYMPTOMS AND EFFECTS:**

**SYMPTOMS:** Expected to be a minor eye irritant. Repeated or prolonged skin contact may cause dermatitis.

### **INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

Note to Physicians: Treat Symptomatically

## SECTION 5: FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide.

**UNSUITABLE EXTINGUISHING MEDIA:** While carbon dioxide and inert will extinguish the fire, they can also displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:** This material can burn but will not readily ignite. This material will release vapors when heated above the flashpoint temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flashpoint. Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide and other oxides may be generated as products of combustion.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Aldehydes. Ketones. Combustion products of sulfur and nitrogen.

**PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:** AS in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke and vapor. Water may be used to cool containers exposed to heat or flame.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Use personal protective equipment as required.

**METHODS FOR CONTAINMENT:** Remove sources of ignition. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**METHODS FOR CLEAN-UP:** Take up small spills with absorbent pads. Large spills may be taken up with pump or vacuum.

## SECTION 7: HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Handle in accordance with good industrial hygiene and safety practice.

### **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**

**STORAGE CONDITIONS:** Store at ambient conditions. Store at atmospheric pressure. Keep container tightly closed. Store in a cool, well-ventilated place. Keep away from heat, sparks and flame. Empty containers retain product residues. Store away from incompatible materials.

**INCOMPATIBLE MATERIALS:** This product may react with strong oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE GUIDELINES:** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

**APPROPRIATE ENGINEERING CONTROLS:** Use general ventilation and use local exhaust, where possible or enclosed spaces. If product is heated above 70°C (155°F) in the presence of water, hydrogen sulfide vapors may be released. Ventilation should be sufficient to keep hydrogen sulfide levels below recommended exposure limits. Eye wash fountains are recommended.

### **INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:**

**EYE/FACE PROTECTION:** Wear safety glasses. Wear chemical goggles or face shield if splash or mist occurs.

**SKIN/BODY PROTECTION:** Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

**RESPIRATORY PROTECTION:** If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

**GENERAL HYGIENE CONSIDERATIONS:** Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors – wear appropriate footwear.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Attention: the data below are typical values and do not constitute a specification.**

**Color:** Amber

**Physical State:** Liquid

**Odor:** Typical petroleum

**Odor Threshold:** No data available

**pH:** No data available

**Vapor Pressure:** No data available

**Vapor Density (Air = 1):** >1

**Boiling Point/Boiling Range:** No data available

**Solubility:** Insoluble in water

**Freezing Point:** No data available

**Melting Point:** No data available

**Pour Point Temperature:** No data available

**Viscosity:** No data available

**Specific Gravity:** 0.86

**Evaporation Rate:** No data available

**Decomposition Temperature:** No data available

**Partition Coefficient:** No data available

**Flash Point:** 204°C / 400°F ASTM D-92

**Flammability (Solid, Gas):** Liquid- Not applicable

**Upper Flammability Limits:** No data available

**Lower Flammability Limits:** No data available

**Auto-Ignition Temperature:** No data available

**Kinematic Viscosity:** No data available

**Dynamic Viscosity:** No data available

**Explosive Properties:** No data available

**Oxidizing Properties:** No data available

## SECTION 10: STABILITY AND REACTIVITY

**REACTIVITY:** Not reactive under normal conditions.

**CHEMICAL STABILITY:** Stable under recommended storage conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS:** None under normal processing.

**HAZARDOUS POLYMERIZATION:** Under normal conditions of storage and use, hazardous polymerization will not occur.

**CONDITIONS TO AVOID:** Avoid formation of mists. Keep away from extreme heat, sparks, open flame and incompatible materials.

**INCOMPATIBLE MATERIALS:** This product may react with strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposition of this product may yield oxides of baron, calcium, magnesium, nitrogen, phosphorus, sulfur including hydrogen sulfide and zinc as well as carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

## SECTION 11: TOXICOLOGICAL INFORMATION

### INFORMATION OF LIKELY ROUTES OF EXPOSURE:

**EYE CONTACT:** Avoid contact with eyes

**SKIN CONTACT:** Avoid contact with skin

**INHALATION:** Do not inhale

**INGESTION:** Do not ingest

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc alkyl dithiophosphate 2215-35-2	= 2000 mg/kg (Rat)	>3160 mg/kg (Rabbit)	-

**INFORMATION ON PHYSICAL, CHEMICAL AND TOXICOLOGICAL EFFECTS:**

**SYMPTOMS:** Please see section 4 of this SDS for symptoms.

**DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHROMIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:**

**CARCINOGENICITY:** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**SECTION 12: ECOLOGICAL INFORMATION**

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

**COMPONENT INFORMATION:**

Chemical Name	Alge/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/ L EC50
Zinc alkyl dithiophosphate 2215-35-2	1.0 - 5.0: 96 h Pseudokirchneriella subcapitata mg/L EC50	100: 96 h Pimephales promelas mg/L LC50 semistatic  25 - 50: 96 h Pimephales promelas mg/L LC50 static		4.0-6.0: 48 h Daphnia magna mg/L EC50

**MOBILITY:** No data available

**PERSISTENCE/DEGRADABILITY:** No data available

**BIOACCUMULATION:** No data available

**OTHER ADVERSE EFFECTS:** No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

**DISPOSAL OF WASTES:** Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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

## SECTION 14: TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT: Not regulated

IMO/IMDG: Not regulated

ICAO/IATA: Not regulated

## SECTION 15: REGULATORY INFORMATION

### INTERNATIONAL INVENTORIES:

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum distillates, hydrotreated heavy paraffinic	Present	X		Present		Present	X	Present	X	X

### Legend:

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

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US FEDERAL REGULATIONS:

#### 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).

#### 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

#### 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

**CWA (Clean Water Act)**

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA Hazardous Substances
Zinc alkyl dithiophosphate		X		

**US STATE REGULATIONS:**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**US STATE RIGHT-TO-KNOW REGULATIONS:**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Zinc alkyl dithiophosphate 113706-15-3	X		X
Zinc alkyl dithiophosphate 2215-35-2	X		X

**SECTION 16: OTHER INFORMATION**

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0 Special Hazards: NA

**HMIS RATINGS:** Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: NA

**DISCLAIMER**

*The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose*

**Issue Date: 10.09.2017**

**Revision Date: 07.23.2019**



# MATERIAL SAFETY DATA SHEET

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## Section 1: Product & Company Identification

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**Product Name:** White Lithium Grease (aerosol)

**Product Number (s):** 06037, 76037

**Product Use:** lubricating grease

### Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

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

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

[www.crc-canada.ca](http://www.crc-canada.ca)

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

[www.crc-mexico.com](http://www.crc-mexico.com)

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

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## Section 2: Hazards Identification

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### Emergency Overview

**DANGER:** Extremely Flammable. Harmful or Fatal if Swallowed. Contents Under Pressure.  
Appearance & Odor: Off-white, viscous grease with solvent odor

### Potential Health Effects:

**ACUTE EFFECTS:**

**EYE:** May cause mild irritation including stinging and redness, but does not injure eye.

**SKIN:** Single, brief exposures may cause mild irritation. Frequent or prolonged contact may cause more severe irritation, defatting of the skin, and dermatitis.

**INHALATION:** High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage. Heating the dispensed grease may generate irritating vapors.

**INGESTION:** Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary adema, possible progressing to death.

**CHRONIC EFFECTS:** Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

**TARGET ORGANS:** central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

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### **Section 3: Composition/Information on Ingredients**

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COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	64742-49-0 / 107-83-5	40 - 50
n-Hexane	110-54-3	3.2
Heavy naphthenic petroleum distillates	64742-52-5	10 - 20
Liquefied petroleum gas	68476-86-8	35 - 45

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### **Section 4: First Aid Measures**

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**Eye Contact:** Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

**Skin Contact:** Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

**Inhalation:** Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

**Ingestion:** Do NOT induce vomiting. Contact a physician immediately.

**Note to Physicians:** Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

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### **Section 5: Fire-Fighting Measures**

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**Flammable Properties:** This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6) ).

Flash Point: < 20°F / -6°C (TCC)	Upper Explosive Limit: 9.0
Autoignition Temperature: 489°F / 254°C	Lower Explosive Limit: 1.7

**Fire and Explosion Data:**

**Suitable Extinguishing Media:** Class B fire extinguishers, dry chemical, foam or CO<sub>2</sub>

**Products of Combustion:** Fumes, smoke and carbon monoxide

**Explosion Hazards:** Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

**Protection of Fire-Fighters:** Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

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### **Section 6: Accidental Release Measures**

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**Personal Precautions:** Use personal protection recommended in Section 8.

**Environmental Precautions:** Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

Methods for Containment & Clean-up: Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

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## Section 7: Handling and Storage

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Handling Procedures: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Avoid contact with eyes and skin. Avoid breathing vapors. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: III

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## Section 8: Exposure Controls/Personal Protection

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### Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Heavy naphthenic petroleum distillates	5	NE	NE	NE	NE		mg/m <sup>3</sup>
Liquefied petroleum gas	1000	NE	1000	NE	NE		ppm

N.E. – Not Established      (c) – ceiling      (s) – skin      (v) – vacated

### Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVC or Viton®. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

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## Section 9: Physical and Chemical Properties

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**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

Physical State: semi-solid / grease

Color: off-white

Odor: solvent

Odor Threshold: ND

Specific Gravity: 0.6257

Initial Boiling Point: 140°F / 60°C

Freezing Point: < -50°F / -45°C

Vapor Pressure: ND

Vapor Density: > 1 (air = 1)

Evaporation Rate: fast

Solubility: not soluble in water

Coefficient of water/oil distribution: ND

pH: NA

Volatile Organic Compounds: wt %: 85 g/L: 531.8 lbs./gal: 4.43

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## Section 10: Stability and Reactivity

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Stability: Stable

Conditions to Avoid: Sources of ignition, temperature extremes

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

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## Section 11: Toxicological Information

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Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

### Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Hexane isomers	> 5000 mg/kg	> 2000 mg/kg	No data
n-Hexane	28,710 mg/kg	> 3000 mg/kg	48,000 ppm/4H
Heavy naphthenic petroleum distillates	No data	No data	No data
Liquefied petroleum gas	No data	No data	No data

### Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Hexane isomers	No	No	No	No	Unknown
n-Hexane	No	No	No	Skin	No
Heavy naphthenic petroleum distillates	No	No	No	Eye	Unknown
Liquefied petroleum gas	No	No	No	No	No

Reproductive Toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

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## **Section 12: Ecological Information**

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Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: n-hexane - 48 Hr EC50 water flea: 3.87 mg/L  
96 Hr LC50 Lepomis macrochirus: 4.12 mg/L  
Persistence / Degradability: No information available  
Bioaccumulation / Accumulation: No information available  
Mobility in Environment: No information available

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## **Section 13: Disposal Considerations**

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**Waste Classification:** The packaged liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. The dispensed grease is not a hazardous waste. (See 40 CFR Part 261.20 – 261.33). Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

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## **Section 14: Transport Information**

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US DOT (ground): UN1950, Aerosols, flammable, 2.1, Limited Quantity\*\*

ICAO/IATA (air): UN1950, Aerosols, flammable, 2.1, Limited Quantity

IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: \*\*This product can be classified and labeled as 'Consumer Commodity, ORM-D' for domestic ground shipping until January 1, 2014.  
If shipping as limited quantity by ground, note that shipping papers are not required.

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## **Section 15: Regulatory Information**

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### **U.S. Federal Regulations:**

#### **Toxic Substances Control Act (TSCA):**

All ingredients are either listed on the TSCA inventory or are exempt.

#### **Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):**

Reportable Quantities (RQ's) exist for the following ingredients: n-hexane (5000 lbs)

**Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.**

#### **Superfund Amendments Reauthorization Act (SARA) Title III:**

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:  
n-hexane (3.2%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

**U.S. State Regulations:**

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product is not regulated (semi-solid lubricant).

State Right to Know:

New Jersey: 75-83-2, 109-66-0, 78-78-4, 96-37-7, 110-54-3, 79-29-8, 68476-86-8  
Pennsylvania: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8  
Massachusetts: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8  
Rhode Island : 75-83-2, 110-54-3, 79-29-8, 68476-86-8

**Canadian Regulations:**

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D2A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

**European Union Regulations:**

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

**Additional Regulatory Information:** None

**Product Name: White Lithium Grease (aerosol)**

**Product Number (s): 06037, 76037**

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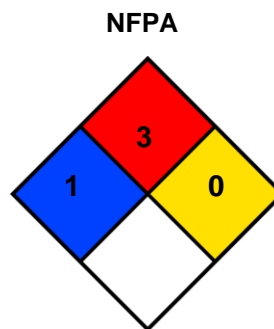
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## Section 16: Other Information

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HMIS® (II)	
Health:	1
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick  
CRC #: 568G  
Revision Date: 04/10/2012

Changes since last revision: Section 14: Transport Information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstract Service  
CFR: Code of Federal Regulations  
DOT: Department of Transportation  
DSL: Domestic Substance List  
g/L: grams per Liter  
HMIS: Hazardous Materials Identification System  
IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
IMDG: International Maritime Dangerous Goods  
IMO: International Maritime Organization  
lbs./gal: pounds per gallon  
LC: Lethal Concentration  
LD: Lethal Dose

NA: Not Applicable  
ND: Not Determined  
NIOSH: National Institute of Occupational Safety & Health  
NFPA: National Fire Protection Association  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PMCC: Pensky-Martens Closed Cup  
PPE: Personal Protection Equipment  
ppm: Parts per Million  
RoHS: Restriction of Hazardous Substances  
STEL: Short Term Exposure Limit  
TCC: Tag Closed Cup  
TWA: Time Weighted Average  
WHMIS: Workplace Hazardous Materials Information System



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

## Gear Lube GL-5 80W90

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Dilmar Gear Lube GL-5 80W90

**Part Number:** 2572-35

**Distributor:** Dilmar Oil Co., Inc. 1951 W. Darlington St. Florence, SC 29501

800-922-5823

**Emergency Phone Number:** During normal business hours – 800-922-5823

**Recommend Uses:** Extreme pressure automotive hypoid gear oil

### SECTION 2. HAZARD(S) IDENTIFICATIONS

#### Emergency Overview

Appearance	Liquid at room temperature
Color	Amber
Odor	Slight hydrocarbon

#### GHS Classification:

Not a hazardous substance or mixture.

#### GHS Label Elements:

Not a hazardous substance or mixture.

#### Potential Health Effects

Primary Routes of Entry: Eye contact  
Ingestion  
Inhalation  
Skin contact

Aggravated Medical Condition: None Known

#### Other hazards which do not result in classification

No Data Available.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture: Mixture

#### Hazardous component(s)

Chemical Name	CAS-No.	Concentration (%)
Highly refined mineral oil		<3% (w/w) DMSO-extract
Severely hydrotreated slack wax		
Synthetic esters		
Polyolefins		

### SECTION 4. FIRST-AID MEASURES

If inhaled: Move to fresh air.  
Artificial respiration and/or oxygen may be necessary.  
Seek medical advice.

In case of skin contact: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.



Wash skin thoroughly with soap and water or use recognized skin cleanser.  
Wash clothing before reuse.  
Seek medical advice.

In case of eye contact:

Remove contact lenses.  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.

If swallowed:

Rinse mouth with water.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Never give anything by mouth to an unconscious person.  
Seek medical advice.

Most important symptoms

and effects, both acute and delayed: First aider needs to protect himself.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used on small fires only.

Unsuitable extinguishing media: Do not use water in a jet.

Specific hazards during firefighting: Cool closed containers exposed to fire with water spray.

Hazardous combustion products: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment and Emergency procedures: Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.

Environmental precautions: If the product contaminates rivers and lakes or drains inform Respective authorities.

Methods and materials for containment and cleaning up: Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Soak up with inert absorbent material. Non-sparking tools should be used. Ensure adequate ventilation. Contact the proper local authorities.

**SECTION 7. HANDLING AND STORAGE**

Advice on safe handling:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Keep away from heat and sources of ignition. Keep container closed when not in use.
Conditions for safe storage:	Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not use in heat or direct sunlight.

**SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION****Components with workplace control parameters**

Material	Source	Type	ppm	mg/m <sup>3</sup>	Notation
Oil mist, mineral	ACGIH	TWA(Inhalable fraction.)		5 mg/m <sup>3</sup>	
Oil mist, mineral	OSHA Z1	PEL(Mist.)		5 mg/m <sup>3</sup>	

**Monitoring Methods:** Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods

<http://www.cdc.gov/niosh/>

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods

<http://www.osha.gov/>

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances

<http://www.hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.

<http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité, (INRS), France

<http://www.inrs.fr/accueil>

**Engineering measures:** No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

**Respiratory protection:** Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Filter type:** Organic vapor filter

**Hand protection material:** Neoprene, Nitrile, Polyvinyl Alcohol (PVA), Viton(R).



Remarks:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection:	Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures:	Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before re-use. Ensure that eyewash station and safety shower are proximal to the work-station location.
Hygiene measures:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid at room temperature
Color:	Amber
Odor:	Slight hydrocarbon
Odor Threshold:	No data available
pH:	No data available
Pour point:	Typical -27 °C / -17 °F
Melting point/freezing point:	No data available
Boiling point/boiling range:	> 280 °C / 536 °F estimated value(s)
Flash Point:	Typical 218 °C / 424 °F (COC)
Fire Point:	No data available
Auto-Ignition Temperature:	>320 °C / 608 °F
Decomposition Temperature:	No data available
Evaporation Rate:	No data available
Flammability:	Typical 1 – 10 %(V) (based on mineral oil)
Upper explosion limit:	Typical 1 – 10 %(V) (based on mineral oil)
Lower explosion limit:	Typical 1 – 10 %(V) (based on mineral oil)
Vapor pressure:	<0.5 Pa at 20 °C / 68 °F (estimated value(s))
Relative vapor density(air=1):	>1 (estimated value(s))
Density:	Typical 887 kg/m <sup>3</sup> at 15 °C / 59 °F
Solubility (ies):	
Water solubility:	Negligible
Partition coefficient: n- Octanol/water	> 6 (based on information on similar products)
Viscosity	
Viscosity, Kinematic:	Typical 139 mm <sup>2</sup> /s at 40 °C / 104 °F
Explosive properties:	No data available

## SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions:	Hazardous polymerization does not occur. Stable under normal conditions.
Conditions to avoid:	No data available
Incompatible materials:	Reactive with oxidizing agents, acids, alkalis and reducing agents.
Hazardous decomposition products:	Not expected to form during normal storage.

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute Toxicity****Product:**

Acute oral toxicity	Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat Remarks: No data available
Acute inhalation toxicity	Remarks: No data available
Acute dermal toxicity	Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit Remarks: No data available

**Skin corrosion/irritation****Product:**

Remarks: Expected to be slightly irritating.

**Serious eye damage/eye irritation****Product:**

Remarks: Expected to be slightly irritating.

**Respiratory or skin sensitization**

Not expected to be a skin sensitizer.

**Germ cell mutagenicity**

Not considered a mutagenic hazard

**Carcinogenicity****Product:**

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skin painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not expected to be a hazard.

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available



## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Toxicity to fish:	Remarks: No data available
Toxicity to daphnia and other: aquatic invertebrates	Remarks: No data available
Toxicity to algae:	Remarks: No data available
Toxicity to bacteria:	Remarks: No data available

### Persistence and degradability

#### Product:

Biodegradability:	Remarks: No data available
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### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues:	The product should not be allowed to enter drains, water courses or the soil. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste must be classified and labelled prior to recycling or disposal. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.
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Contaminated packaging:	Do not re-use empty containers.
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## SECTION 14. TRANSPORTATION INFORMATION

### International Regulation

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### **49 CFR**

Not regulated as a dangerous good

#### **TDG**

Not regulated as a dangerous good

**Special precautions for user**

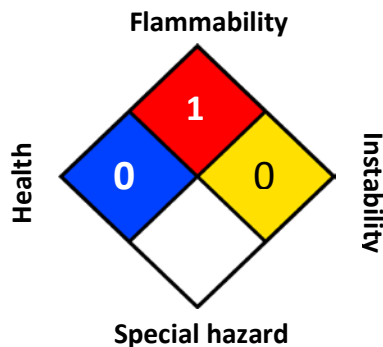
Not applicable

**SECTION 15. REGULATORY INFORMATION**

OSHA Hazards: No data available

The components of this product are reported in the following inventories:

DSL All components listed.  
 TSCA All components listed.  
 EINECS All components listed or polymer exempt.

**SECTION 16. OTHER INFORMATION****Further information****NFPA:****HMIS III:**

<b>HEALTH</b>	
<b>FLAMMABILITY</b>	
<b>PHYSICAL HAZARD</b>	
<b>PERSONAL PROTECTION</b>	

0 = not significant, 1 = Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; 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)

Prepared by: Dilmar Oil Co., Inc.

Revision date: May 28, 2015

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

**Material Safety Data Sheet**

**1. MATERIAL AND COMPANY IDENTIFICATION**

**Material Name** : **Shell Retinax Grease LX 1**  
**Uses** : Automotive and industrial grease.

**Manufacturer/Supplier** : **SOPUS Products**  
 PO BOX 4427  
 Houston, TX 77210-4427  
 USA

**MSDS Request** : 877-276-7285

**Emergency Telephone Number**  
**Spill Information** : 877-242-7400  
**Health Information** : 877-504-9351

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

A lubricating grease containing highly-refined mineral oils and additives.  
 The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

**3. HAZARDS IDENTIFICATION**

<b>Emergency Overview</b>	
<b>Appearance and Odour</b>	: Red. Semi-solid at ambient temperature. Slight hydrocarbon.
<b>Health Hazards</b>	: High-pressure injection under the skin may cause serious damage including local necrosis.
<b>Safety Hazards</b>	: Not classified as flammable but will burn.
<b>Environmental Hazards</b>	: Not classified as dangerous for the environment.

**Health Hazards** : Not expected to be a health hazard when used under normal conditions.

**Health Hazards Inhalation** : Under normal conditions of use, this is not expected to be a primary route of exposure.

**Skin Contact** : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

**Eye Contact** : May cause slight irritation to eyes.

**Ingestion** : Low toxicity if swallowed.

**Other Information** : High-pressure injection under the skin may cause serious damage including local necrosis. Used grease may contain harmful impurities.

**Signs and Symptoms** : Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

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- Aggravated Medical Condition** : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
- Environmental Hazards** : Not classified as dangerous for the environment.
- Additional Information** : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**4. FIRST AID MEASURES**

- General Information** : Not expected to be a health hazard when used under normal conditions.
- Inhalation** : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
- Skin Contact** : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
- Eye Contact** : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- Ingestion** : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
- Advice to Physician** : Treat symptomatically. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

**5. FIRE FIGHTING MEASURES**

Clear fire area of all non-emergency personnel.

- Flash point** : > 200 °C / 392 °F (COC)
- Lower / upper Flammability or Explosion limits** : Typical 1 - 10 %(V)(based on mineral oil)
- Auto ignition temperature** : > 320 °C / 608 °F
- Specific Hazards** : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

**Material Safety Data Sheet**

- Suitable Extinguishing Media** : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- Unsuitable Extinguishing Media** : Do not use water in a jet.
- Protective Equipment for Firefighters** : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

**6. ACCIDENTAL RELEASE MEASURES**

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

- Protective measures** : Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
- Clean Up Methods** : Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

**7. HANDLING AND STORAGE**

- General Precautions** : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : PVC.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Occupational Exposure Limits**

- Additional Information** : Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.
- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls

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- based on a risk assessment of local circumstances.  
Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
- Hand Protection** : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
- Eye Protection** : Wear safety glasses or full face shield if splashes are likely to occur.
- Protective Clothing** : Skin protection not ordinarily required beyond standard issue work clothes.
- Monitoring Methods** : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
- Environmental Exposure Controls** : Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : Red. Semi-solid at ambient temperature.
- Odour : Slight hydrocarbon.
- pH : Not applicable.
- Initial Boiling Point and Boiling Range : Data not available
- Dropping point : Typical 245 °C / 473 °F

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Flash point	: > 200 °C / 392 °F (COC)
Lower / upper Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: 0.90
Density	: Typical 900 kg/m <sup>3</sup> at 15 °C / 59 °F
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: Not applicable.
Vapour density (air=1)	: > 1 (estimated value(s))
Evaporation rate (nBuAc=1)	: Data not available

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	: Stable.
<b>Conditions to Avoid</b>	: Extremes of temperature and direct sunlight.
<b>Materials to Avoid</b>	: Strong oxidising agents.
<b>Hazardous Decomposition Products</b>	: Hazardous decomposition products are not expected to form during normal storage.

**11. TOXICOLOGICAL INFORMATION**

<b>Basis for Assessment</b>	: Information given is based on data on the components and the toxicology of similar products.
<b>Acute Oral Toxicity</b>	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
<b>Acute Dermal Toxicity</b>	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
<b>Acute Inhalation Toxicity</b>	: Not considered to be an inhalation hazard under normal conditions of use.
<b>Skin Irritation</b>	: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
<b>Eye Irritation</b>	: Expected to be slightly irritating.
<b>Respiratory Irritation</b>	: Inhalation of vapours or mists may cause irritation.
<b>Sensitisation</b>	: Not expected to be a skin sensitiser.
<b>Repeated Dose Toxicity</b>	: Not expected to be a hazard.
<b>Mutagenicity</b>	: Not considered a mutagenic hazard.
<b>Carcinogenicity</b>	: Product contains mineral oils of types shown to be non- carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.

<b>Material</b>	: <b>Carcinogenicity Classification</b>
Diphenylamine	: ACGIH Group A4: Not classifiable as a human carcinogen.

<b>Reproductive and Developmental Toxicity</b>	: Not expected to be a hazard.
<b>Additional Information</b>	: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful

**Material Safety Data Sheet**

impurities will depend on use and they may present risks to health and the environment on disposal. ALL used grease should be handled with caution and skin contact avoided as far as possible. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

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**12. ECOLOGICAL INFORMATION**

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

- Acute Toxicity** : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.
- Mobility** : Semi-solid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
- Persistence/degradability** : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- Bioaccumulation** : Contains components with the potential to bioaccumulate.
- Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

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**13. DISPOSAL CONSIDERATIONS**

- Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
- Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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**14. TRANSPORT INFORMATION****US Department of Transportation Classification (49CFR)**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

**Material Safety Data Sheet****IMDG**

This material is not classified as dangerous under IMDG regulations.

**IATA (Country variations may apply)**

This material is not classified as dangerous under IATA regulations.

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**15. REGULATORY INFORMATION**

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

**Federal Regulatory Status****Notification Status**

EINECS	All components listed or polymer exempt.
TSCA	All components listed.
DSL	All components listed.

**Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)**

Shell Retinax Grease LX 1 ( )	Reportable quantity: 10000 lbs
Fatty acid, zinc salt (68551-44-0)	

**SARA Hazard Categories (311/312)**

No SARA 311/312 Hazards.

**SARA Toxic Release Inventory (TRI) (313)**

Diphenylamine (122-39-4)	0.50%
Fatty acid, zinc salt (68551-44-0)	0.01%

**State Regulatory Status****California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**New Jersey Right-To-Know Chemical List**

Diphenylamine (122-39-4)	Listed.
Fatty acid, zinc salt (68551-44-0)	Listed.

## Material Safety Data Sheet

### Pennsylvania Right-To-Know Chemical List

Diphenylamine (122-39-4)

Environmental hazard.  
Listed.

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#### 16. OTHER INFORMATION

**NFPA Rating (Health, Fire, Reactivity)** : 0, 1, 0

**MSDS Version Number** : 1.1

**MSDS Effective Date** : 03/31/2010

**MSDS Revisions** : A vertical bar (|) in the left margin indicates an amendment from the previous version.

**MSDS Regulation** : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**MSDS Distribution** : The information in this document should be made available to all who may handle the product.

**Disclaimer** : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.