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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 ³	Notation
Oil mist, mineral	ACGIH	TWA(Inhalable fraction.)		5 mg/m ³	
Oil mist, mineral	OSHA Z1	PEL(Mist.)		5 mg/m ³	

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 ³ 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 ² /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).

IARC	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.
ACGIH	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.
OSHA	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.
NTP	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**

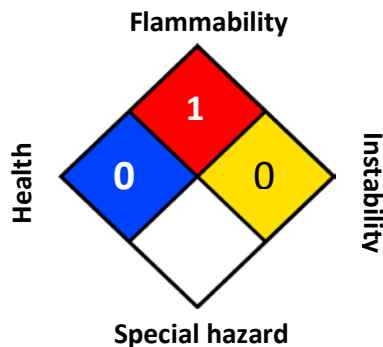
Not applicable

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:**

HEALTH	
FLAMMABILITY	
PHYSICAL HAZARD	
PERSONAL PROTECTION	

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.



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 (CO₂). 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

Safety Data Sheet

Issuing Date 01-Nov-2017

Revision Date 10-Feb-2019

Revision Number 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Valve Regulated Maintenance Free Lead-Acid Batteries:
DJW, DJM, DJ, FT, LP, LPC, LPL, LPF, LPX, LPS, XP, XPE, XVP, PLH,
PLC, PLX, LDC, DTA, EV, GF, LOP series

Recommended Use Lead acid battery. Lead Acid (Non-spillable) Battery

Supplier Identifier

Company Name : Leoch International Technology Limited

Address: 5TH FLOOR,XINBAOHUI BLDG,NANHAI BLVD,NANSHAN.
SHENZHEN CHINA.518052

Telephone: 086-755-8603-6060

Fax: 086-755-2606-7269

Emergency Telephone: China: +86 755-8603-6060
United States: +1 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

NOTE: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery acid and lead exposure that may occur during battery production or container breakage or under extreme heat conditions such as fire.

In case of rupture:

Corrosive

The product causes burns of eyes, skin and mucous membranes




Appearance: No information available.

Physical State: Solid.

Odor: Odorless

Health		Environmental		Physical
Acute Toxicity (Oral/Dermal/Inhalation)	Category 4	Aquatic	Chronic 1	Explosive Chemical Division 1.3
Skin Corrosion/Irritation	Category 1A	Aquatic	Acute 1	
Eye Damage	Category 1			
Reproductive	Category 1A			
Carcinogenicity (lead)	Category 2A			
Carcinogenicity (acid mist)	Category 1A			
Specific Target Organ Toxicity (Repeated exposure)	Category 1A			

Label Elements :

Health	Environmental	Physical
		
<p>Hazard Statements DANGER! Causes severe skin burns and eye damage. Causes serious eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure. May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen). Explosive, fire, blast or projection hazard.</p>	<p>Precautionary Statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well ventilated area. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Irritating to eyes, respiratory system, and skin.</p>	

Potential Health Effects

Principle Routes of Exposure

Skin contact.

Acute Toxicity

Eyes

Corrosive to the eyes and may cause severe damage including blindness.

Skin

Causes burns.

Inhalation

Harmful by inhalation. Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns.

Ingestion

Harmful if swallowed. Can burn mouth, throat, and stomach.

Chronic Effects

Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure.

Main Symptoms

Severe exposures can lead to shock, circulatory collapse, and death. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness.

Aggravated Medical Conditions

None known.

Environment Hazard

See Section 12 for additional Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Lead	7439-92-1	65~75
Sulfuric acid	7664-93-9	10~20
ABS resin	9003-56-9	~5
Tin	7440-31-5	<0.5
Calcium	7440-70-2	<0.1

4. FIRST AID MEASURES

General Advice	First aid is upon rupture of sealed battery.
Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. Call a physician or Poison Control Center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Immediate medical attention is required. Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Flash Point	Hydrogen – 259 °C
Auto ignition	Hydrogen – 580 °C
Temperature	
Flammable Limits	LEL = 4.1% (Hydrogen Gas in air) ; UEL = 74.2%
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Uniform Fire Code	Corrosive: Acid-Liquid
Hazardous Combustion Products	Hazardous metal fumes and oxides.
Explosion Data Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	No.
Specific Hazards Arising from the Chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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.

NFPA Health Hazard 3 Flammability 0 Stability 2 Physical and Chemical Hazards

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	In case of rupture: Use personal protective equipment. Dam up. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.
Other Information	Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.
Charging:	There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut -off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged may generate and release flammable hydrogen gas. Charging space should be ventilated. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.
Other	Follow Manufacturers Recommendations regarding maximum recommended currents and operating temperature range. Do not overcharge beyond the recommended upper charging voltage limit. Applying pressure or deforming the battery may lead to disassembly followed by eye, skin and throat irritation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lead 7439-92-1	TWA: 0.05 mg/m ³	TWA: 50 µg/m ³ Action Level: 30 µg/m ³ Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m ³ TWA: 0.050 mg/m ³
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³
Tin 7440-31-5	TWA: 2 mg/m ³	TWA: 2 mg/m ³ Sn except oxides (vacated) TWA: 2 mg/m ³	IDLH: 100 mg/m ³ TWA: 2 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value.

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits.

NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines	Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. , 1992).
Engineering Measures	Showers Eyewash stations Ventilation systems
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin and Body Protection	Wear protective gloves/clothing.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Manufactured article;no apparent odor. Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.
Odor Threshold	Not applicable.
pH	Not applicable
Boiling Point	Not applicable unless individual components exposed. Battery Electrolyte (Acid) - 230 - 233.6 °F (110 - 112 °C) Lead - 3191 °F (1755 °C)
Melting Point	Lead - 621.32 °F (327.4 °C)
Specific Gravity (H₂O = 1)	1.215 to 1.350
Flash Point	498.2 °F (259.0 °C) Hydrogen
Evaporation Rate (Butyl Acetate = 1)	< 1
Vapor Pressure (mm Hg @ 20 ° C)	Battery Electrolyte (Acid) 11.7
Flammability	
Upper/lower flammability or explosive limits	Hydrogen Flammability Limit Lower - 4.1 % Flammability Limit Upper - 74.2 %
Vapor Pressure	Not applicable.
Vapor Density	3.4 (Air = 1) Battery Electrolyte (Acid)
Relative Density	1.21 - 1.3 Battery Electrolyte (Acid)
Solubility	Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).
% Volatile by Weight	Not applicable unless individual components exposed.
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	1076 ° F (580 ° C) Hydrogen.

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Incompatible with strong acids and bases. Incompatible with oxidizing agents.
Conditions to Avoid	Exposure to air or moisture over prolonged periods.
Hazardous Decomposition Products	Thermal decomposition can lead to release of toxic/corrosive gases and vapors
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity**Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

Irritation

Causes severe irritation and or burns

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	= 2140 mg/kg (Rat)	-	= 510 mg/m3(Rat) 2 h

Chronic Toxicity Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Lead	A3	Group 2A	Reasonably Anticipated	X
Sulfuric acid	A2	Group 1	Known	X
ABS resin		Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard.
Developmental Toxicity	Contains ingredients that have suspected developmental hazards. Inorganic lead compounds can cause developmental damage.
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lead		LC50: 0.44 mg/L (96 h semi-static) Cyprinus carpio LC50: 1.17 mg/L (96 h flow-through) Oncorhynchus mykiss LC50: 1.32 mg/L (96 h static) Oncorhynchus mykiss		EC50: 600 µg/L (48 h) water flea
Sulfuric acid		LC50: > 500 mg/L (96 h static) Brachydanio rerio		EC50: 29 mg/L (24 h) Daphnia magna

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Should not be released into the environment.

Contaminated Packaging Do not re-use empty containers.

US EPA Waste Number D002 D008

SARA 311/312 Hazard Categories	Acute	Yes
Health Hazard		Yes
Chronic Health Hazard		Yes
Fire Hazard		No
Sudden Release of Pressure Hazard		No
Reactive Hazard		No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead		X	X	
Sulfuric acid	1000 lb			X

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Lead	7439-92-1	65~75				

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Lead	10 lb	
Sulfuric acid	1000 lb	1000 lb

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Lead	7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive
Sulfuric acid	7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Lead	X	X	X	X	X
Tin	X	X	X		
Calcium	X	X	X		
Sulfuric acid	X	X	X	X	X

International Regulations

Mexico - Grade Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Lead	A3	Mexico: TWA= 0.15 mg/m3
Tin		Mexico: TWA 2 mg/m3 Mexico: STEL 4 mg/m3
Sulfuric acid	A2	Mexico: TWA 1 mg/m3

Canada

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

WHMIS Hazard Class

D2A Very toxic materials E Corrosive material



Chemical Name	NPRI
Lead	X
Sulfuric acid	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Prepared By 5th Floor, Xinbaohui Bldg., Nanhai Blvd.
Nanshan, Shenzhen, China. 518054
86-0755-2606-7267

Issuing Date Nov. 01, 2017

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Revision Note No information available

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

Safety Data Sheet

Issuing Date 01-Nov-2014

Revision Date 10-JUL-2019

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Sealed Maintenance Free Lead-Acid Motorcycle Batteries: LT, EB and MX
Recommended Use	Wet Lead acid battery. Lead Acid (Non-Spillable) Battery.
Supplier Address	
Leoch Battery Corp 19751 Descartes Unit A Foothill Ranch, CA 92610 Phone:800-424-9300 Fax:949-588-5966 Contact: Paul Yu Email: paulyu@leoch.us	NOTE: Leoch Battery is considered an article as defined by 29 CFR 1910.1200 (OSHA Hazard Communication Standard). The information supplied in this SDS is at the customer's request for information only. Emergency Contact Number: 1-800-424-9300 CHEMTREC US & CANADA ONLY

2. HAZARDS IDENTIFICATION

Emergency Overview

NOTE: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery acid and lead exposure that may occur during battery production or container breakage or under extreme heat conditions such as fire. In case of rupture, Corrosive The product causes burns of eyes, skin and mucous membranes

Appearance: No information available.

Physical State: Solid.

Odor: Odorless

	Potential Health Effects
Principle Routes of Exposure	Skin contact.
Acute Toxicity	Oral, dermal, inhalation: Category 4
Eyes	Corrosive to the eyes and may cause severe damage including blindness. Category 1
Skin	Causes burns, corrosion, irritation. Category 1A Harmful by inhalation. Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns. Category 4
Inhalation	Harmful if swallowed. Can burn mouth, throat, and the rest of digestive tract. Category 4
Ingestion	Category 1A
Reproductive	Category 1B
Carcinogenicity	
Chronic Effects	Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure.
Main Symptoms	Severe exposures can lead to shock, circulatory collapse, and death. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite

indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness



Aggravated Medical Conditions

None known.

Environment Hazard

Toxic to aquatic life with long lasting effects. Aquatic Chronic 1, Aquatic Acute 1

Label Elements:

Health	Environmental	Physical
		
<p>Hazard Statements DANGER! Causes severe skin damage Causes serious eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure.</p>	<p>Precautionary Statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Irritating to eyes, respiratory system, and skin.</p>	

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Inorganic Lead/Lead Compounds	7439-92-1	65%-75%
Tin	7440-31-5	<0.5%
Calcium	7440-70-2	<0.1%
Dilute Sulfuric Acid	7664-93-9	15%-25%
Fiberglass Separator	--	~ 5%
Case Material: Acrylonitrile Butadine Styrene (ABS) or Polypropylene(PP)	9003-56-9 9003-07-0	~5%

4. FIRST AID MEASURES

General Advice

First aid is upon rupture of sealed battery.

Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

Skin Contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation

Move to fresh air. Call a physician or Poison Control Center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion	Immediate medical attention is required. Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Uniform Fire Code	• Corrosive: Acid-Liquid
Hazardous Combustion Products	Hazardous metal fumes and oxides.
Explosion Data Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	No.
Specific Hazards Arising from the Chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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.

NFPA **Health Hazard 3** **Flammability 0** **Stability 2** **Physical and Chemical Hazards**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	In case of rupture: Use personal protective equipment. Dam up. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.
Other Information	Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice.
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Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lead 7439-92-1	TWA: 0.05 mg/m ³	TWA: 50 µg/m ³ Action Level: 30 µg/m ³ Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m ³ TWA: 0.050 mg/m ³
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³
Tin 7440-31-5	TWA: 2 mg/m ³	TWA: 2 mg/m ³ Sn except oxides (vacated) TWA: 2 mg/m ³	IDLH: 100 mg/m ³ TWA: 2 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value.

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits.

NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. , 1992).

Engineering MeasuresShowers
Eyewash stations
Ventilation systems**Personal Protective Equipment****Eye/Face Protection**

Tightly fitting safety goggles.

Skin and Body Protection

Wear protective gloves/clothing.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

No information available, Black.

Odor Threshold

No information available

pH

No information available

Flash Point

No information available.

Decomposition Temperature

No information available

Melting Point/Range

No information available

Flammability Limits in Air

No information available

Water Solubility

Immiscible in water

Evaporation Rate

No information available

Vapor Density

No data available

Odor

Odorless.

Physical State

Solid

Auto-ignition Temperature

No information available

Boiling Point/Range

No information available

Explosion Limits

No information available

Solubility

No information available

Solubility

No information available

Vapor Pressure

No data available

Partition Coefficient:

No data available

noctanol/water**noctanol/water****10. STABILITY AND REACTIVITY**

Stability	Stable under recommended storage conditions.
Incompatible Products	Incompatible with strong acids and bases. Incompatible with oxidizing agents.
Conditions to Avoid	Exposure to air or moisture over prolonged periods.
Hazardous Decomposition Products	Thermal decomposition can lead to release of toxic/corrosive gases and vapors
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Irritation	Causes severe irritation and or burns

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	= 2140 mg/kg (Rat)	-	= 510 mg/m3(Rat) 2 h

Chronic Toxicity

Chronic Toxicity

Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Lead	A3	Group 2A	Reasonably Anticipated	X
Sulfuric acid	A2	Group 1	Known	X
ABS resin		Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard.
Developmental Toxicity	Contains ingredients that have suspected developmental hazards. Inorganic lead compounds can cause developmental damage.
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lead		LC50: 0.44 mg/L (96 h semi-static) Cyprinus carpio LC50: 1.17 mg/L (96 h flow-through) Oncorhynchus mykiss LC50: 1.32 mg/L (96 h static) Oncorhynchus mykiss		EC50: 600 µg/L (48 h) water flea
Sulfuric acid		LC50: > 500 mg/L (96 h static) Brachydanio rerio		EC50: 29 mg/L (24 h) Daphnia magna

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Should not be released into the environment.

Contaminated Packaging

Do not re-use empty containers.

US EPA Waste Number

D002 D008

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Lead - 7439-92-1	(hazardous constituent - no waste number)	Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K064, K065, K066, K069, K086, K100, K176	= 5.0 mg/L regulatory level	

California Hazardous Waste Codes 792

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California EHW	California Carc	California Hazardous Waste	California Waste - Part 2
Lead			Toxic	TCLP (for CA Toxicity): 5.0 mg/L
Sulfuric acid			Toxic Corrosive	
Calcium	Ignitable Reactive			

14. TRANSPORT INFORMATION

Note: Transportation requirements do not apply once the battery pack has been installed in an equipment as part of the equipment's functional components.

Transportation: Absorptive Glass-Fiber Material Lead Acid Battery is not a DOT Hazardous Material

Other: Per DOT, IATA, ICAO, and IMDG rules and regulations, these batteries are exempt from "UN2800" classification as a result of successful completion of the following tests:

- 1.) Vibration tests
- 2.) Pressure Differential Tests
- 3.) Case Rupturing Tests (no free liquids)

Note:		Exempt from hazardous materials regulations per 49CFR173.159 (d).
DOT	Description	NOT REGULATED NON-SPILLABLE BATTERY
TDG	Description	Not regulated NON-SPILLABLE BATTERY
MEX	Description	Not regulated NON-SPILLABLE BATTERY
ICAO Description		Not regulated NON-SPILLABLE BATTERY
IATA	Description	Not regulated NON-SPILLABLE BATTERY
IMDG/IMO Description		Not regulated NON-SPILLABLE BATTERY

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Not determined

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) . This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
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Lead	7439-92-1	65%-75%	0.1
Sulfuric acid	7664-93-9	15%-25%	1.0

SARA 311/312 Hazard Categories Acute
Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead		X	X	
Sulfuric acid	1000 lb			X

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPS) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Lead	7439-92-1	65%-75%				

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Lead	10 lb	
Sulfuric acid	1000 lb	1000 lb

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Lead	7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive
Sulfuric acid	7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Lead	X	X	X	X	X
Tin	X	X	X		
Calcium	X	X	X		
Sulfuric acid	X	X	X	X	X

International Regulations

Mexico - Grade

Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Lead	A3	Mexico: TWA= 0.15 mg/m3
Tin		Mexico: TWA 2 mg/m3 Mexico: STEL 4 mg/m3
Sulfuric acid	A2	Mexico: TWA 1 mg/m3

Canada

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

WHMIS Hazard Class

D2A Very toxic materials E Corrosive material



Chemical Name	NPRI
Lead	X
Sulfuric acid	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Prepared By 5th Floor, Xinbaohui Bldg., Nanhai Blvd.
Kevin Zhang, Nanshan, Shenzhen, China. 518054
86-0755-2606-7267

Issuing Date 01-Nov-2014

Revision Date July 10th, 2019

Revision Note Rev. 2

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End of Safety Data Sheet

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

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

Material Safety Data Sheet

- 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

Material Safety Data Sheet

	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.

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 ³ 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

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

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	: 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.
Eye Irritation	: Expected to be slightly irritating.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation.
Sensitisation	: Not expected to be a skin sensitiser.
Repeated Dose Toxicity	: Not expected to be a hazard.
Mutagenicity	: Not considered a mutagenic hazard.
Carcinogenicity	: 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.

Material	: Carcinogenicity Classification
Diphenylamine	: ACGIH Group A4: Not classifiable as a human carcinogen.

Reproductive and Developmental Toxicity	: Not expected to be a hazard.
Additional Information	: 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.

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.

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.

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.

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.

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Pennsylvania Right-To-Know Chemical List

Diphenylamine (122-39-4)

Environmental hazard.
Listed.

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.



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

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

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

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

52-444-824-1666

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

Section 2: Hazards Identification

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 edema, 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

Section 3: Composition/Information on Ingredients

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

Section 4: First Aid Measures

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.

Section 5: Fire-Fighting Measures

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 CO₂

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.

Section 6: Accidental Release Measures

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.

Section 7: Handling and Storage

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

Section 8: Exposure Controls/Personal Protection

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 ³
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.

Section 9: Physical and Chemical Properties

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

Section 10: Stability and Reactivity

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

Section 11: Toxicological Information

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

Section 12: Ecological Information

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

Section 13: Disposal Considerations

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.

Section 14: Transport Information

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.

Section 15: Regulatory Information

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.

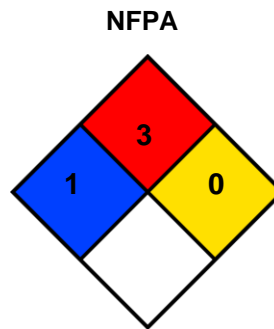
Additional Regulatory Information: None

Product Name: White Lithium Grease (aerosol)

Product Number (s): 06037, 76037

Section 16: Other Information

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