SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: 495505

Product Name: ZenaLube Gear

Revision Date: Jul 22, 2020

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Manufacturer's Name: Zenex International

Address: 1 Zenex Circle Cleveland, OH, US, 44146

Emergency Phone: 1-800-535-5053

Information Phone Number: (440)-232-4155

Product/Recommended Uses: Open Gear Lubricant

SECTION 2) HAZARDS IDENTIFICATION

Classification

Aerosols - Category 1

Gases Under Pressure - Liquefied Gas

Aspiration Hazard - Category 1

Germ Cell Mutagenicity - Category 1B

Carcinogenicity - Category 1B

Reproductive Toxicity - Category 2

Pictograms

Signal Word

Danger

Hazardous Statements - Physical

H222 - Extremely flammable aerosol

H280 - Contains gas under pressure; may explode if heated

Hazardous Statements - Health

H304 - May be fatal if swallowed and enters airways

H350 - May cause cancer.

H340 - May cause genetic defects.

H361 - Suspected of damaging fertility or the unborn child

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary Statements - Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P331 - Do NOT induce vomiting.

P308 + P313 - IF exposed or concerned: Get medical attention.

Precautionary Statements - Storage

P403 + P405 - Store in a well-ventilated place. Store locked up.

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

Precautionary Statements - Disposal

P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0068476-86-8	Petroleum gases, liquefied, sweetened	15% - 25%
0000471-34-1	CALCIUM CARBONATE	11% - 24%
0008052-42-4	BITUMENS	9% - 20%
Proprietary	Grease lubricant for gear No. 4803	9% - 19%
0064742-47-8	ISOPARAFFINIC PETROLEUM DISTILLATE	6% - 14%
0064741-41-9	MINERAL SPIRITS	4% - 8%
0000110-54-3	HEXANE	2% - 5%
1372804-76-6	Alkanes, C14-16, chloro	1.3% - 3%
0000108-65-6	PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	0.1% - 1.2%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/feel unwell/concerned: Call a POISON CENTER or doctor.

Eliminate all ignition sources if safe to do so.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms/Effects, Acute and Delayed

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increased fire intensity.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressures. Cool with water.

Empty Containers retain product residue which may exhibit hazards of material; therefore do not pressurize, cut, glaze, weld or use for any other purposes.

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Avoid breathing vapors. Ventilate area. Wear safety glasses and gloves.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Absorb liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING AND STORAGE

General

Do not puncture or incinerate (burn) cans. Do not stick pins, nails, or any other sharp objects into opening on top of can. Do not spray in eyes. Do not take internally.

Ventilation Requirements

Use in a well-ventilated place.

Storage Room Requirements

Store and use in a cool, dry, well-ventilated area. Do not store above 120°F. See product label for additional information.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear safety glasses with side shields. Eyewash stations and showers should be available in areas where this material is used and stored.

Skin Protection

Use solvent-resistant protective gloves for prolonged or repeated contact.

Respiratory Protection

Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use an approved air line respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits.

Appropriate Engineering Controls

Ventilation should be sufficient to prevent inhalation of any vapors.

Chemical Name	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)
BITUMENS							0.5	
CALCIUM CARBONATE	[15]; [5 (a)];					1		
HEXANE	1800	500				1		50
ISOPARAFFINIC PETROLEUM DISTILLATE	2000	500				1	[(L)[N159](L)[N800]]; [5 (I)[N159]5 (I)[N800]];	(L)[N159](L)[N800]
MINERAL SPIRITS	2000	500				1	[(L)]; [5 (I)];	(L)
Petroleum gases, liquefied, sweetened	2000	500				1		

Chemical Name	NIOSH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)
BITUMENS				A4	URT & eye irr	A4; BEI		
CALCIUM CARBONATE							10,5a	
HEXANE					CNS impair; peripheral neuropathy; eye irr	Skin; BEI	180	50
ISOPARAFFINIC PETROLEUM DISTILLATE				[A2[N159]A2[N800]]; [A4[N159]A4[N800]];	URT irr[N159]URT irr[N800]	[A2[N159]A2[N800]]; [A4[N159]A4[N800]];		
MINERAL SPIRITS				[A2]; [A4];	URT irr	[A2]; [A4];		
Petroleum gases, liquefied, sweetened								

Chemical Name	NIOSH STEL (mg/m3)	OSHA STEL (ppm)	NIOSH Carcinogen
BITUMENS			1
CALCIUM CARBONATE			
HEXANE			

ISOPARAFFINIC PETROLEUM DISTILLATE			
MINERAL SPIRITS			
Petroleum gases, liquefied, sweetened			

(C) - Ceiling limit, (L) - Exposure by all routes should be carefully controlled to levels as low as possible, A1 - Confirmed Human Carcinogen, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, A4 - Not Classifiable as a Human Carcinogen, BEI - Substances for which there is a Biological Exposure Index or Indices, CNS - Central nervous system, impair - Impairment, irr - Irritation, repro - reproductive, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	7.52372 lb/gal
Density VOC	3.40349 lb/gal
% VOC	45.23680%

Appearance	Dark Brown/Black Liquid
Odor Threshold	N.A.
Odor Description	Hydrocarbon
pH	N.A.
Water Solubility	N.A.
Flammability	N.A.
Vapor Pressure	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Density	N.A.
Melting Point	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions to Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Dropping containers may cause bursting.

Incompatible Materials

Avoid strong oxidizers, reducers, acids, and alkalis.

Hazardous Reactions/Polymerization

Will not occur.

Hazardous Decomposition Products

No data available.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

No data available.

Likely Route of Exposure

Inhalation, ingestion, skin absorption.

Serious Eye Damage/Irritation

No data available.

Carcinogenicity

May cause cancer.

Germ Cell Mutagenicity

May cause genetic defects.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child

Respiratory/Skin Sensitization

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

May be fatal if swallowed and enters airways

Acute Toxicity

No data available.

Potential Health Effects - Miscellaneous

0000091-20-3 NAPHTHALENE

Is an IARC, NTP or OSHA carcinogen. Tests in some laboratory animals demonstrate carcinogenic activity. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: kidneys, liver. Recurrent overexposure may result in liver and kidney injury. WARNING: This chemical is known to the State of California to cause cancer.

0000100-41-4 ETHYLBENZENE

Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

0000108-88-3 TOLUENE

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, respiratory system, skin. Can be absorbed through the skin in harmful amounts. Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. WARNING: This chemical is known to the State of California to cause birth defects or other reproductive harm.

0008052-42-4 BITUMENS

Is an IARC carcinogen. Occupational exposures to straight-run bitumens and their emissions during road paving are possibly carcinogenic to humans (Group 2B)

0008052-42-4 BITUMENS

LC50 (Rodent - rat, Inhalation) : >94.4 mg/m3, Toxic effects : Details of toxic effects not reported other than lethal dose value.
LD50 (Rodent - rat, Oral) : >5000 mg/kg, Toxic effects : Gastrointestinal - hypermotility, diarrhea.

0000110-54-3 HEXANE

LC50 (male rat): 38500 ppm (4-hour exposure); cited as 77000 ppm (271040 mg/m3) (1-hour exposure) (15)
LC50 (rat): 48000 ppm (4-hour exposure) (16)
LC50 (rat): 73680 ppm (260480 mg/m3) (4-hour exposure) (n-hexane and isomers) (1,3)

LD50 (oral, 14-day old rat): 15840 mg/kg (3)
LD50 (oral, young rat): 32340 mg/kg (3)
LD50 (oral, adult rat): 28700 mg/kg (3,16)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Harmful to aquatic life with long lasting effects.

Persistence and Degradability

No data available.

Bio-Accumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

Results of the PBT and vPvB assessment

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) Transport Information

	U.S. DOT Information	IMDG Information	IATA Information
UN number:	UN1950	UN1950	UN1950
Proper shipping name:	Aerosols	Aerosols	Aerosols, non-flammable
Hazard class:	2.2	2.2	2.2
Packaging group:	N.A.	N.A.	N.A.
Note / Special Provision:	(LTD QTY)	(LTD QTY)	(LTD QTY)

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0068476-86-8	Petroleum gases, liquefied, sweetened	15% - 25%	SARA312, TSCA, OSHA
0000471-34-1	CALCIUM CARBONATE	11% - 24%	SARA312, TSCA, OSHA
0008052-42-4	BITUMENS	9% - 20%	SARA312, TSCA, ACGIH
0064742-47-8	ISOPARAFFINIC PETROLEUM DISTILLATE	11% - 24%	SARA312, VOC,TSCA, ACGIH, OSHA
0064741-41-9	MINERAL SPIRITS	4% - 8%	SARA312, VOC,TSCA, ACGIH, OSHA
0000110-54-3	HEXANE	2% - 5%	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, ACGIH, California Proposition 65 Male

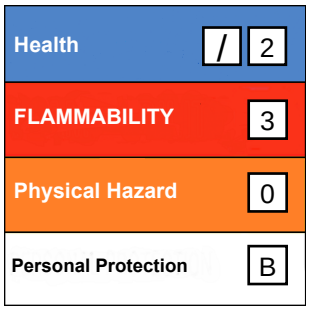
1372804-76-6	Alkanes, C14-16, chloro	1.3% - 3%	SARA312, TSCA
0000108-65-6	PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	0.1% - 1.2%	SARA312, VOC, TSCA
0000098-82-8	CUMENE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA, ACGIH, California Proposition 65 Cancer
0000091-20-3	NAPHTHALENE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA, ACGIH, California Proposition 65 Cancer
0000100-41-4	ETHYLBENZENE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, ACGIH, California Proposition 65 Cancer
0000071-43-2	BENZENE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA, ACGIH, California Proposition 65 Cancer - Developmental - Male
0000108-88-3	TOLUENE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA, ACGIH, California Proposition 65 Developmental

SECTION 16) OTHER INFORMATION

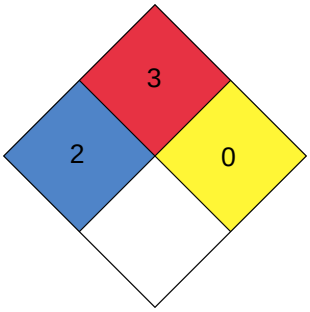
Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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