SAFETY DATA SHEET

1. Identification

Product identifier **Molylube Open Gear & Rope Lub Aerosol**

Product Code 301775

SDS number 7233

Other means of identification

Synonyms Old Product Code 77091; For Package Codes 301775XXXXXX

Product Code 301775

Recommended use of the chemical and restrictions on use

Recommended use Open Gear Lube

Restrictions on use Not available.

Details of manufacturer or importer

Manufacturer

Calumet Branded Products, LLC
GPO Darling Park Towers 2 201 Sussex St. Sydney AU NSW 2000 Australia
2780 Waterfront Pkwy E. Dr., Suite 200 Indianapolis, IN 46214
1 317 328 5660
CHEMTREC: 1800 069 100 (AUS)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements, including precautionary statements

Hazard symbol(s)

Flame | Exclamation mark | Environment

Signal word Danger

Hazard statement(s) Extremely flammable aerosol. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing gas. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.

Response	IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards which do not result in classification	None known.
Supplemental information	84.26% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 75.13% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
Butane	106-97-8	10 - < 20
Heptane	142-82-5	10 - < 20
Propane	74-98-6	10 - < 20
Distillates (petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	5 - < 10
METHYL ACETATE	79-20-9	5 - < 10
Other components below reportable levels		40 - < 50

4. First-aid measures

Description of necessary first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Symptoms caused by exposure	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Medical attention and special treatment	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for fire fighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Hazchem code	None.
General fire hazards	Extremely flammable aerosol.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 2 Aerosol. Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	TWA	5 mg/m3
Heptane (CAS 142-82-5)	STEL	2050 mg/m3

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
		500 ppm
	TWA	1640 mg/m3
		400 ppm
METHYL ACETATE (CAS 79-20-9)	STEL	757 mg/m3
		250 ppm
	TWA	606 mg/m3
		200 ppm

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value	Form
Butane (CAS 106-97-8)	TWA	1900 mg/m3	
		800 ppm	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Mist.
Heptane (CAS 142-82-5)	STEL	2050 mg/m3	
		500 ppm	
	TWA	1640 mg/m3	
		400 ppm	
METHYL ACETATE (CAS 79-20-9)	STEL	757 mg/m3	
		250 ppm	
	TWA	606 mg/m3	
		200 ppm	

ACGIH

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable Fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
METHYL ACETATE (CAS 79-20-9)	STEL	250 ppm
	TWA	200 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1810 mg/m3
		750 ppm
	TWA	1450 mg/m3
		600 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
METHYL ACETATE (CAS 79-20-9)	STEL	770 mg/m3
		250 ppm
	TWA	616 mg/m3
		200 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	2400 mg/m3 1000 ppm
Heptane (CAS 142-82-5)	TWA	2100 mg/m3 500 ppm
METHYL ACETATE (CAS 79-20-9)	TWA	310 mg/m3 100 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid, Gas.

Form Aerosol.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -305.68 °F (-187.6 °C) estimated

Initial boiling point and boiling range Not available.

Flash point -156.0 °F (-104.4 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable. Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.9 % estimated

Flammability limit - upper (%) 16 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 3447.64 hPa estimated

Density	0.62 g/cm3 estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	500 °F (260 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other physical and chemical parameters	
Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	26.31 kJ/g estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.62 estimated
VOC	65 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
Hazardous decomposition products	Irritants. Nitrogen oxides (NOx). At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

11. Toxicological information

Information on possible routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to exposure	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Acute toxicity	Narcotic effects.

Product	Species	Test Results
Molylube Open Gear & Rope Lub Aerosol		
Acute		
Inhalation		
LC50	Cat	29494 mg/l, 6 Hours estimated
	Mouse	6754 mg/l, 2 Hours estimated
	Rat	59082 mg/l, 6 Hours estimated
		10593 mg/l, 15 Minutes estimated
		696 mg/l, 4 Hours estimated
LD50	Mouse	507 mg/l, 2 Hours estimated
Oral		
LD50	Monkey	1350 g/kg estimated

Product	Species	Test Results
	Rabbit	65 g/kg estimated

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
LD50	Mouse	75 mg/l, 2 Hours
METHYL ACETATE (CAS 79-20-9)		
Acute		
Oral		
LD50	Rabbit	3.7 g/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442.847 mg/l, 15 Minutes

* Estimates for product may be based on additional component data not shown.

Skin corrosion / irritation Causes skin irritation.

Serious eye damage / irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Due to lack of data the classification is not possible.

ACGIH Carcinogens

Distillates (petroleum), Hydrotreated Heavy Naphthenic MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 64742-52-5)	A4 Not classifiable as a human carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Due to lack of data the classification is not possible.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours

Components		Species	Test Results
METHYL ACETATE (CAS 79-20-9)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	295 - 348 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
Butane	2.89
Heptane	4.66
METHYL ACETATE	0.18
Propane	2.36

Mobility in soil No data available for this product.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

ADG

UN number 1950
UN proper shipping name Aerosols
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Packing group Not applicable.
Environmental hazards Yes
Hazchem code 2YE
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

UN number 1950
UN proper shipping name Aerosol
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1 (+13)
Packing group Not applicable.
Environmental hazards Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number 1950
UN proper shipping name Aerosols

Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	Yes
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	1950
UN proper shipping name	Aerosol, MARINE POLLUTANT
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

ADG

IATA; IMDG; RID

Marine pollutant

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

Australia Medicines & Poisons Appendix B

METHYL ACETATE (CAS 79-20-9)	Low toxicity. General: Solvent

Australia Medicines & Poisons Appendix E

Butane (CAS 106-97-8)	For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once)., If swallowed, do NOT induce vomiting.
Heptane (CAS 142-82-5)	For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once)., If swallowed, do NOT induce vomiting.

Australia Medicines & Poisons Schedule 5

Butane (CAS 106-97-8)	applies to all preparations in any concentration Exception may apply, see the regulation for relevance.
Heptane (CAS 142-82-5)	applies to all preparations in any concentration Exception may apply, see the regulation for relevance.

High Volume Industrial Chemicals (HVIC)

Butane (CAS 106-97-8)	100000 - 999999 TONNES See the regulation for additional information.
Propane (CAS 74-98-6)	100000 - 999999 TONNES See the regulation for additional information.

International regulations

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 11-10-2016

Revision date 11-18-2017

Disclaimer Calumet Branded Products, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information Product and Company Identification: Synonyms
GHS: Classification