



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	KLONDIKE Ultra Tac EP-2 Grease	
Version #	02	
Issue date	01-09-2017	
CAS #	Mixture	
Product code	Ultra Tac EP-2	
Product use	Multi-Purpose Grease	
Manufacturer information	KLONDIKE Lubricants Corporation 3078 275th Street Langley, BC V4W 3L4 Canada info@klondikelubricants.com www.klondikelubricants.com	
	General Information	1-877-293-4691
	Chemtrec (Within US)	1-800-424-9300
	Chemtrec (International)	1-703-527-3887
Supplier	Refer to Manufacturer	

2. Hazards Identification

Emergency overview	WARNING
	May cause moderate to severe skin and eye irritation. May cause respiratory irritation. Prolonged or repeated overexposure may cause liver and kidney effects.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	May cause moderate to severe eye irritation.
Skin	May cause moderate to severe skin irritation. Skin absorption: Not expected to be absorbed through the skin.
Inhalation	May cause irritation of respiratory tract.
Ingestion	May cause irritation of the gastrointestinal tract.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Most important symptoms/effects, acute and delayed	May cause moderate to severe skin and eye irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects	See ECOLOGICAL INFORMATION, Section 12.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
Lithium Hydroxide	1310-66-3	1 - 5
Non-hazardous components	CAS #	Percent
Oil, Mineral	64742-52-5	60 - 100
Antimony Compounds	15890-25-2	3 - 7
Oil, Mineral	64742-46-7	3 - 7
Other components below reportable levels		1 - 5

4. First Aid Measures

First aid procedures	
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Get medical attention if symptoms persist.

Skin contact	IF ON SKIN: Gently wash with plenty of soap and water. Duration of rinsing should be at least 15 minutes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Duration of rinsing should be at least 15 minutes. If eye irritation persists: Get medical advice/attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if any discomfort continues.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire fighting equipment/instructions	Wear suitable protective equipment. Ventilate the contaminated area. Use water spray to cool unopened containers. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Explosion data	
Sensitivity to static discharge	Not expected to be sensitive to static discharge.
Sensitivity to mechanical impact	Not expected to be sensitive to mechanical impact.
Hazardous combustion products	Carbon oxides. Lithium oxides Hydrocarbons. Sulphur oxides. Phosphorus oxides. Nitrogen oxides (NOx). Other irritating fumes and smoke.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. 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 MSDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Absorb spill with vermiculite or other inert material. Place in clean, dry and labeled containers. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Do not use in areas without adequate ventilation. Water quenching is good practice. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices.
-----------------	--

Storage

Store locked up. Keep away from heat, sparks and open flame. Keep container tightly closed. Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

8. Exposure Controls / Personal Protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value
Antimony Compounds (CAS 15890-25-2)	TWA	0.5 mg/m ³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Antimony Compounds (CAS 15890-25-2)	PEL	0.5 mg/m ³	
Oil, Mineral (CAS 64742-46-7)	PEL	5 mg/m ³	Mist.
Oil, Mineral (CAS 64742-52-5)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³	
		500 ppm	

Biological limit values

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

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. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles). A full face shield may also be necessary. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Advice should be sought from respiratory protection specialists.

Hand protection

Wear appropriate chemical resistant gloves. Advice should be sought from glove suppliers.

9. Physical & Chemical Properties**Appearance**

Physical state	Liquid.
Form	Liquid.
Color	Red.

Odor Mild petroleum odor.

Odor threshold Not available.

pH Not available.

Vapor pressure < 0.01 mm Hg

Vapor density Heavier than air

Boiling point > 300 °C (572 °F)

Melting point/Freezing point Not available.

Solubility (water) Not available.

Specific gravity 0.92

Relative density Not available.

Flash point > 200.0 °C (392 °F)

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Auto-ignition temperature	Not available.
Evaporation rate	Not available.
Viscosity	336 cSt
Partition coefficient (n-octanol/water)	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known, refer to hazardous combustion products in Section 5.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Antimony Compounds (CAS 15890-25-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 16000 mg/kg
<i>Inhalation</i>		
LC50	Rat	No data in literature
<i>Oral</i>		
LD50	Rat	> 16400 mg/kg
Lithium Hydroxide (CAS 1310-66-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	No Data in Literature
<i>Inhalation</i>		
LC50	Rat	> 3.4 mg/l/4h
Oil, Mineral (CAS 64742-46-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	4.6 mg/l, 4 Hours (Mist)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Oil, Mineral (CAS 64742-52-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.23 mg/l, 4 hours Mist
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Acute effects	May cause moderate to severe skin and eye irritation. May cause respiratory irritation.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Prolonged or repeated overexposure may cause liver and kidney effects.	

Carcinogenicity Not classifiable as to carcinogenicity to humans. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). The highly refined mineral oils in this product contain <3% (w/w) DMSO-extract, according to IP346

ACGIH Carcinogens

Oil, Mineral (CAS 64742-46-7)

A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Oil, Mineral (CAS 64742-46-7)

1 Carcinogenic to humans.

Skin corrosion/irritation May cause moderate to severe skin irritation.

Serious eye damage/irritation May cause moderate to severe eye irritation.

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

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

Teratogenicity This product is not expected to be a teratogen.

Most important symptoms/effects, acute and delayed May cause moderate to severe skin and eye irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Synergistic materials None known.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
Lithium Hydroxide (CAS 1310-66-3)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (Selenastrum capricornutum)	41.62 mg/l, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	19.1 mg/l, 48 hours
Fish	LC50	Zebra danio (Danio rerio)	90 mg/l, 96 hours
<i>Chronic</i>			
Algae	NOEC	Green algae (Selenastrum capricornutum)	10 mg/l, 72 hours
Crustacea	NOEC	Water flea (Daphnia magna)	2.3 mg/l, 21 days
Oil, Mineral (CAS 64742-46-7)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green Algae (Pseudokirchneriella subcapitata)	1.714 mg/l, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	7.385 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	1.13 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (Daphnia magna)	0.163 mg/l, 21 days
Oil, Mineral (CAS 64742-52-5)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
<i>Chronic</i>			
Algae	NOEL	Green Algae (Pseudokirchneriella subcapitata)	> 100 mg/l, 72 hours
Crustacea	NOEC	Water flea (Daphnia magna)	10 mg/l, 21 days

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Components of this product are hazardous to aquatic life.
Environmental effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Aquatic toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Contains material that may be harmful in the environment.
Persistence and degradability	Not available.
Mobility in environmental media	The product is immiscible with water.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	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	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory Information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	D2B - Other Toxic Effects-TOXIC
WHMIS labeling	



International Inventories

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

Country(s) or region	Inventory name	On inventory (yes/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

HMIS® ratings	Health: 3* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 1 Instability: 0
Disclaimer	Klondike 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.
Bibliography	Not available.
Legend to abbreviations and acronyms used in the SDS	Not available.