



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	KLONDIKE Ultra Tac EP-1 Synthetic Blend Grease
Version #	02
Issue date	02-08-2017
CAS #	Mixture
Product code	Ultra Tac EP-1 Syn Blend
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 irritation of respiratory tract. May cause irritation of the gastrointestinal tract. 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 to the mouth, throat and stomach.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.
Most important symptoms/effects, acute and delayed	May cause moderate to severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause moderate to severe skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. 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	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
Lithium Hydroxide	1310-66-3	1 - 5
Non-hazardous components	CAS #	Percent
Distillates (petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	60 - 100
Antimony Compounds	15890-25-2	3 - 7
Distillates (petroleum), Hydrotreated Middle	64742-46-7	3 - 7
Other components below reportable levels		3.125

4. First Aid Measures

First aid procedures

Inhalation

Move to fresh air. If breathing stops, provide artificial respiration.

Skin contact

Take off contaminated clothing and wash before reuse. Duration of rinsing should be at least 15 minutes. Get medical attention if irritation develops and persists.

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. Get medical attention immediately.

Ingestion

Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to physician

In case of shortness of breath, give oxygen. Symptoms may be delayed.

General advice

In case of shortness of breath, give oxygen. If you feel unwell, seek medical advice (show the label where possible). Get medical attention if symptoms occur. 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. Keep victim under observation. Keep victim warm.

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

Firefighters should wear full protective gear. Ventilate the contaminated area. Move containers from fire area if you can do so without risk. 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 Other irritating fumes and smoke.

6. Accidental Release Measures

Personal precautions

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the MSDS. 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.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods and materials for containment and cleaning up

Extinguish all flames in the vicinity. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Contaminated absorbent material may pose the same hazards as the spilled product. Prevent entry into waterways, sewer, basements or confined areas.

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

Eliminate all sources of ignition. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains.

Storage

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS).

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 64742-52-5)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³	
		500 ppm	
Oil, Mineral (CAS 64742-46-7)	PEL	5 mg/m ³	Mist.

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).
Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection

Wear suitable protective clothing. Wear protective gloves.

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) Insoluble

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.

VOC	Nil
Evaporation rate	Not available.
Viscosity	336 cSt
Partition coefficient (n-octanol/water)	Not available.

10. Chemical Stability & Reactivity Information

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Not available.
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

Product	Species	Test Results
KLONDIKE Ultra Tac EP-1 Synthetic Blend Grease (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 4923 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l, 4 hours
<i>Oral</i>		
LD50	Rat	> 2352 mg/kg
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
Distillates (petroleum), Hydrotreated Heavy Naphthenic (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
Distillates (petroleum), Hydrotreated Middle (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

Components	Species	Test Results
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
<i>Oral</i>		
LD50	Rat	120 mg/kg
Acute effects	May cause moderate to severe skin and eye irritation. May cause irritation to the respiratory tract. May cause irritation of the gastrointestinal tract.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.	
Carcinogenicity	No components present at greater than 0.1% are considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
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 eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause moderate to severe skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. 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
Distillates (petroleum), Hydrotreated Heavy Naphthenic (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
Distillates (petroleum), Hydrotreated Middle (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

Components	Species		Test Results
Lithium Hydroxide (CAS 1310-66-3)			
Aquatic			
Acute			
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
Chronic			
Algae	NOEC	Green algae (Selenastrum capricornutum)	10 mg/l, 72 hours
Crustacea	NOEC	Water flea (Daphnia magna)	2.3 mg/l, 21 days
Ecotoxicity	Components of this product are hazardous to aquatic life.		
Environmental effects	Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.		
Aquatic toxicity	Not available.		
Persistence and degradability	Not available.		
Mobility in environmental media	The product is immiscible with water and will spread on the water surface.		

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

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

The information in this document was written based on the best knowledge and experience currently available, and is offered for your consideration and guidance when exposed to this product. KLONDIKE Lubricants Corporation disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this document does not apply to use with any other product or in any other process. This document may not be changed, or altered in any way without the expressed knowledge and permission of KLONDIKE Lubricants Corporation.

Bibliography

Not available.

Legend to abbreviations and acronyms used in the SDS

Not available.