



SAFETY DATA SHEET

1. Identification

Product identifier	KLONDIKE Soluble Cutting Oil
Other means of identification	
Product code	CUTTING OIL
Recommended use	Soluble Cutting Oil
Recommended restrictions	No restrictions on use known.
Chemical family	Petroleum hydrocarbon
Manufacturer	
	KLONDIKE Lubricants Corporation 3078 275th Street Langley, BC, Canada V4W 3L4 info@klondikelubricants.com www.klondikelubricants.com General Information 1-877-293-4691 Chemtec (Within US) 1-800-424-9300 Chemtec (International) 1-703-527-3887
Supplier information	Refer to Manufacturer

2. Hazard(s) Identification

This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Physical hazards	Not classified for physical hazards.
Health hazards	Not classified for health hazards.
Environmental hazards	Not currently regulated by Hazcom 2012 or WHMIS 2015. Consult section 12 for details.
OSHA defined hazards	No OSHA defined hazard classes.
Label elements	None required according to OSHA Hazcom 2012.
Signal Word	None.
Hazard statement(s)	The mixture does not meet the criteria for classification.
Precautionary statement(s)	
Prevention	None required.
Response	None required.
Storage	None required.
Disposal	None required.
Hazard(s) not otherwise Classified (HNOC)	Other hazards which do not result in classification: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Contact with eyes or skin may cause mild irritation.
Supplemental Information	None reported by the manufacturer.

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3. Composition/information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	Concentration (%)
Hydrotreated heavy naphthenic distillate	Mineral oil	64742-52-5	80.0 - 90.0
Diethylene glycol monobutyl ether	Glycol DB Ether	112-34-5	3.0 - 5.0
Triethanolamine	TEA	102-71-6	3.0 - 5.0

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.

4. First-aid measures

Inhalation	If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	For skin contact, flush with water for at least 15 minutes, while removing contaminated clothing. If skin irritation occurs, get medical advice/attention.
Eye contact	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
Ingestion	Do NOT induce vomiting. Rinse mouth. If irritation or symptoms develop, seek medical attention.
Most important symptoms and effects, both acute and delayed	May be mildly irritating to skin, eyes and respiratory system. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Indication of any immediate medical attention and special treatment needed	Treat symptomatically.
General Information	None reported by the manufacturer.

5. Fire-fighting measures

Suitable extinguishing media	Water. Water spray. Dry chemicals. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Thermal decomposition or combustion may liberate toxic gases or fumes.
Special protective equipment and precautions for fire-fighters	Firefighters should wear an approved full-face, self-contained breathing apparatus (SCBA) and impervious clothing.
Fire-fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Avoid release to the environment.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	Carbon oxides. Nitrogen oxides (NO _x).

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13).

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage,

including any incompatibilities

Keep container tightly closed. Keep cool. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Exposure Limits (29 CFR 1910)

	Type	Value
Hydrotreated heavy naphthenic distillate (CAS 64742-52-5)	TWA	5 mg/m ³ (As 'Oil mist, mineral')

US. ACGIH Threshold Limit Values

	Type	Value
Hydrotreated heavy naphthenic distillate (CAS 64742-52-5)	TWA	5 mg/m ³ (As 'Oil mist, mineral')
Diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	10 ppm (inhalable) (vapor)
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³

Biological limit values

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

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye / face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Chemical resistant gloves recommended.

Other

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health or safety professional or manufacturer for specific information.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards

Not available.

General hygiene considerations

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.

Form

Oily liquid

Color

Brown

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Odor	Mild petroleum odour.
Odor threshold	Not available.
pH	Not available.
Melting point /freezing point	Not available.
Initial boiling point and boiling range	300°C (572°F)
Flash point	>200°C Cleveland closed cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Lower flammability/explosive limit	Not available.
Upper flammability/explosive limit	Not available.
Vapour pressure	<0.01
Vapour density	>1(Air = 1)
Relative density	0.927
Solubility(ies)	
Other solubility(ies)	Not available.
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive
Oxidizing properties	Not available.
Specific gravity	0.927
Critical temperature	Not available.
VOC	Not available.
Volatilities %	Nil
Flame projection length	Not available.
Flashback observed	Not available.
Absolute pressure of container	Not available.
Other physical/chemical data	None known or reported by the manufacturer.
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	High temperatures, flame, sparks, high humidity, light, water, and moisture.
Incompatible materials	Oxidizing agents

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Hazardous decomposition products Carbon oxides.
Nitrogen oxides (NOx).

11. Toxicological information

Information on likely routes of exposure

Routes of entry inhalation YES

Routes of entry skin & eye YES

Routes of entry Ingestion YES

Routes of exposure skin absorption YES

Most important symptoms/effects, acute and delayed May be mildly irritating to skin, eyes and respiratory system. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Information on toxicological effects

Acute toxicity

See below for toxicological data on the substance.

Components	Species	Test Results
Hydrotreated heavy naphthenic distillate		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5 mg/L (mist)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Diethylene glycol monobutyl ether		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2764 mg/kg
<i>Inhalation</i>		
LC50	Rat	N/Av
<i>Oral</i>		
LD50	Rat	6560 mg/kg
Triethanolamine		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 19 870 mg/kg
<i>Inhalation</i>		
LC50	Rat	N/Av
<i>Oral</i>		
LD50	Rat	6110 mg/kg
Skin Corrosion/Irritation	May cause mild skin irritation.	
Serious eye damage/Irritation	May cause mild eye irritation.	
Respiratory or skin sensitization	Not expected to be a skin or respiratory sensitizer.	
Germ cell mutagenicity	Not expected to be mutagenic.	
Carcinogenicity	No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Triethanolamine(CAS 102-71-6)	Group 3 (Not Classifiable)	

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Reproductive toxicity This product is not expected to cause reproductive effects.
Specific target organ toxicity - single exposure Not classified as a specific target organ toxicity-single exposure.
Specific target organ toxicity - repeated exposure Not classified as specific target organ toxicity-repeated exposure.

Chronic effects Prolonged or repeated skin contact may cause defatting and drying resulting in irritation and possible dermatitis.

Aspiration toxicity Not expected to be an aspiration hazard.

Further information None reported by the manufacturer.

12. Ecological information

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.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Hydrotreated heavy naphthenic distillate	64742-52-5	> 5000 mg/L (Rainbow trout)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	1300 mg/L (Bluegill sunfish)	N/Av	None.
Triethanolamine	102-71-6	11 800 mg/L (Fathead minnow)	N/Av	None.

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Hydrotreated heavy naphthenic distillate	64742-52-5	> 1000 mg/L (Daphnia magna)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L (Daphnia magna)	N/Av	None.
Triethanolamine	102-71-6	1386 mg/L/24hr (Daphnia magna)	16 mg/L	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Hydrotreated heavy naphthenic distillate	64742-52-5	> 1000 mg/L/96hr (Green algae)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L/96hr (Green algae)	N/Av	None.
Triethanolamine	102-71-6	169 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability

Not readily biodegradable.

Bioaccumulation potential

Not available.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Hydrotreated heavy naphthenic distillate (CAS 64742-52-5)	>20	N/Av
Diethylene glycol monobutyl ether (CAS 112-34-5)	1.0	no bioconcentration expected
Triethanolamine (CAS 102-71-6)	-2.53	<3.9 BCF method: OECD 305C

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Mobility in soil Not available.

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 consideration

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations Dispose in accordance with all applicable regulations.
Hazardous waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
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

49CFR/DOT
Not regulated as dangerous goods
ICAO/IATA
Not regulated as dangerous goods
IMDG
Not regulated as dangerous goods
TDG
Not regulated as dangerous goods

General information Keep away from heat, sparks and open flame. - No smoking.

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

15. Regulatory information

US Federal Information: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
 All components are on the U.S. EPA TSCA Inventory list.

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Hydrotreated heavy naphthenic distillate	64742-52-5	Yes	None.	None.	No	N/Ap
Diethylene glycol monobutyl ether	112-34-5	Yes	None.	None.	No	N/Ap
Triethanolamine	102-71-6	Yes	N/Ap	N/Ap	No	N/Ap

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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Hazard categories

Immediate Hazard - NO
 Delayed Hazard - NO
 Fire Hazard - NO
 Pressure Hazard - NO
 Reactivity Hazard - NO

US state regulations

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Hydrotreated heavy naphthenic distillate	64742-52-5	No	N/Ap	No	No	No	No	No	No
Diethylene glycol monobutyl ether	112-34-5	No	N/Ap	No	No	No	No	No	No
Triethanolamine	102-71-6	No	N/Ap	No	Yes	Yes	Yes	Yes	Yes

Not Regulated.

Canadian Information:

Not regulated.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

International Inventories

Components listed below are present on the following International Inventory lists:

<u>Ingredients</u>	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Hydrotreated heavy naphthenic distillate	64742-52-5	265-155-0	Present	Present	(9)-1689	KE-12543	Present	May be used as a single component chemical under an appropriate group standard
Diethylene glycol monobutyl ether	112-34-5	203-961-6	Present	Present	(7)-97; (2)-422	KE-10466	Present	HSR001075
Triethanolamine	102-71-6	203-049-8	Present	Present	(2)-308	KE-25940	Present	HSR002785

16. Other information, including date of preparation or last revision

Issue date 06/06/2016
Version # 1
Legend ACGIH: American Conference of Governmental Industrial Hygienists
 CA: California
 CAS: Chemical Abstract Services
 CEPA: Canadian Environmental Protection Act
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CFR: Code of Federal Regulations
 CPR: Controlled Products Regulation
 CSA: Canadian Standards Association
 DOT: Department of Transportation
 DSL: Domestic Substances List
 EPA: Environmental Protection Agency

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HMIS: Hazardous Materials Identification System
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OEL: National occupational exposure limits
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PPE: Personal Protective Equipment
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RQ: Reportable Quantity
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WEL: Workplace Exposure Limit
WHMIS: Workplace Hazardous Materials Identification System

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Disclaimer

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Bibliography

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3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2016(Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - 2016 version.
6. California Proposition 65 List - 2016 version.
7. OECD - The Global Portal to Information on Chemical Substances -eChemPortal,2016.