



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
Pr 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 01/06/2020

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

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

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6. California Proposition 65 List - 2016 version.
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