



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	KLONDIKE SAE 10W-30 CK-4 Heavy Duty Synthetic Blend Engine Oil	
Version #	02	
Issue date	01-16-2017	
CAS #	Mixture	
Product code	10W-30 CK-4 Synthetic Blend	
Product use	Heavy Duty Engine Oil	
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	CAUTION
	May cause mild skin and eye irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	May cause mild eye irritation.
Skin	Skin contact: May cause mild skin irritation on prolonged contact.
	Skin absorption: Not expected to be absorbed through the skin.
Inhalation	Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target organs	Eyes. Respiratory system. Skin.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
Petroleum Base Oil	64742-52-5	60 - 100
Highly Refined Light Mineral Base Oil	64742-55-8	7 - 13

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin contact	Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

Ingestion	Do not induce vomiting. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.
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. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.
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	Evacuate area and fight fire from a safe distance. Ventilate the contaminated area. Remove all sources of ignition. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray. 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. Hydrocarbons. Nitrogen oxides (NOx). Phosphorus oxides. Sulphur oxides.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the MSDS.
Environmental precautions	Do not contaminate water.
Methods for containment	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. The product is immiscible with water and will spread on the water surface. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. 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. Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not breathe dust. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. When using do not eat or drink. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.
Storage	Store in a closed container away from incompatible materials. Store away from incompatible materials (see Section 10 of the MSDS). Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

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

Components	Type	Value	Form
Highly Refined Light Mineral Base Oil (CAS 64742-55-8)	PEL	5 mg/m3	Mist.
Petroleum Base Oil (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		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).

Skin protection

Wear appropriate chemical resistant 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. Seek advice from respiratory protection specialists.

Hand protection

Wear protective gloves. Advice should be sought from glove suppliers.

9. Physical & Chemical Properties

Appearance

Physical state

Liquid.

Form

Liquid.

Color

Amber.

Odor

Mild petroleum odor.

Odor threshold

Not available.

pH

Not available.

Vapor pressure

< 0.01 kPa

Vapor density

10

Boiling point

280 °C (536 °F)

Melting point/Freezing point

Not available.

Solubility (water)

Insoluble

Specific gravity

0.86

Relative density

Not available.

Flash point

215.0 °C (419 °F)

Flammability limits in air, upper, % by volume

10 %

Flammability limits in air, lower, % by volume

1 %

Auto-ignition temperature

Not available.

Evaporation rate

Not available.

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	No dangerous reaction known under conditions of normal use.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Highly Refined Light Mineral Base Oil (CAS 64742-55-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 4000 mg/m3, 4 hours
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Petroleum Base Oil (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 mild irritation to skin, eyes and respiratory system. May cause irritation of the gastrointestinal tract.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Prolonged or repeated contact may cause drying, cracking and defatting of the skin.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Skin corrosion/irritation	May be irritating to the skin.	
Serious eye damage/irritation	May be irritating to eyes.	
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.	
Symptoms and target organs	May cause mild 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	Not applicable.	

12. Ecological Information

Ecotoxicological data

Product	Species		Test Results
KLONDIKE SAE 10W-30 CK-4 Heavy Duty Synthetic Blend Engine Oil (CAS Mixture)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	9.999 mg/l, 48 hours estimated
Fish	LC50	Fish	9.901 mg/l, 96 hours estimated

Components	Species		Test Results
Highly Refined Light Mineral Base Oil (CAS 64742-55-8)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Water flea (Daphnia magna)	10 mg/l, 21 days
Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment.		
Environmental effects	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	Non-controlled

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: 2* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0
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