



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier KLONDIKE -35°C Washer Fluid
Version # 01
Issue date 05-13-2014
CAS # Mixture
Product code -35°C Washer Fluid
Product use Windshield Washer Fluid
Manufacturer information KLONDIKE Lubricants Corporation
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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 DANGER
Flammable liquid and vapor. Vapors may cause flash fires. POISON. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Harmful by inhalation and in contact with skin. May cause central nervous system effects. Causes eye irritation. Prolonged or repeated overexposure may cause liver effects. Teratogenic.

Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Causes eye irritation.
Skin Harmful in contact with skin. May cause mild skin irritation.
Skin absorption: May be absorbed and cause symptoms similar to those for inhalation.
Inhalation May be harmful if inhaled. Toxic effects exerted upon nervous system, particularly the optic nerve. May cause irritation of respiratory tract.
Ingestion Toxic if swallowed. Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness.

Target organs Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Skin.

Chronic effects Pregnant women or women of child-bearing age should not be exposed to this product. May cause birth defects. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated overexposure may cause liver effects.

Signs and symptoms Causes moderate eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause mild skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause respiratory irritation. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.

Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Methyl Alcohol	67-56-1	30 - 40

4. First Aid Measures

First aid procedures

Eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Seek immediate medical attention/advice.

Skin contact

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse.

Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Get medical attention, if needed.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to physician

Treat symptomatically. Immediate medical attention is required. This product is a CNS depressant. Contains methanol. Onset of symptoms may be delayed for 18 to 24 hours after ingestion. Medical supervision for minimum 48 hours. Administration of ethanol can slow the metabolism of methanol, thus reducing the potential for harmful effects.

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

Flammable by WHMIS criteria. Heat may cause the containers to explode. Vapors are heavier than air and may spread along floors. Vapors may travel considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable extinguishing media

Alcohol resistant foam. Water fog. 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

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Ventilate the contaminated area. Evacuate area and fight fire from a safe distance. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Specific methods

Cool containers exposed to flames with water until well after the fire is out.

Explosion data

Sensitivity to static discharge

May be sensitive to static discharge. Vapours in the flammable range may be ignited by a static discharge or sufficient energy.

Sensitivity to mechanical impact

Not expected to be sensitive to mechanical impact.

Hazardous combustion products

Carbon oxides. Formaldehyde. Other unidentified organic compounds.

6. Accidental Release Measures

Personal precautions

Keep people away from and upwind of spill/leak. Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. 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 for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Extinguish all flames in the vicinity. Should not be released into the environment. This product is miscible in water.

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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb residues with a non-combustible absorbent material (e.g. sand, vermiculite) and collect adsorbate for disposal. 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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only in area provided with appropriate exhaust ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash contaminated clothing before reuse.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Storage

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. 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). Keep in an area equipped with sprinklers.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

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

Components	Type	Value
Methyl Alcohol (CAS 67-56-1)	PEL	260 mg/m ³
		200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methyl Alcohol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Canada - Alberta OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methyl Alcohol (CAS 67-56-1)

Can be absorbed through the skin.

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**

Chemical goggles are recommended. A full face shield may also be necessary. Eye wash facilities and emergency shower must be available when handling this product.

Skin protection

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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

Blue.

Odor

Mild.

Odor threshold

Not available.

pH

8.2

Vapor pressure

127 hPa

Vapor density

1.105 - 1.11

Boiling point

64 °C (147.2 °F)

Melting point/Freezing point

0 °C (32 °F)

Solubility (water)

Soluble

Specific gravity

0.87

Relative density

Not available.

Flash point

34.0 °C (94 °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

< 1

Percent volatile

95 %

Partition coefficient (n-octanol/water)

Not available.

10. Chemical Stability & Reactivity Information**Chemical stability**

Material is stable under normal conditions. Risk of explosion.

Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials	Strong oxidizing agents. Acids. Powdered metal.
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
Methyl Alcohol (CAS 67-56-1)		
Acute		
<i>Dermal</i>		
LD50	Monkey	> 393 mg/kg
<i>Inhalation</i>		
LC50	Rat	4.1 mg/l/4h
<i>Oral</i>		
LD50	Human	300 - 1000 mg/kg
Acute effects	May cause moderate eye irritation. May cause mild skin irritation. May cause respiratory irritation. May cause irritation of the gastrointestinal tract. May be fatal or cause blindness if swallowed.	
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 or repeated overexposure may cause liver effects.	
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 cause moderate eye irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	Contains methanol, which may cause teratogenic effects at doses which are not maternally toxic. Effects were observed following inhalation of high concentrations of methanol, as doses which were not maternally toxic.	
Teratogenicity	Hazardous by WHMIS criteria. Avoid exposure to women during early pregnancy.	
Synergistic materials	Not available.	
Further information	Symptoms may be delayed.	

12. Ecological Information

Ecotoxicological data

Product	Species	Test Results
KLONDIKE -35°C Washer Fluid (CAS Mixture)		
Aquatic		
Crustacea	EC50 Daphnia	17183.334 mg/l, 48 hours estimated
<i>Acute</i>		
Fish	LC50 Fish	15400 mg/l, 96 hours estimated
Components	Species	Test Results
Methyl Alcohol (CAS 67-56-1)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
<i>Acute</i>		
Algae	EC50 Green algae (Scenedesmus quadricauda)	> 100 mg/l, 96 hours
Fish	LC50 Bluegill (Lepomis macrochirus)	15400 mg/l, 96 hours
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.
Partition coefficient	
Methyl Alcohol	-0.77
Mobility in environmental media	This product is miscible in 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

UN number	UN1992
UN proper shipping name	Flammable liquids, toxic, n.o.s. (Methyl Alcohol)
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGIII)
Packing group	III
Environmental hazards	Not available.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling. For shipments by ground within Canada, the Limited Quantity / Consumer Commodity Exemption may apply for containers which hold 5 Litres or less of the material. Refer to TDG Section 1.17 for details.

IATA

UN number	UN1992
UN proper shipping name	Flammable liquids, toxic, n.o.s. (Methyl Alcohol)
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGIII)
Label(s)	3, 6.1
Packing group	III
Environmental hazards	No.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden.
Cargo aircraft only	Forbidden.

IMDG

UN number	UN1992
UN proper shipping name	Flammable liquids, toxic, n.o.s. (Methyl Alcohol)
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGIII)
Label(s)	3, 6.1
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG



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

B2 - Flammable Liquids
D1B - Immediate/Serious-TOXIC
D2A - Other Toxic Effects-VERY TOXIC
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)	Yes
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: 2*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

Disclaimer

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