



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier KLONDIKE Summer Bug Wash
Version # 01
Issue date 05-13-2014
CAS # Mixture
Product code Bug Wash
Product use Windshield Washer Fluid
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
Causes skin and eye irritation. May cause irritation of respiratory tract. May cause central nervous system effects. May cause discomfort if swallowed. Prolonged or repeated overexposure may cause kidney effects.

Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes May irritate eyes.
Skin May be irritating to the skin.
Skin absorption: Not expected to be absorbed through the skin.
Inhalation May cause irritation of respiratory tract. May cause central nervous system effects.
Ingestion May cause irritation of the gastrointestinal tract.
Target organs Central nervous system. Eyes. Respiratory system. Skin.
Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated overexposure may cause kidney effects.
Signs and symptoms Causes mild to moderate skin and eye 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. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Propylene Glycol Monomethyl Ether	107-98-2	40 - 70
Sodium Lauryl Ether Sulfate	32612-48-9	40 - 70

4. First Aid Measures

First aid procedures
Eye contact Rinse immediately 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. If symptoms persist, get medical attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.
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	Combustible by WHMIS criteria. Heat may cause the containers to explode.
Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
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 must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. In the event of fire, cool tanks with water spray. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Some of these materials, if spilled, may evaporate leaving a flammable residue.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
Explosion data	
Sensitivity to static discharge	Not available.
Sensitivity to mechanical impact	Not available.
Hazardous combustion products	Carbon oxides. Hydrocarbons. Hydrogen gas.
General fire hazards	Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

6. Accidental Release Measures

Personal precautions	Consider initial downwind evacuation for at least 500 meters (1/3 mile). 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. Ventilate closed spaces before entering them. 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 in vermiculite, dry sand or earth and place into containers. 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 handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. All equipment used when handling the product must be grounded. Avoid breathing mist or vapor. 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. Wash thoroughly after handling. Avoid release to the environment.

Storage

Do not handle or store near an open flame, heat or other sources of ignition. Keep at temperature not exceeding 49 °C. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Keep out of the reach of children. Keep in an area equipped with sprinklers. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components

Type

Value

Propylene Glycol
Monomethyl Ether (CAS
107-98-2)

STEL

100 ppm

TWA

50 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). Eye wash facilities and emergency shower must be available when handling this product.

Skin protection

Wear appropriate chemical resistant clothing.

Respiratory protection

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Advice should be sought 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

Pink.

Odor

Mild.

Odor threshold

Not available.

pH

Not available.

Vapor pressure

Not available.

Vapor density

> 1

Boiling point

99 °C (210.2 °F)

Melting point/Freezing point

0 °C (32 °F)

Solubility (water)

Soluble

Specific gravity

1

Relative density

Not available.

Flash point

> 120.0 °C (> 248°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
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 acids. Strong oxidizing agents. Alkali metals. Halogenated materials. Aldehydes.
Hazardous decomposition products	Not available.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Propylene Glycol Monomethyl Ether (CAS 107-98-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 19200 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5320 ppm
<i>Oral</i>		
LD50	Rat	8532 mg/kg
Sodium Lauryl Ether Sulfate (CAS 32612-48-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	No data in literature
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Acute effects	Causes eye irritation. May cause skin irritation. May cause respiratory irritation. May cause central nervous system effects. May cause irritation of the gastrointestinal tract.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Not expected to be hazardous by WHMIS criteria. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated overexposure may cause kidney effects.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
ACGIH Carcinogens		
Propylene Glycol Monomethyl Ether (CAS 107-98-2)	A4 Not classifiable as a human carcinogen.	
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 does contain Propylene glycol monomethyl ether acetate (PGMMEA). Commercial PGMMEA may contain small amounts of a beta-isomer. beta-PGMMEA may cause teratogenic effects, based on animal data. The potential for these developmental effects to occur for commercial PGMMEA is, however, considered to be low. The level of beta-PGMMEA in this product is unknown.	
Teratogenicity	This product is not expected to be a teratogen.	

Symptoms and target organs Causes mild to moderate 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 pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.

Synergistic materials Not available.

12. Ecological Information

Ecotoxicological data

Product		Species	Test Results
KLONDIKE Summer Bug Wash (CAS Mixture)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	746 mg/l, 48 hours estimated
Fish	LC50	Fish	200 mg/l, 96 hours estimated

Components		Species	Test Results
Propylene Glycol Monomethyl Ether (CAS 107-98-2)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Selenastrum capricornutum</i>)	> 1000 mg/l, 72 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	373 mg/l, 48 hours
Fish	LC50	Japanese rice fish (<i>Oryzias latipes</i>)	> 100 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>)	>= 100 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 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

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
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
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: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 1
Instability: 0

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