



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier KLONDIKE ISO AW32 Hydraulic Oil
Version # 01
Issue date 07-17-2014
CAS # Mixture
Product code ISO AW32
Product use Hydraulic Fluid
Manufacturer information KLONDIKE Lubricants Corporation
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Canada
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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 respiratory irritation. May be harmful if swallowed and enters airways. May cause mild skin and eye irritation.

Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes May cause mild eye irritation.
Skin May cause mild skin irritation on prolonged contact.
Inhalation Skin absorption: Not expected to be absorbed through the skin.
May cause irritation to the nose, throat and upper respiratory tract.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Signs and symptoms May cause mild skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause mild eye irritation. Symptoms may include stinging and tearing. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may present an aspiration hazard, if ingested in large amounts. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
Distillates (petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	30 - 60
Distillates (petroleum), Hydrotreated Light Paraffinic	64742-55-8	30 - 60

4. First Aid Measures

First aid procedures
Eye contact Rinse with water. Get medical attention if irritation develops and persists.
Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.
Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Ingestion

Call a physician or poison control center immediately. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

General advice

If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures**Flammable properties**

Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. 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**

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.

Fire fighting equipment/instructions

Ventilate the contaminated area. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. 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. Sulphur oxides. Phosphorus oxides. Nitrogen oxides (NO_x). Hydrocarbons.

6. Accidental Release Measures**Personal precautions**

Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use only non-sparking tools. Avoid inhalation of vapors and spray mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

Methods for containment

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up

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: 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. For waste disposal, see section 13 of the MSDS.

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. Do not ingest. Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Handle and open container with care.

Storage

Store locked up. Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS).

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
Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8)	PEL	5 mg/m ³	Mist.

Biological limit values

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

Engineering controls	If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.
Personal protective equipment	
Eye/face protection	If contact is likely, safety glasses with side shields are recommended. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin protection	Wear suitable protective clothing as protection against splashing or contamination.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Seek advice 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	Dark amber.
Odor	Mild petroleum odor.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	< 1 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	216.0 °C (420.8 °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	Not available.
Viscosity	32 cSt
Percent volatile	Negligible
Partition coefficient (n-octanol/water)	Not available.

10. Chemical Stability & Reactivity Information

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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	Carbon oxides. Phosphorus oxides. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Distillates (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l, 4 Hours (Mist)
<i>Oral</i>		
LD50	Rat	> 15000 mg/kg
Distillates (petroleum), Hydrotreated Light Paraffinic (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
Acute effects	May cause irritation of the gastrointestinal tract. May cause respiratory irritation. Product may present an aspiration hazard, if ingested in large amounts. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.	
Sensitization	Not expected to be a respiratory sensitizer. Not expected to be a skin sensitizer.	
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.	
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	Direct contact may cause very mild, temporary irritation and redness.	
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 and tearing. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may present an aspiration hazard, if ingested in large amounts. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.	
Synergistic materials	Not available.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Distillates (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Water flea (Daphnia magna) 10 mg/l, 21 days
Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) > 10000 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 100 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>) 10 mg/l, 21 days
Ecotoxicity	Not available.	
Environmental effects	Not available.	
Aquatic toxicity	Not available.	
Persistence and degradability	Distillates, (petroleum), Hydrotreated Heavy Paraffinic is considered to be not readily biodegradable.	
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.
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

WHMIS status	Non-controlled
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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
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: 1 Flammability: 1 Physical hazard: 0
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NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

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Legend to abbreviations and acronyms used in the SDS

Not available.