



SAFETY DATA SHEET

1. Identification

| | | | |
|---|--|----------------|--|
| Product identifier | KLONDIKE ISO AW22 Hydraulic Oil | | |
| Other means of identification | | | |
| Product code | ISO AW22 | | |
| Recommended use | Hydraulic Fluid | | |
| Recommended restrictions | None known. | | |
| Manufacturer/Importer/Supplier/Distributor information | | | |
| Manufacturer | | | |
| Company name | KLONDIKE Lubricants Corporation | | |
| Address | 3078 275th Street Langley, BC V4W 3L4 Canada | | |
| Telephone | General Information | 1-877-293-4691 | |
| Website | www.klondikelubricants.com | | |
| E-mail | info@klondikelubricants.com | | |
| Emergency phone number | Chemtrec (Within US) | 1-800-424-9300 | |
| | Chemtrec (International) | 1-703-527-3887 | |
| Supplier | Refer to Manufacturer | | |

2. Hazard(s) identification

| | |
|------------------------------|---|
| Physical hazards | This mixture does not meet the classification criteria according to OSHA HazCom 2012. |
| Health hazards | This mixture does not meet the classification criteria according to OSHA HazCom 2012. |
| Environmental hazards | This mixture does not meet the classification criteria according to OSHA HazCom 2012. |
| OSHA defined hazards | This mixture does not meet the classification criteria according to OSHA HazCom 2012. |

Label elements

| | |
|--------------------------------|--|
| Hazard symbol | None. |
| Signal word | None. |
| Hazard statement | The mixture does not meet the criteria for classification. |
| Precautionary statement | |

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| Prevention | Observe good industrial hygiene practices. |
| Response | Wash hands after handling. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of waste and residues in accordance with local authority requirements. |

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| Hazard(s) not otherwise classified (HNOC) | No OSHA defined hazard classes. Other hazards which do not result in classification: May cause mild skin and eye irritation. May cause respiratory irritation. 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. |
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|---------------------------------|-------|
| Supplemental information | None. |
|---------------------------------|-------|

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|-------------------|----------|
| Distillates (petroleum), Hydrotreated Heavy Paraffinic | HEAVY BASE OILS (HEAVY PARAFFINIC HYDROTREATED DISTILLATE) | 64742-54-7 | 30 - 60 |
| Distillates (petroleum), Hydrotreated Light Paraffinic | Not Available | 64742-55-8 | 30 - 60 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |
| 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. |
| Most important symptoms/effects, acute and delayed | May be mildly irritating to skin, eyes and respiratory system. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging and tearing. 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. |
| Indication of immediate medical attention and special treatment needed | Treat symptomatically. |
| General information | If you feel unwell, seek medical advice (show the label where possible). |

5. Fire-fighting measures

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| 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. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of 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. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. |
| Hazardous combustion products | Carbon oxides. Sulphur oxides. Phosphorus oxides. Nitrogen oxides (NO _x). Hydrocarbons. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | 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 SDS. |
| Methods and materials for containment and 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 SDS. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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| Precautions for safe 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. |
| Conditions for safe storage, including any incompatibilities | 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 SDS). |

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. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|---|------|----------------------|-------|
| Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8) | STEL | 10 mg/m ³ | Mist. |
| | TWA | 5 mg/m ³ | Mist. |

Biological limit values

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

Appropriate 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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Advice should be sought from glove suppliers.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Seek advice from respiratory protection specialists.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

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

Liquid.

Color

Dark amber.

Odor

Mild petroleum odor.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

280 °C (536 °F)

Flash point

216.0 °C (420.8 °F)

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

< 1 kPa

Vapor density

> 10

Relative density

Not available.

Solubility(ies)

Solubility (water)

Insoluble

| | |
|--|----------------|
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | 22 cSt |
| Other information | |
| Percent volatile | Negligible |
| Specific gravity | 0.86 |

10. Stability and reactivity

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| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| 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. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Inhalation | Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. |
| Skin contact | May cause mild skin irritation. |
| Eye contact | May cause mild eye irritation. |

Symptoms related to the physical, chemical and toxicological characteristics 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.

Information on toxicological effects

Acute toxicity See below for individual ingredient acute toxicity 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 |

* Estimates for product may be based on additional component data not shown.

| | |
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| Skin corrosion/irritation | May be irritating to the skin. |
| Serious eye damage/eye irritation | Direct contact may cause very mild, temporary irritation and redness. |
| Respiratory or skin sensitization | |
| Respiratory sensitization | This product is not expected to cause respiratory sensitization. |
| Skin sensitization | Not expected to be a skin sensitizer. |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |

Carcinogenicity

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8) Known To Be Human Carcinogen.

| | |
|---|---|
| Reproductive toxicity | This product is not expected to cause reproductive or developmental 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 a specific target organ toxicity -repeated exposure. |
| Chronic effects | Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. |
| Further information | This product has no known adverse effect on human health. |
| Aspiration toxicity | Not expected to be hazardous by OSHA criteria. |

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.

| 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 |
| 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 |

* Estimates for product may be based on additional component data not shown.

| | |
|--------------------------------------|---|
| Persistence and degradability | Distillates, (petroleum), Hydrotreated Heavy Paraffinic is considered to be not readily biodegradable. |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data 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 considerations

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|-----------------------------------|--|
| 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. |

| | |
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| 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

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations This product is not known to be 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.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8)

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Distillates (petroleum), Hydrotreated Light Paraffinic (CAS 64742-55-8)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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, including date of preparation or last revision**Issue date** 02-07-2017**Version #** 02

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