# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **KLONDIKE SAE 40 CF-2 Heavy Duty Engine Oil**

**Other means of identification**

**Product code** 40 CF-2

**Recommended use** Heavy Duty Engine Oil

**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**

**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.

**Hazard(s) not otherwise classified (HNOC)** May cause mild skin and eye irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Supplemental information** None.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Distillates, (petroleum), Hydrotreated Heavy Paraffinic | Not Available | 64742-54-7 | 60 - 100 |
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters | PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS. | 68649-42-3 | 0.1 - 1 |

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist. |
| **Skin contact** | Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. |
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. |
| **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. |
| **Most important symptoms/effects, acute and delayed** | Direct contact with eyes may cause temporary irritation. |
| **Indication of immediate medical attention and special treatment needed** | Treat symptomatically. |
| **General information** | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

## 5. Fire-fighting measures

| | |
|---|---|
| **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. |
| **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** | 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. |
| **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. Hydrocarbons. Nitrogen oxides (NOx). Phosphorus oxides. Sulphur oxides. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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.<br><br>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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>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

| | |
|---|---|
| **Precautions for safe handling** | Avoid prolonged exposure. Observe good industrial hygiene practices. |
| **Conditions for safe storage, including any incompatibilities** | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). |

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**U.S. - OSHA**

| Components | Type | Value | Form |
|---|---|---|---|
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3) | TWA | | None |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate 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.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear protective gloves. Advice should be sought from glove suppliers.

**Other** 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.

**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** Amber.

**Odor** Mild petroleum odor.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** 315 ºC (599 ºF)

**Flash point** 210.0 ºC (410 ºF)

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** < 0.01 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** | Not available. |
| **Other information** | |
| **Kinematic viscosity** | 135 cSt |
| **Percent volatile** | Nil |
| **Specific gravity** | 0.89 |

## 10. Stability and reactivity

| | |
|---|---|
| **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** | None known, refer to hazardous combustion products in Section 5. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion** | May cause discomfort if swallowed. |
| **Inhalation** | May cause irritation to the respiratory system. |
| **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, 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. |

**Information on toxicological effects**

| | |
|---|---|
| **Acute toxicity** | May cause mild irritation to skin, eyes and respiratory system. May cause irritation of the gastrointestinal tract. |

| Components | Species | Test Results |
|---|---|---|
| Distillates, (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 5000 mg/kg |
| *Inhalation* | | |
| | | No data in literature |
| *Oral* | | |
| LD50 | Rat | > 15000 mg/kg |
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LC50 | Rabbit | No data in literature |
| *Inhalation* | | |
| LC50 | Rat | No data in literature |
| *Oral* | | |
| LD50 | Rat | 26100 mg/kg |

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

| | |
|---|---|
| **Skin corrosion/irritation** | May be irritating to the skin. |
| **Serious eye damage/eye irritation** | May be irritating to eyes. |

**Respiratory or skin sensitization**

**Respiratory sensitization** This product is not expected to cause respiratory sensitization.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**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** Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

**Further information** This product has no known adverse effect on human health.

**Aspiration toxicity** Not expected to be an aspiration hazard.

## 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.

| Product | | Species | Test Results |
|---|---|---|---|
| KLONDIKE SAE 40 CF-2 Heavy Duty Engine Oil (CAS Mixture) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Crustacea | EC50 | Daphnia | 99.0198 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 50.2513 mg/l, 96 hours estimated |
| **Components** | | **Species** | **Test Results** |
| Distillates, (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7) | | | |
| **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 |
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Algae | EC50 | Green algae (Selenastrum capricornutum) | 1 - 5 mg/l, 96 hours |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1 - 1.5 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 1 - 5 mg/l, 96 hours |
| *Chronic* | | | |
| Algae | NOEC | Green algae (Selenastrum capricornutum) | 1 mg/l, 96 hours |

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

**Persistence and degradability** No data is available on the degradability of this product.

**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

**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.

| | |
|---|---|
| **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**

All components are on the U.S. EPA TSCA Inventory List.
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3) | 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)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Zinc, Dithiophosphate Di-c1-14-alkyl Esters | 68649-42-3 | 0.1 - 1 |

**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**

Not regulated.

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

Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3)

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

Not listed.

**US. Rhode Island RTK**

Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3)

**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** 02-15-2017

**Version #** 02

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