1. Identification

Product identifier: KLONDIKE SAE 5W-40 SN/CF Euro Spec Full Synthetic Engine Oil

Other means of identification:
- Product code: 5W-40 SN/CF Euro Full Syn
- Recommended use: Full Synthetic Automotive Engine Oil
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
- Company name: KLONDIKE Lubricants Corporation
- Address: 3078 275th Street
- City: Langley, BC
- Province: V4W 3L4
- Country: Canada
- Telephone: 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: Not available.
- 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. May cause respiratory irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may present an aspiration hazard, if ingested in large amounts. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Supplemental information: Not applicable.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, (petroleum), Hydrocracked Heavy Paraffinic</td>
<td>Not Available</td>
<td>64742-54-7</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Zinc, Dithiophosphate</td>
<td>PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS.</td>
<td>68649-42-3</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

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. 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
Rinse mouth. 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. Cool containers / tanks with water spray. Move containers from fire area if you can do so without risk. 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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
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. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). 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

Precautions for safe handling
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

<table>
<thead>
<tr>
<th>U.S. - OSHA Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3)</td>
<td>TWA</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
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
If contact is likely, safety glasses with side shields are recommended. Eye wash facilities and emergency shower must be available when handling this product.

Skin protection
Hand protection
For prolonged or repeated skin contact use suitable protective gloves. Advice should be sought from glove suppliers.

Other
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.

Thermal protection
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
> 300 °C (572 °F)
Flash point
> 200.0 °C (392°F)
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 mm Hg
Vapor density
>= 10
Relative density
Not available.

Solubility(ies)
Solubility (water)
Not Soluble
Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.
Decomposition temperature
Not available.
Viscosity
Not available.
Other information
Kinematic viscosity
88 cSt
Specific gravity
0.85
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. Direct sources of heat. 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 coughing, choking and wheezing. 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
May cause mild irritation to skin, eyes and respiratory system.

Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7)</td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
</tr>
<tr>
<td>Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3)</td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td>Dermal LC50</td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
</tr>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
</tr>
</tbody>
</table>

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

Aspiration toxicity
Not available.

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.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLONDIKE SAE 5W-40 SM/CF Euro Spec Full Synthetic Engine Oil (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test Results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distillates, (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>NOEC</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Zinc, Dithiophosphate Di-c1-14-alkyl Esters (CAS 68649-42-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Green algae (Selenastrum capricornutum)</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>NOEC</td>
<td>Green algae (Selenastrum capricornutum)</td>
</tr>
</tbody>
</table>

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

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.

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)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc, Dithiophosphate Di-c1-14-alkyl Esters</td>
<td>68649-42-3</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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:** 03-14-2017
- **Version #:** 02

**Disclaimer**

The information in this document was written based on the best knowledge and experience currently available, and is offered for your consideration and guidance when exposed to this product. KLONDIKE Lubricants Corporation disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this document does not apply to use with any other product or in any other process. This document may not be changed, or altered in any way without the expressed knowledge and permission of KLONDIKE Lubricants Corporation.