

**MATERIAL SAFETY DATA SHEET**

MSDS FORMAT MEETS ANSI Z400.1-1993 AND OSHA 1910.1200



**SENTINEL'S  
SCO REFRIGERATION OIL  
SERIES**

REVISION# 0

MSDS #

REVISION DATE: JANUARY 2, 2006

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Sentinel SCO Refrigeration Oil Series

PRODUCT NUMBER (S): 11301, 11310, 11305, 11307, 11309

SYNONYM: Sentinel's SCO REF 32, SCO REF 46, SCO REF 68, SCO REF 100, SCO REF 150

**COMPANY IDENTIFICATION**

Sentinel Lubricants Corp.  
15755 N.W. 15<sup>th</sup> Ave.  
Miami, FL 33169

**EMERGENCY TELEPHONE NUMBERS**

HEALTH (24 hr) : (800) 842-6400 or (305) 625-6400  
TRANSPORTATION (24 hr) : (800) 842-6400  
or (305) 625-6400 Int'l collect calls accepted

**PRODUCT INFORMATION:**

MSDS Requests: (800) 842-6400  
Environmental, Safety, & Health Info: (800) 842-6400  
Product Information: (800) 842-6400

SPECIAL NOTES: This MSDS is for the entire line of Sentinel's SCO Refrigeration Oil Series.

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

100% SENTINEL'S SCO REFRIGERATION OIL SERIES

**CONTAINING**

| COMPONENTS  | AMOUNT | LIMIT/QTY | AGENCY/TYPE |
|---|--------|-----------|-------------|
| SYNTHETIC HYDROCARBON BASE OIL<br>Chemical Name: 1-DECENE, HOMOPOLYMER, HYDROGENATED<br>CAS68037014 |        | NONE      | NA          |

**COMPOSITION COMMENT**

All the components of this material are in the Toxic Substances Control Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5mg/m3.

### 3. HAZARD IDENTIFICATION AND EMERGENCY AND FIRST AID PROCEDURES

#### POTENTIAL HEALTH EFFECTS

##### EYE:

Not expected to cause prolonged or significant eye irritation.

##### SKIN

Contact with skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but if left untreated could result in disfigurement or amputation of the affected part.

##### INGESTION

Not expected to be harmful if swallowed.

##### INHALATION

Contains a synthetic-based oil that may cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended exposure limit.

### 4. FIRST AID MEASURES

##### EYE:

No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses if worn, and flush eyes with water.

##### SKIN

No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Use a waterless hand cleaner, mineral oil, or petroleum jelly to remove the material. Then wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

##### INGESTION

No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

##### INHALATION

If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

##### NOTE TO PHYSICIANS

In an accident involving high-pressure systems, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

## 5. FIRE FIGHTING MEASURES

### SPECIAL NOTES:

Leaks/ ruptures in high-pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (e.g. Open flame, pilot lights, sparks, or electric arcs).

### FIRE CLASSIFICATION:

Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible

### FLAMMABLE PROPERTIES:

FLASH POINT (COC) 218-248°C (425-478°F) Min.

AUTOIGNITION: NDA

FLAMMABILITY LIMITS ( % by volume in air ): Lower: NA UPPER: NA

EXTINGUISHING MEDIA: CO2, Dry Chemical, Foam, Water Fog

NFPA RATINGS: Health 1; Flammability 1; Reactivity; 0.

### FIRE FIGHTING INSTRUCTIONS:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

### COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

## 6. ACCIDENTAL RELEASE MEASURES

EMERGENCY NUMBER (24hr) : (800) 842-6400 or (305) 625-6400, International Collect Calls Accepted.

### ACCIDENTAL RELEASE MEASURES:

Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or leading to surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

This material does not contain any CERCLA Hazardous Substances.

This material does not contain any SARA Title III Section 302 – Extremely Hazardous Substances.

This material does not contain any SARA Title III Section 313 – Toxic Chemicals.

## 7. HANDLING AND STORAGE

DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Drum is not designed to contain pressure. Do not use pressure to empty drum or drum may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty drums should be completely drained, properly bunged, and promptly returned to a drum re-conditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### GENERAL CONSIDERATION

Consider the potential hazards of this material (see section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### ENGINEERING CONTROLS

Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT:

Where splashing is possible, wear safety glasses with side shields as a good safety practice.

### EYE PROTECTION:

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

### SKIN PROTECTION:

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Viton> <Nitrile> <Silver Shield>

### RESPIRATORY PROTECTION

No respiratory protection is normally required. If user operations generate an oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air purifying respirators: particulate.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL DESCRIPTION:

Clear, Fluid, Bland Odor

|                          |   |
|--------------------------|---|
| pH:                      | NDA   |
| VAPOR PRESSURE:          | NA  |
| VAPOR DENSITY (AIR = 1): | NA  |
| BOILING POINT:           | NA  |
| FREEZING POINT:          | NA  |
| MELTING POINT:           | NA  |
| SOLUBILITY:              | Solubility in hydrocarbon solvents; insoluble in water. |
| SPECIFIC GRAVITY:        | 0.88 – 0.89 @ (15.6/15.6C)                              |
| EVAPORATION RATE:        | NA  |
| VISCOSITY:               | 5 - 17 cSt @ 100°C                                      |
| PERCENT VOLATILE (VOL):  | NA  |

## 10. STABILITY AND REACTIVITY

### HAZARDOUS DECOMPOSITION PRODUCTS:

No data available.

### CHEMICAL STABILITY:

Stable.

### CONDITIONS TO AVOID:

No data available.

### INCOMPATIBILITY WITH OTHER MATERIALS:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

### HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

### EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

### SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

### EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

### SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

### ACUTE ORAL EFFECTS:

The acute oral toxicity is based on data for a similar material.

### ACUTE INHALATION EFFECTS:

The acute respiratory toxicity is based on data for a similar material.

### ADDITIONAL TOXICOLOGY INFORMATION:

This product contains synthetic base oils not refined from petroleum base stocks. The potential of base oil prepared by this process to cause cancer has not been specifically addressed by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the International Agency for Research on Cancer (IARC), nor the National Toxicology Program (NTP) Annual Report. However, the process conditions, chemical analysis, and the results of mutagenicity tests all support our opinion that these oils should not cause skin cancer.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY:

No data available.

### ENVIRONMENTAL FATE:

This material is considered inherently biodegradable. Small accidental leaks or releases of this material are not expected present an environmental problem. See section 6 for Accidental Release Measures.

## 13. DISPOSAL CONSIDERATIONS

Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods

## 14. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

The description shown may not apply to all shipping situations. Consult 49 CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT  
 DOT HAZARD CLASS: NOT APPLICABLE  
 DOT IDENTIFICATION NUMBER: NOT APPLICABLE  
 DOT PACKING GROUP: N/A

ADDITIONAL INFORMATION: Lubricating Oil, N.O.I.B.N. - Not hazardous by U.S. DOT.  
 ADR/RID Hazard Class – Not Applicable

## 15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

- |                                       |    |
|---------------------------------------|----|
| 1. Immediate (Acute) Health Effects:  | NO |
| 2. Delayed (Chronic) Health Effects:  | NO |
| 3. Fire Hazard:                       | NO |
| 4. Sudden Release of Pressure Hazard: | NO |
| 5. Reactivity Hazard:                 | NO |

REGULATORY LISTS SEARCHED:

|                         |                         |                       |
|-------------------------|-------------------------|-----------------------|
| 01=SARA 313             | 11=NJ RTK               | 22=TSCA Sect 5(a) (2) |
| 02=MASS RTK             | 12=Cercla 302.4         | 23=TSCA Sect 6        |
| 03=NTP Carcinogen       | 13=MN RTK               | 24=TSCA Sect 12 (b)   |
| 04=CA Prop 65-Carcin    | 14=ACGIH TWA            | 25=TSCA Sect 8 (d)    |
| 05=CA Prop 65-Repro Tox | 15=ACGIH STEL           | 26=TSCA Sect 8 (a)    |
| 06=IARC Group 1         | 16=ACGIH Calc TLV       | 27=TSCA Sect 4 (a)    |
| 07=IARC Group 2A        | 17=OSHA PEL             | 28=Canadian WHMIS     |
| 08=IARC Group 2B        | 18=DOT Marine Pollutant | 29=OSHA CEILING       |
| 09=SARA 302/304         | 19=Sentinel TWA         | 30=Sentinel STEL      |
| 10=PA RTK               | 20=EPA Carcinogen       |                       |

The following components of this material are found on the regulatory lists indicated.

EU RISK AND SAFETY LABEL PHRASES:

May cause long-term adverse effects in the aquatic environment

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A.  
 34:5A-1 et. Seq., the product is to be identified as follows:  
 PETROLEUM OIL

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

## 16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;

HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator).

These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (For HMIS ratings)

### REVISION STATEMENT:

This is a new Material Safety Data Sheet.

### ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

|      |   |                           |     |   |                                  |
|------|---|---------------------------|-----|---|----------------------------------|
| TLV  | - | Threshold Limit Value     | TWA | - | Time Weighted Average            |
| STEL | - | Short-term Exposure Limit | TPQ | - | Threshold Planning Quantity      |
| RQ   | - | Reportable Quantity       | PEL | - | Permissible Exposure Limit       |
| C    | - | Ceiling Limit             | CAS | - | Chemical Abstract Service Number |
| A1-5 | - | Appendix A Categories     | ( ) | - | Change Has Been Proposed         |
| NDA  | - | No Data Available         | NA  | - | Not Applicable                   |

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1)

The above information is based on the data of which we are aware and is believed to be correct as of data hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date. Hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.