



## Material Safety Data Sheet

### Section 1 PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: ECHO/SHINDAIWA RED ARMOR OIL

#### Company Identification

Spectrum Lubricants Corporation  
500 Industrial Park Drive  
Selmer, TN 38375-3276  
United States of America

#### Emergency Response

North America: CHEMTREC (800) 424-9300 after 5:00pm CST  
Or (703) 527-3887

#### Health Emergency

USA: (800) 264-6457 or (731) 645-4972

#### Product Information

MSDS Requests: (800) 264-6457 or (731) 645-4972  
Technical Information: (800) 264-6457 or (731) 645-4972  
General Information: [vswedley@spectrumcorporation.com](mailto:vswedley@spectrumcorporation.com)

|                       |                                  |
|-----------------------|----------------------------------|
| <b>Product Family</b> | <b>Petroleum Lubricating Oil</b> |
| <b>CAS Number</b>     | <b>Mixture</b>                   |

Note: Petroleum lubricating oils with a flashpoint above 200°F, are not regulated by D.O.T standards.

### Section 2 HAZARDS IDENTIFICATION

#### IMMEDIATE HEALTH EFFECTS

|                         |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
| <b>Inhalation:</b>      | Inhalation of fumes may result in dizziness, headache and respiratory irritation. |
| <b>Eye Contact:</b>     | Contact with eyes may cause minimal irritation.                                   |
| <b>Skin Contact:</b>    | Mild irritation may occur with prolonged or repeated contact.                     |
| <b>Ingestion:</b>       | Slightly toxic. Pulmonary aspiration hazard if vomiting occurs.                   |
| <b>TLV:</b>             | 5mg/m3 as mist. ACGIH 1984-85.                                                    |
| <b>Chronic Effects:</b> | This product does not contain ingredients that are listed as potential            |

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carcinogens in N.T.P. Annual Report on Carcinogens, I.A.R.C. Monographs, or by O.S.H.A. HCS (g) (2) (vii).

### Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

| COMPONENTS                                  | CAS Number  | Concentration (%) |
|---------------------------------------------|-------------|-------------------|
| Polybutene                                  | 9003-29-6   | 15 – 40           |
| Proprietary ester                           | Proprietary | 10-30             |
| Distillates (petroleum), hydrotreated light | 64742-47-8  | 10-30             |
| Highly-refined petroleum lubricant oils     | Various     | 10-30             |
| Hydrocarbyl amine                           | Proprietary | 7 – 13            |
| Alkyl imidazpoine                           | Proprietary | 1 – 5             |
| Alkarylamine                                | Proprietary | <2                |
| Solvent naphtha, petroleum, heavy aromatic  | 64742-94-5  | <2                |

Note that the chemical identity of some or all of the above components is considered confidential business information and is being withheld as permitted by 29CFR 1910.1200 and various State Right-To-Know Laws.

### Section 4 FIRST AID MEASURES

**Skin:** Wash skin with soap and warm water. Wash clothing before re-use.  
**Eye:** If splashed into eyes flush eyes with clear water for five (5) minutes.  
**Inhalation:** If overcome by fumes remove from exposure immediately.  
**Ingestion:** If ingested, do not induce vomiting. Call a physician.

### Section 5 FIRE FIGHTING MEASURES

#### PROTECTION OF FIRE FIGHTERS:

##### Fire Fighting Instructions:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self contained breathing apparatus.

**Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.  
**Special Firefighting Procedures:** Cool exposed containers with water spray.  
**Unusual Fire and Explosion Hazards:** Pressure increase in over heated closed containers. Cool containers with water spray.

### Section 6 ACCIDENTAL RELEASE MEASURES

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**Spill Procedures:** Remove ignition sources. Recover Liquid. Add absorbent to spill area. Ventilate confined spaces. Advise authorities if product enters sewers, etc.

**Waste Disposal:** Assure conformity with applicable disposal regulations. Dispose of absorbed material at approved waste site.

### Precautionary Measures:

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling.

Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

## Section 7 HANDLING AND STORAGE

### General Storage Information:

Keep container closed when not in use. Do not store with strong oxidizing agents. Do not store at elevated temperatures.

### Container Warnings:

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 containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## Section 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

| COMPONENTS                                             | Component          | Regulatory Agency | Exposure Limit |
|--------------------------------------------------------|--------------------|-------------------|----------------|
| Distillates (petroleum), hydrotreated heavy paraffinic | Base Oil-Synthetic | OSHA/ACGIH        | 5mg/m3 Mist    |
| Distillates (petroleum), hydrotreated light paraffinic | Base Oil-Synthetic | OSHA/ACGIH        | 5mg/m3 Mist    |
| Distillates (petroleum), hydrotreated light            | High Flash Solvent | OSHA/ACGIH        | 5mg/m3 Mist    |

**Ventilation Procedure:** Ventilate as needed to comply with exposure limit.

**Gloves Protection:** Use impervious gloves to avoid repeated/prolonged skin contact.

**Eye Protection:** Use goggles/face shield to avoid eye contact.

**Work/Hygienic Practices:** If clothing becomes contaminated, change to fresh clean

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clothing. Do not wear until thoroughly laundered.

### Section 9 PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                            |
|---------------------------------------|----------------------------|
| <b>Vapor Pressure (mmHg) at 20°C:</b> | <b>1</b>                   |
| <b>Specific Gravity at 60°F:</b>      | <b>0.88</b>                |
| <b>Water Solubility:</b>              | <b>Negligible</b>          |
| <b>Boiling Point:</b>                 | <b>Not determined</b>      |
| <b>Vapor Density (Air=1):</b>         | <b>&gt; 1</b>              |
| <b>Evaporation Rate (BUAC=1):</b>     | <b>&lt; 1</b>              |
| <b>Odor:</b>                          | <b>Mild Petroleum Odor</b> |
| <b>Appearance:</b>                    | <b>RedColor Liquid</b>     |
| <b>Viscosity at 100°C CST:</b>        | <b>10.3</b>                |
| <b>V.O.C.</b>                         | <b>180 g/L</b>             |
| <b>Flash Point</b>                    | <b>163°F</b>               |

### Section 10 STABILITY AND REACTIVITY

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| <b>Stability:</b>             | Stable                                                     |
| <b>Incompatibility:</b>       | Avoid strong oxidants                                      |
| <b>Polymerization:</b>        | Will not occur                                             |
| <b>Thermal Decomposition:</b> | Partial burning produces fumes, smoke and carbon monoxide. |

### Section 11 TOXICOLOGY INFORMATION

#### **Distillates (petroleum), hydrotreated light**

ORAL (LD50): Acute: >5000 mg/kg [Rat].

DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc). Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of similar materials to the skin can produce defatting dermatitis and kidney damage in laboratory animals. The most common effects observed in repeated dose animal studies with mineral spirits are kidney changes that are consistent with an alpha 2u-globulin- mediated process that is not regarded as relevant to humans. Certain studies have reported effects in the liver as well as hematological or urine chemistry changes. In general, these effects have not to been shown to be dose-related.

#### **Highly-refined petroleum lubricant oils:**

ORAL (LD50): Acute: >5000 mg/kg [Rat].

DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near

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current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

### Section 12 ECOLOGICAL INFORMATION

#### Ecotoxicity

An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

#### Environmental Fate

Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

### Section 13 DISPOSAL CONSIDERATIONS

**Waste Disposal:** Assure conformity with applicable disposal regulations.  
Dispose of absorbed material at approved waste site.

### Section 14 TRANSPORTATION INFORMATION

**The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.**

|                             |                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>US DOT Status</b>        | A U.S. Department of Transportation regulated material.                                                                                                                                         |
| <b>Proper Shipping Name</b> | UN1268, Petroleum Distillates, n.o.s., Combustible Liquid<br>[This product has a flash point temperature between 60.5° to 93°C (141° and 200°F). Bulk shipments of this product are regulated.] |
| <b>Hazard Class</b>         | Combustible liquid                                                                                                                                                                              |
| <b>UN/NA Number</b>         | UN1268                                                                                                                                                                                          |

### Section 15 REGULATORY INFORMATION

|                                                                 |                                                                                                                                                                                                  |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TSCA Inventory</b>                                           | This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.                                                                                              |
| <b>SARA 302/304<br/>Emergency Planning<br/>and Notification</b> | The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on |

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### SARA 311/312 Hazard Identification

Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

### SARA 313 Toxic Chemical Notification and Release Reporting CERCLA

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: Fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Naphthalene [CAS No.: 91-20-3] RQ = 100 lbs. (45.36 kg) Concentration: <0.1%

### Clean Water Act (CWA)

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

### California Proposition 65

This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Naphthalene: <0.1% Ethylbenzene: <0.01% Benzene: <0.0001%

### New Jersey Right-to-Know Label

Petroleum Oil (Two Cycle Engine Oil)

## Section 16 OTHER INFORMATION

***The data presented herein is based upon tests and information, which we believe to be reliable. However, users should make their own investigations to determine the suitability of the information for their particular purpose.***