Material Safety Data Sheet

Section 1 PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: ECHO POWER BLEND TWO-CYCLE ENGINE 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

Product Family Petroleum Lubricating Oil
CAS Number Mixture

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

Inhalation: Inhalation of fumes may result in dizziness, headache and respiratory irritation.
Eye Contact: Contact with eyes may cause minimal irritation.
Skin Contact: Mild irritation may occur with prolonged or repeated contact.
Ingestion: Slightly toxic. Pulmonary aspiration hazard if vomiting occurs.

TLV:

Chronic Effects: Ingredients of this product may be listed as potential 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

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly-refined mineral oils (petroleum)</td>
<td>Various</td>
<td>40-70</td>
</tr>
<tr>
<td>Polybutene</td>
<td>9003-29-6</td>
<td>40-70</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>10-30</td>
</tr>
</tbody>
</table>

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, dry chemical or carbon dioxide (CO₂) 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

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

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>Regulatory Agency</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Mist</td>
<td>OSHA/ACGIH</td>
<td>5mg/m3 Mist</td>
</tr>
</tbody>
</table>

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 clothing. Do not wear until thoroughly laundered.
Section 9 PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure (mmHg) at 20°C</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Specific Gravity at 60°F</td>
<td>0.87</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Negligible</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Evaporation Rate (BUAC=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild Petroleum Odor</td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue-green Color Liquid</td>
</tr>
<tr>
<td>Viscosity at 40°C CST</td>
<td>77</td>
</tr>
<tr>
<td>V.O.C.</td>
<td>135 g/L</td>
</tr>
<tr>
<td>Flash Point Closed Cup</td>
<td>68°C / 154°F</td>
</tr>
</tbody>
</table>

Section 10 STABILITY AND REACTIVITY

- Stability: Stable
- Incompatibility: Avoid strong oxidants
- Polymerization: Will not occur
- Thermal Decomposition: 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
current workplace 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

UN1268, Petroleum Distillates, n.o.s., Combustible Liquid, PG III
[This product has a flash point temperature between 60.5° to 93°C (141° and 200°F). Bulk shipments of this product are regulated.]

Section 15 REGULATORY INFORMATION

California Proposition 65: This material may contain components which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 OTHER INFORMATION
Risk Phrases

R37  Inhalation:  Inhalation of fumes may result in dizziness, headache and respiratory irritation.
R36  Eye Contact:  Contact with eyes may cause minimal irritation.
R38  Skin Contact:  Mild irritation may occur with prolonged or repeated contact.  Slightly toxic.  Pulmonary aspiration hazard if vomiting occurs.
R22  Ingestion:  Slightly toxic.  Pulmonary aspiration hazard if vomiting occurs.

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.