1. IDENTIFICATION

Product Identifier

Product Name
PURUS Heavy Duty Fleet Engine Oil SAE 10WT, SAE 30WT and SAE 40WT

Other means of identification
SDS #
PUR-014, 17236, PHD17236, PHD27236, PHD37236, PHD57236; 17234, PHD17234, PHD27234, PHD37234, PHD57234; 17235, PHD17235, PHD27235, PHD37235, PHD57235

Recommended use of the chemical and restrictions on use

Recommended Use
Premium heavy duty motor oil.

Details of the supplier of the safety data sheet

Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301

Manufactured for:
AIOD
P.O. BOX 1861
Montrose, CO 81402-1861
970-249-6336   www.purusproducts.com

Emergency Telephone Number
Company Phone Number 1-800-428-9284
Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Light amber, viscous liquid
Physical State Viscous liquid
Odor Typical petroleum

Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic</td>
<td>64742-54-7</td>
<td>70-80</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures
Eye Contact  
Flush eyes with large amounts of water, for at least 15 minutes, until irritation subsides. If irritation persists, get medical attention.

Skin Contact  
No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should seek immediate medical attention.

Inhalation  
Remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

Ingestion  
If swallowed, do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical attention.

Most important symptoms and effects
Symptoms  
Expected to be a minor eye irritant. Repeated or prolonged skin contact may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician  
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media  
Use dry chemical, foam, carbon dioxide or water fog.

Unsuitable Extinguishing Media  
While carbon dioxide and inert will extinguish the fire, they can also displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

Specific Hazards Arising from the Chemical  
This material can burn but will not readily ignite. This material will release vapors when heated above the flashpoint temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flashpoint. Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

Hazardous Combustion Products  

Protective equipment and precautions for firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke and vapor. Water may be used to cool containers exposed to heat or flame.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions  
Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment  
Remove sources of ignition. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Clean-Up  
Take up small spills with absorbent pads. Large spills may be taken up with pump or vacuum.
7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling  Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities


Incompatible Materials  This product may react with strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines  This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls  Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. If product is heated above 70 C (155 F) in the presence of water, hydrogen sulfide vapors may be released. Ventilation should be sufficient to keep hydrogen sulfide levels below recommended exposure limits. Eye wash fountains are recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection  Wear safety glasses. Wear chemical goggles or face shield if splash or mist occurs.

Skin and Body Protection  Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

Respiratory Protection  If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

General Hygiene Considerations  Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors - wear appropriate footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Viscous liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Light amber, viscous liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Light amber</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Typical petroleum</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>204 °C / 400 °F</td>
<td>ASTM D-92</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
<td></td>
</tr>
</tbody>
</table>
### Upper Flammability Limits
Not determined

### Lower Flammability Limit
Not determined

### Vapor Pressure
Not available

### Vapor Density
$>1$ (Air=1)

### Specific Gravity
0.88

### Water Solubility
Insoluble in water

### Solubility in other solvents
Not determined

### Partition Coefficient
Not available

### Auto-ignition Temperature
No data available

### Decomposition Temperature
Not determined

### Kinematic Viscosity
Not determined

### Dynamic Viscosity
Not determined

### Explosive Properties
Not determined

### Oxidizing Properties
Not determined

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### 10. STABILITY AND REACTIVITY

**Reactivity**
Not reactive under normal conditions.

**Chemical Stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Hazardous Polymerization**
Under normal conditions of storage and use, hazardous polymerization will not occur.

**Conditions to Avoid**
Avoid formation of mists. Keep away from extreme heat, sparks, open flame and incompatible materials.

**Incompatible Materials**
This product may react with strong oxidizing agents.

**Hazardous Decomposition Products**
Decomposition of this product may yield oxides of boron, calcium, magnesium, nitrogen, phosphorus, sulfur including hydrogen sulfide and zinc as well as carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Eye Contact**
Avoid contact with eyes.

**Skin Contact**
Avoid contact with skin.

**Inhalation**
Do not inhale.

**Ingestion**
Do not ingest.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum derived calcium salt</td>
<td>$&gt; 5000$ mg/kg (Rat)</td>
<td>$&gt; 4000$ mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>
Information on physical, chemical and toxicological effects

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

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.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7</td>
<td></td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>Petroleum derived calcium salt 61789-86-4</td>
<td></td>
<td>5.7 - 9.7: 96 h Pimephales promelas mg/L LC50 static 1.0 - 10.0: 96 h Pimephales promelas mg/L LC50 semi-static</td>
<td>6.2 - 12: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined.

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.
14. TRANSPORT INFORMATION

**Note**
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**
Not regulated

**IATA**
Not regulated

**IMDG**
Not regulated

15. REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates,</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>hydrotreated heavy paraffinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Legend:**
- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- **AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 311/312 Hazard Categories**

- Acute Health Hazard: No
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

**SARA 313**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc alkyl dithiophosphate - 113706-15-3</td>
<td>113706-15-3</td>
<td>&lt;1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**CWA (Clean Water Act)**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc alkyl dithiophosphate</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**US State Regulations**
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc alkyl dithiophosphate</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>113706-15-3</td>
<td></td>
<td></td>
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</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Not determined</td>
</tr>
<tr>
<td>HMIS</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Personal Protection</td>
</tr>
</tbody>
</table>

Issue Date: 20-Apr-2012
Revision Date: 28-May-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet