1. IDENTIFICATION

Product Identifier
Product Name
PURUS ALLETOR Heavy Duty Hi-Temp Grease
Product Codes
PIN17253, PIN27253, PIN37253, PIN57253, PIN00426, PIN00427; PIN17252,
PIN27252, PIN37252, PIN5722, PIN00412, PIN00413

Other means of identification
SDS #
NLGI #1, NLGI #2
PUR-006

Recommended use of the chemical and restrictions on use
Recommended Use
Lubricant.
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
Dark gray to black semi-solid to solid
Physical State
Semi-solid to solid
Odor
Mild petroleum

Classification
Skin corrosion/irritation
Category 2
Serious eye damage/eye irritation
Category 2

Signal Word
Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Unknown Acute Toxicity
14.9% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severely Hydrotreated Heavy Naphthenic Petroleum Oil</td>
<td>64742-52-5</td>
<td>70-80</td>
</tr>
<tr>
<td>Molybdenum Disulfide</td>
<td>1317-33-5</td>
<td>1-10</td>
</tr>
<tr>
<td>Lithium Hydroxide Solution</td>
<td>1310-66-3</td>
<td>1-10</td>
</tr>
<tr>
<td>Residual oils (petroleum), solvent refined</td>
<td>64742-01-4</td>
<td>1-10</td>
</tr>
<tr>
<td>Antimony diamylidithiocarbamate</td>
<td>15890-25-2</td>
<td>1-10</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

General Advice
If exposed or concerned: Get medical advice/attention. Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.

Eye Contact
Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness or pain persists.

Skin Contact
If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.
Inhalation
Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

Ingestion
Do not induce vomiting unless directed to by a physician. Rinse out mouth with water. Never give anything by mouth to a person who is not fully conscious. Allow small quantities to pass through the digestive system. If large amounts are swallowed or irritation of discomfort, seek medical attention immediately.

Most important symptoms and effects

Symptoms
Causes skin irritation. Causes serious eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Skin: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal. Ingestion: Check for possible bowel obstruction with ingestion of large quantities of material.

5. FIRE-FIGHTING MEASURES

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

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Water or foam may cause frothing. Molten material can form flaming droplets if ignited. Use of water on product above 100°C (212°F) can cause product to expand with explosive force.

Hazardous Combustion Products
Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/or nitrogen.

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. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces. Fight the fire from a safe distance in a protected location. Open any masses with a water stream to prevent re-ignition due to smoldering. Cool surface with water fog. Do not allow liquid runoff to enter sewers or public waters.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Use personal protective equipment as required. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Slipping hazard; do not walk through spilled material.

Methods and material for containment and cleaning up

Methods for Containment
Stop leak if you can do it without risk.
Methods for Clean-Up

For small spills, absorb or cover with dry earth, sand or other inert non-combustible absorbent material and place into waste containers for lateral disposal. Contain large spills to maximize product recovery or disposal. In urban areas, clean up spill as soon as possible. In natural environments, seek clean up advice from specialists to minimize physical habitat damage.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

If this product is stored or applied in high-pressure systems such as grease guns or hydraulic lines, there is the potential for accidental injection into the skin and underlying tissues. Empty containers may contain product residue that can ignite with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5</td>
<td>TWA: 5 mg/m³ (oil mist) STEL: 10 mg/m³ (oil mist)</td>
<td>TWA: 5 mg/m³ (oil mist) STEL: none estab.</td>
<td>TWA: none estab. STEL: none estab.</td>
</tr>
<tr>
<td>Molybdenum Disulfide 1317-33-5</td>
<td>TWA: 10 mg/m³ Mo inhalable fraction TWA: 3 mg/m³ Mo respirable fraction</td>
<td>TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ Mo</td>
<td>IDLH: 5000 mg/m³ Mo</td>
</tr>
<tr>
<td>Antimony diamylthiocarbamate 15980-25-2</td>
<td>TWA: 0.5 mg/m³ Sb (vacated) TWA: 0.5 mg/m³ Sb</td>
<td>TWA: 0.5 mg/m³ Sb TWA: 0.5 mg/m³ Sb</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Chemical resistant, impermeable gloves. Long sleeve shirt and long pants. Wear a lab coat. Aprons.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Semi-solid to solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Dark gray to black semi-solid to solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild petroleum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Dark gray to black</td>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.001 kPa (&lt;0.01 mm Hg) (at 20°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt;10 (Air=1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.93 (Water = 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Negligible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
Not expected to occur.

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

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/or nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation.

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>Molybdenum Disulfide 1317-33-5</td>
<td>-</td>
<td>-</td>
<td>&gt; 2820 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>Azelaic acid 123-99-9</td>
<td>&gt; 5 g/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Residual oils (petroleum), solvent refined 64742-01-4</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>= 2.18 mg/L (Rat) 4 h</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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

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

Numerical measures of toxicity
Not determined

Unknown Acute Toxicity 14.9% of the mixture consists of ingredient(s) of unknown toxicity.

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>Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual oils (petroleum), solvent refined 64742-01-4</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
<td></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.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony diamylthiocarbamate</td>
<td>Toxic</td>
</tr>
<tr>
<td>15890-25-2</td>
<td></td>
</tr>
</tbody>
</table>

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

TSCA
Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

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>Antimony diamylthiocarbamate - 15890-25-2</td>
<td>15890-25-2</td>
<td>1-10</td>
<td>1.0</td>
</tr>
<tr>
<td>Zinc diamylthiocarbamate - 15337-18-5</td>
<td>15337-18-5</td>
<td>&lt;1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
### US State Regulations

#### 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>Molybdenum Disulfide 1317-33-5</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lithium Hydroxide Solution 1310-66-3</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Antimony diamyldithiocarbamate 15890-25-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zinc diamyldithiocarbamate 15337-18-5</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### 16. OTHER INFORMATION

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

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

**Issue Date:** 30-July-2015  
**Revision Date:** N/A  
**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