1. IDENTIFICATION

Product Identifier
Product Name  Warren Economy AW Hydraulic Oil

Other means of identification  AW 32, AW 46, AW 68

SDS #  WOC-019

Recommended use of the chemical and restrictions on use
Recommended Use  Hydraulic oil

Details of the supplier of the safety data sheet
Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301

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, liquid
Physical State  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>90-100</td>
</tr>
<tr>
<td>Severely Hydrotreated Heavy Naphthenic Petroleum Oil</td>
<td>64742-52-5</td>
<td>90-100</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 and shoes. 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.

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

Storage Conditions
Store at ambient conditions. Store at atmospheric pressure. Keep container tightly closed. Store in a cool, well-ventilated place. Keep away from heat, sparks, and flame. Empty containers retain product residues.

Incompatible Materials
This product may react with 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></td>
<td>TWA: 5 mg/m³ (oil mist)</td>
<td>TWA: 5 mg/m³ (oil mist)</td>
<td>TWA: none estab.</td>
</tr>
<tr>
<td></td>
<td>STEL: 10 mg/m³ (oil mist)</td>
<td>STEL: none estab.</td>
<td>STEL: none estab.</td>
</tr>
<tr>
<td>SevereHydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5</td>
<td>TWA: 5 mg/m³ (oil mist)</td>
<td>TWA: 5 mg/m³ (oil mist)</td>
<td>TWA: none estab.</td>
</tr>
<tr>
<td></td>
<td>STEL: 10 mg/m³ (oil mist)</td>
<td>STEL: none estab.</td>
<td>STEL: none estab.</td>
</tr>
</tbody>
</table>

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>Typical petroleum</td>
</tr>
<tr>
<td>Color</td>
<td>Light amber</td>
<td>Odor Threshold Not determined</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>202 °C / 396 °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>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt;1</td>
<td>(Air=1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.87</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
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Avoid formation of mists. Extreme heat, open flames or sparks. Keep separated from incompatible substances.

Incompatible Materials
This product may react with strong oxidizing agents.

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

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>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>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>
</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>
</table>

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Petroleum distillates, hydrotreated heavy paraffinic

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL/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>Severely Hydrotreated Heavy Naphthenic Petroleum Oil</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</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**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**US State Regulations**

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

**U.S. State Right-to-Know Regulations**
This product does not contain any substances regulated under applicable state right-to-know regulations
16. OTHER INFORMATION

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

Issue Date: 22-Oct-2012
Revision Date: 18-Nov-2014
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