SAFETY DATA SHEET

Synthetic Anti-Wear Hydraulic Oil ISO-46


1. Identification

Product identifier

Product name Synthetic Anti-Wear Hydraulic Oil ISO-46

Product number AWI

Recommended use of the chemical and restrictions on use

Application Hydraulic fluid.

Uses advised against Avoid the formation of mists.

Details of the supplier of the safety data sheet

Supplier AMSOIL INC.
Bordner, Ladner, Gervais
Scotia Plaza, 40 King St W
Toronto, ON, Canada M5H 3Y4
T: +1 416-367-6547

Manufacturer AMSOIL INC.
One AMSOIL Center,
Superior, WI 54880, USA.
T: +1 715-392-7101
compliance@amsoil.com

Emergency telephone number

Emergency telephone CHEMTREC: Within USA and Canada: 1-800-424-9300
Outside the USA and Canada: +1 703-741-5970
(collect calls accepted) 24/7

2. Hazard(s) identification

Classification of the substance or mixture

OSHA/WHMIS Regulatory Status This Product is not Hazardous under the OSHA Hazard Communication Standard and according to the hazard criteria of the Hazardous Product Regulations.

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Label elements

Hazard statements NC Not Classified

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/Information on ingredients

Mixtures
Synthetic Anti-Wear Hydraulic Oil ISO-46

Hydrogenated base oil
CAS number: 64742-54-7

25 - <35%

Classification
Asp. Tox. 1 - H304

The full text for all hazard statements is displayed in Section 16.

Composition comments
The exact percentage is withheld as a trade secret in accordance with 29 CFR 1910.1200.

4. First-aid measures

Description of first aid measures

General information
Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Ingestion
Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact
Wash skin thoroughly with soap and water.

Eye contact
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information
See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion
Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

Skin contact
Prolonged contact may cause dryness of the skin.

Eye contact
May cause temporary eye irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

Specific treatments
No special treatment required.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture
Synthetic Anti-Wear Hydraulic Oil ISO-46

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up. Contains Hydrocarbons. The product is immiscible with water and will spread on the water surface.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters
Protective actions during firefighting
Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter’s clothing including helmets, protective boots and gloves, that provides a basic level of protection during chemical incidents is defined by the Canada Occupational Health and Safety Regulations, by provincial guidelines on occupational health and safety or by NFPA standards if applicable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Use protective equipment appropriate for surrounding materials.

Environmental precautions

Environmental precautions
Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of contents/container in accordance with national regulations.

Reference to other sections
For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid contact with used product. Do not reuse empty containers.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store away from incompatible materials (see Section 10). Keep container tightly closed, in a cool, well ventilated place. Protect containers from damage.
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8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Comments The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Under conditions which may generate mists, the following exposure limits are recommended:

Long-term exposure limit (8-hour TWA): 5 mg/m³
Short-term exposure limit (15-minute): 10 mg/m³

Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.6), and any relevant provincial regulation relating to health and safety at work. The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.9), and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.

Environmental exposure controls

Not regarded as dangerous for the environment.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Liquid.
Color Straw.
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Odor
Mild hydrocarbon.

Odor threshold
Not available.

pH
Not available.

Melting point
Not available.

Initial boiling point and range
Not available.

Flash point
230°C Cleveland open cup. [ASTM D 92]

Evaporation rate
Not available.

Upper/lower flammability or explosive limits
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
0.8463

Solubility(ies)
Not known.

Partition coefficient
Not available.

Auto-ignition temperature
Not available.

Decomposition Temperature
Not available.

Viscosity
49.1 cSt @ 40°C
9.7 cSt @ 100°C
[ASTM D 445]

Explosive properties
Not considered to be explosive.

Oxidizing properties
Does not meet the criteria for classification as oxidizing.

Fire point
250°C Cleveland open cup. [ASTM D 92]

Pour point
-46°C [ASTM D 97]

10. Stability and reactivity

Reactivity
See the other subsections of this section for further details.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
No potentially hazardous reactions known.

Conditions to avoid
There are no known conditions that are likely to result in a hazardous situation.

Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects
## Synthetic Anti-Wear Hydraulic Oil ISO-46

### Toxicological effects
- **Acute toxicity - oral**
  - Notes (oral LD₅₀): Based on available data the classification criteria are not met.

- **Acute toxicity - dermal**
  - Notes (dermal LD₅₀): Based on available data the classification criteria are not met.

- **Acute toxicity - inhalation**
  - Notes (inhalation LC₅₀): Based on available data the classification criteria are not met.

### Skin corrosion/irritation
- **Animal data**
  - Based on available data the classification criteria are not met.

### Serious eye damage/irritation
- Based on available data the classification criteria are not met.

### Respiratory sensitization
- Based on available data the classification criteria are not met.

### Skin sensitization
- Based on available data the classification criteria are not met.

### Germ cell mutagenicity
- **Genotoxicity - in vitro**
  - Based on available data the classification criteria are not met.

### Carcinogenicity
- **Carcinogenicity**
  - Based on available data the classification criteria are not met.

### Reproductive toxicity
- **Reproductive toxicity - fertility**
  - Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure
- **STOT - single exposure**
  - Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure
- **STOT - repeated exposure**
  - Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard
- Based on available data the classification criteria are not met.

### General information
- No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

- **Inhalation**
  - Prolonged inhalation of high concentrations may damage respiratory system.

- **Ingestion**
  - Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

- **Skin Contact**
  - Prolonged contact may cause dryness of the skin.

- **Eye contact**
  - May cause temporary eye irritation.

### Route of exposure
- Ingestion Inhalation Skin and/or eye contact
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Target Organs
No specific target organs known.

Medical considerations
Skin disorders and allergies.

Toxicological information on ingredients.

Hydrogenated base oil

Acute toxicity - oral
Notes (oral LD₅₀)
LD₅₀ >5000 mg/kg, Oral, Rat REACH dossier information.

Acute toxicity - dermal
Notes (dermal LD₅₀)
LD₅₀ >5000 mg/kg, Dermal, Rabbit REACH dossier information.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
LC₅₀ >5.53 mg/l, Inhalation, Rat REACH dossier information.

Skin corrosion/irritation
Animal data
Dose: 0.5ml, 24 hours, Rabbit Erythema/eschar score: No erythema (0). Edema score: No oedema (0). REACH dossier information.

Serious eye damage/irritation

Serious eye damage/irritation
Dose: 0.1ml, 72 hours, Rabbit REACH dossier information.

Skin sensitization

Skin sensitization
Buehler test - Guinea pig: Not sensitizing. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro
Gene mutation: Negative. REACH dossier information.

Genotoxicity - in vivo
Chromosome aberration: Negative. REACH dossier information.

Reproductive toxicity

Reproductive toxicity - fertility
Screening - NOAEL > 1000 mg/kg/day, Oral, Rat P REACH dossier information.

Reproductive toxicity - development
Developmental toxicity: - LOAEL: 125 mg/kg/day, Dermal, Rat REACH dossier information.

12. Ecological information

Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity
Based on available data the classification criteria are not met.

Ecological information on ingredients.

Hydrogenated base oil

Acute aquatic toxicity
Acute toxicity - fish
LL₅₀, 96 hours: > 100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates
EL₅₀, 48 hours: > 10000 mg/l, Daphnia magna

Acute toxicity - aquatic plants
NOEL, 72 hours: > 100 mg/l, Pseudokirchneriella subcapitata
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Persistence and degradability

The degradability of the product is not known.

Ecological information on ingredients.

**Hydrogenated base oil**

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>Water - Degradation 31: 28 days</th>
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<td>Inherently biodegradable.</td>
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Bioaccumulative potential

Bio-Accumulative Potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Mobility in soil

Mobility

No data available.

Other adverse effects

Other adverse effects

None known.

13. Disposal considerations

Waste treatment methods

General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

14. Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT, TDG).

UN Number

UN No. (International) Not applicable.

UN proper shipping name

Proper shipping name (International) Not applicable.

Transport hazard class(es)

Transport labels

No transport warning sign required.

Packing group

Packing group (International) Not applicable.

Environmental hazards
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Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.

DOT TIH Zone
Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

Regulatory References

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

\textit{Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts}

1.0 %

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.
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Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
None of the ingredients are listed or exempt.

New Jersey "Right To Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

Inventories
Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Abbreviations and acronyms used in the safety data sheet
C.A.S. = Chemical Abstracts Service; E.C. No = European Commission number; GHS = Globally Harmonised System; OSHA = Occupational Safety and Health Administration; WHMIS = Workplace Hazardous Materials Information System; DOT = Department of Transport; TDG = Transport of Dangerous Goods Regulations; IMDG = International Maritime Dangerous Goods; IATA = International Air Transport Association; SARA = Superfund Amendments and Reauthorization Act; CERCLA = Comprehensive Environmental; EPCRA = Emergency Planning and Community Right-to-Know Act; TSCA = Toxic Substances Control Act; LD/LC/EC = Lethal Dose/Lethal Concentration/Effect Concentration for 50% of population; NOEC = No Overall Effect Concentration; NOEL = No Overall Effect Level; REACH = Registration, Evaluation, Authorisation & Restriction of Chemicals; STOT-RE = Single Target Organ Toxicity - Repeat Exposure; STOT-SE= Specific Target Organ Toxicity - Single Exposure; PBT = Persistent, Bioaccumulative, Toxic; vPvB = Very Persistent, Very Bioaccumulative.

Key literature references and sources for data

Training advice
Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision comments
This is the first issue.

Revision date
8/1/2018

SDS No.
7822

Hazard statements in full
H304 May be fatal if swallowed and enters airways.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.