



SAFETY DATA SHEET

Synthetic Multi-Viscosity Hydraulic Oil ISO-22, Synthetic Multi-Viscosity Hydraulic Oil ISO-32, Synthetic Multi-Viscosity Hydraulic Oil ISO-46

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200 and WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

1. Identification

Product identifier

Product name Synthetic Multi-Viscosity Hydraulic Oil ISO-22, Synthetic Multi-Viscosity Hydraulic Oil ISO-32,
Synthetic Multi-Viscosity Hydraulic Oil ISO-46

Product number HVG, HVH, HVI

Recommended use of the chemical and restrictions on use

Application Hydraulic oil.

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.

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3. Composition/information on ingredients

Mixtures

Hydrogenated base oil CAS number: 64742-54-7	15-40%
Classification Asp. Tox. 1 - H304	

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

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. Remove any dentures. 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	Rinse with 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	A single exposure may cause the following adverse effects: Dryness of mouth and throat. Coughing, chest tightness, feeling of chest pressure. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death. Congestion of the lungs may occur, producing severe shortness of breath.
Ingestion	A single exposure may cause the following adverse effects: Irritation. Nausea, vomiting. Symptoms following overexposure may include the following: Unconsciousness. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	A single exposure may cause the following adverse effects: Redness. Irritation.
Eye contact	A single exposure may cause the following adverse effects: Redness. Irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
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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

Specific hazards Containers can burst 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 Hydrocarbons. Carbon monoxide (CO). Carbon dioxide (CO₂).

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. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

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.

Environmental precautions

Environmental precautions Immiscible with water. Aquatic toxicity is unlikely to occur. However, large or frequent spills may have hazardous effects on the environment. Absorb spillage with non-combustible, absorbent material. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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. Approach the spillage from upwind. Small Spillages: Absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

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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. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Avoid contact with used product.

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). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class

Chemical storage.

Specific end uses(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Diphenylamine

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³

A4

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

Ingredient comments

No exposure limits known for ingredient(s).

Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

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. Unless the assessment indicates a higher degree of protection is required, 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.

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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. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
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	Keep container tightly sealed when not in use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Straw.
Odor	Mild hydrocarbon.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	Not available.
Flash point	224-246°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	0.8418-0.8509
Solubility(ies)	Not known.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	5.2-8.5 cSt @ 100°C [ASTM D 445] 23.6-46.7 cSt @ 40°C [ASTM D 445]
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.
Fire point	242-266°C Cleveland open cup. [ASTM D 92]
Pour point	-44 - -49°C [ASTM D 97]

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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	Oxidizing agents. Acids - oxidizing.
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

Toxicological effects	Not regarded as a health hazard under current legislation.
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	

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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

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

A single exposure may cause the following adverse effects: Dryness of mouth and throat. Coughing, chest tightness, feeling of chest pressure. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death. Congestion of the lungs may occur, producing severe shortness of breath.

Ingestion

A single exposure may cause the following adverse effects: Irritation. Nausea, vomiting. Symptoms following overexposure may include the following: Unconsciousness. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

Skin Contact

A single exposure may cause the following adverse effects: Redness. Irritation.

Eye contact

A single exposure may cause the following adverse effects: Redness. Irritation.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

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.

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Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information.
<u>Reproductive toxicity</u>	
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

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

Hydrogenated base oil

Biodegradation Water - Degradation 31: 28 days
Inherently biodegradable.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Mobility in soil

Mobility The product is insoluble in water.

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.

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Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. 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

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 OSHA Hazard Communication Standard 29 CFR §1910.1200 Hazardous Products Regulation (SOR/2015-17) Transportation of Dangerous Goods Regulations -SOR/2015-100.

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

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SARA 313 Emission Reporting

The following ingredients are listed:

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

1.0 %

CAA Accidental Release Prevention

None of the ingredients are listed.

SARA (311/312) Hazard Categories

None of the ingredients are listed.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed:

Triphenyl Phosphite

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

California Directors List of Hazardous Substances

None of the ingredients are listed.

Massachusetts "Right To Know" List

None of the ingredients are listed.

Rhode Island "Right To Know" List

None of the ingredients are listed.

Minnesota "Right To Know" List

None of the ingredients are listed.

New Jersey "Right To Know" List

None of the ingredients are listed.

Pennsylvania "Right To Know" List

None of the ingredients are listed.

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

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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	Source: European Chemicals Agency, http://echa.europa.eu/
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision date	3/27/2019
Revision	1
Supersedes date	6/9/2017
SDS No.	5838
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.