



SAFETY DATA SHEET Synthetic Anti-Wear Hydraulic Oil ISO-32

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 Anti-Wear Hydraulic Oil ISO-32
Product number	AWH
Recommended use of the che	emical and restrictions on use
Application	Hydraulic oil.
Uses advised against	Avoid the formation of mists.
Details of the supplier of the s	afety 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
Emergency telephone numbe	<u>r</u>
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	e 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

Hydrogenated base oil	50 - <55%
CAS number: 64742-54-7	
Classification Asp. Tox. 1 - H304	
Dec-1-ene, homopolymer, oligomers, hydrogenated	hydrogenated Dec-1-ene, 25 - <50%
CAS number: 68037-01-4	
Classification Asp. Tox. 1 - H304	
The full text for all hazard st	atements is displayed in Section 16.
4. First-aid measures	
Description of first aid meas	ures
General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medica 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 a	nd 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 med	lical attention and special treatment needed
Notes for the doctor	Treat symptomatically.

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.	
Do not use water jet as an extinguisher, as this will spread the fire.	
he substance or mixture	
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.	
Hydrocarbons. Carbon monoxide (CO). Carbon dioxide (CO2).	
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.	
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.	
95	
ve equipment and emergency procedures	
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.	
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. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).	
ainment and 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	

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	
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, in	cluding 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
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8. Exposure Controls/persona	·
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8. Exposure Controls/persona Ingredient comments Exposure controls Appropriate engineering	I protection No exposure limits known for ingredient(s). Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product
8. Exposure Controls/persona Ingredient comments Exposure controls Appropriate engineering controls	I protection No exposure limits known for ingredient(s). 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. 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

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.	
рН	Not available.	
Melting point	Not available.	
Initial boiling point and range	Not available.	
Flash point	228°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	0.8453	
Solubility(ies)	Not known.	
Partition coefficient	Not available.	
Auto-ignition temperature	Not available.	
Decomposition Temperature	Not available.	
Viscosity	7.4 cSt @ 100°C [ASTM D 445] 33.1 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	248°C Cleveland open cup. [ASTM D 92]	
Pour point	-51°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	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 eff	fects
Toxicological effects	Not regarded as a health hazard under current legislation.
Acute toxicity - oral Notes (oral LD₅o)	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 LC ₅₀)	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 Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory sensitization Respiratory sensitization	Based on available data the classification criteria are not met.
Skin sensitization 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.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity 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.
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 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 LC ₅₀)	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/irritat	ion
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 toxic development	city -	Developmental toxicity: - LOAEL: 125 mg/kg/day, Dermal, Rat REACH dossier information.
	Ĩ	Dec-1-en	e, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated
	Acute toxicity - oral		
	Notes (oral LD₅₀)		LD₅₀ >5000 mg/kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.
	Acute toxicity - de	rmal	
	Notes (dermal LD	50)	LD₅₀ >2000 mg/kg, Dermal, Rat REACH dossier information. Based on available data the classification criteria are not met.
	Acute toxicity - inh	nalation	
	Notes (inhalation	LC50)	LC_{50} >5.2 mg/l, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
	Skin corrosion/irrit	tation	
	Animal data		Dose: 0.5 mL, 24 hours, Rabbit Erythema/eschar score: No erythema (0). Edema score: No oedema (0). Primary dermal irritation index: 0.5 REACH dossier information. Based on available data the classification criteria are not met.
	Serious eye dama	age/irritat	ion
	Serious eye damage/irritation		Dose: 0.1 mL, 72 hours, Rabbit Not irritating. REACH dossier information. Based on available data the classification criteria are not met.
	Skin sensitization		
	Skin sensitization		Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing. REACH dossier information. Based on available data the classification criteria are not met.
	Germ cell mutage	nicity	
	Genotoxicity - in v	vitro	Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.
	Genotoxicity - in v	vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
	Reproductive toxic	city	
	Reproductive toxic fertility	city -	One-generation study - NOAEL 1000 mg/kg/day, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.
	Aspiration hazard		
	Aspiration hazard		Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
12. Ecologia	cal Information		
Ecotoxicity		-	arded as dangerous for the environment. However, large or frequent spills may have ous effects on the environment.
Toxicity		Based c	on available data the classification criteria are not met.
Ecological in	nformation on ingre	dients.	
			Hydrogenated base oil

Hydrogenated base oil

Acute aquatic toxicity

Synthetic Anti-Wear Hydraulic Oil ISO-32

Аси	ute toxicity - fish	LL₅₀, 96 hours: > 100 mg/l, Pimephales promelas (Fat-head Minnow)
	ute toxicity - aquatic ertebrates	EL₅₀, 48 hours: > 10000 mg/l, Daphnia magna
Acı pla	ute toxicity - aquatic nts	NOEL, 72 hours: > 100 mg/l, Pseudokirchneriella subcapitata
	Dec-1-en	e, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated
То	xicity	Based on available data the classification criteria are not met. Aquatic toxicity is unlikely to occur.
Acu	ute aquatic toxicity	
Acu	ute toxicity - fish	LL₅₀, 96 hours: >1000 mg/l, Oncorhynchus mykiss (Rainbow trout)
	ute toxicity - aquatic ertebrates	EL₅₀, 48 hours: >1000 mg/l, Daphnia magna
Acu pla	ute toxicity - aquatic nts	EL₅₀, 72 hours: >1000 mg/l, Selenastrum capricornutum
	ute toxicity - croorganisms	NOEC, 28 days: 2 mg/l, Activated sludge
Chi	ronic aquatic toxicity	
	ronic toxicity - aquatic ertebrates	NOELR, 21 days: 125 mg/l, Daphnia magna
Persistence and	degradability	
Persistence and	degradability The deg	radability of the product is not known.
Ecological inform	nation on ingredients.	
		Hydrogenated base oil
Bio	degradation	Water - Degradation 31: 28 days Inherently biodegradable.
	Dec-1-en	e, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated
	rsistence and gradability	Not readily biodegradable.
Bio	degradation	Water - Degradation 2%: 28 days
Bioaccumulative	potential	
Bio-Accumulativ	e Potential No data	available on bioaccumulation.
Partition coefficie	ent Not avai	ilable.
Ecological inform	nation on ingredients.	
	Dec-1-en	e, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated
Par	rtition coefficient	log Pow: >6.5
Mobility in soil		-
Mobility	The pro-	duct is insoluble in water.

Synthetic Anti-Wear Hydraulic Oil ISO-32

Ecological information on ingredients.

	Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated
Mobility	The product is insoluble in water.
Surface tension	27-29 mN/m @ 20°C
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. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal methods	Do not empty into drains. 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.
14. Transport information	
General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT, TDG).
UN Number	
Not applicable.	
UN proper shipping name	
Not applicable.	
Transport hazard class(es)	
Transport labels No transport warning sign requ	uired.
Packing group	
Not applicable.	
Environmental hazards Environmentally Hazardous So No.	ubstance
Special precautions for user	
Not applicable.	
DOT TIH Zone	Not applicable.

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

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 Extreme None of the ingredients are	Iy Hazardous Substances Tier II Threshold Planning Quantities listed.	
CERCLA/Superfund, Hazar None of the ingredients are	dous Substances/Reportable Quantities (EPA) listed.	
SARA Extremely Hazardous None of the ingredients are	s Substances EPCRA Reportable Quantities listed.	
SARA 313 Emission Report The following ingredients ar	-	
<i>Phosphorodithioic acid, O,C</i> 1.0 %	D-di-C1-14-alkyl esters, zinc salts	
CAA Accidental Release Pr None of the ingredients are		
FDA - Essential Chemical None of the ingredients are	listed or exempt.	
FDA - Precursor Chemical None of the ingredients are	listed or exempt.	
SARA (311/312) Hazard Ca None of the ingredients are	-	
OSHA Highly Hazardous C None of the ingredients are		
US State Regulations		
California Proposition 65 Ca	arcinogens and Reproductive Toxins listed.	
California Air Toxics "Hot S None of the ingredients are		
California Air Toxics "Hot S None of the ingredients are		
California Directors List of H None of the ingredients are		
Massachusetts "Right To King None of the ingredients are		

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

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	6/14/2017
Revision	0
SDS No.	5881
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.