



SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: **Marinus Bio 40 Biodegradable Hydraulic Oil**

Product Use: Used as Finished Readily Biodegradable Hydraulic Oil

Restrictions on Use: Do Not Mix with Alcohol Based or Glycol Based Products

Manufacturer/Supplier Info: Awsun Outcomes Inc,
#5-409-38th Ave NE
Calgary AB, Canada T2E 6R9
1-587-353-2000 Toll Free 1-844 512 4093

Emergency Phone Number: CANUTEC – 24 hr Emergency No. 1-613-996-6666
Business Hour Number 1-844 512 4093
(Monday through Friday 8:00am to 4:00pm MST)

Date Revised: 28 April, 2020

SECTION II: HAZARDS IDENTIFICATION

GHS Classification:

Causes mild skin irritation: Category 3
 Causes eye irritation: Category 2B

GHS Label Element:

Signal word : **Warning**

Hazard symbol:



Hazard statements: H316 Causes mild skin irritation.
 H320 Causes eye irritation

Other hazards: None

Precautionary statements: **Prevention:**
 P264 Wash hands thoroughly after handling.
Response:
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.
Storage: P411+235: Store at temperatures not exceeding 190°C/374 °F. Keep cool.

Symptoms of Overexposure: No skin allergy observed.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1-0.5% is identified as probable, possible or confirmed human carcinogen by IARC.



No component of this product present at levels greater than or OSHA equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

No component of this product present at levels greater than or NTP equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION III: COMPOSITION/ INFORMATION ON INGREDIENTS

Hazardous Ingredients	Concentration %	C.A.S. #
Polysulfides, di-tert-dodecyl	3– 4 %	68425-15-0
2,6-di-tert-butylphenol	0.1-0.8%	128-39-2
Mono-unsaturated fatty acid	95%	544-64-9

SECTION IV: FIRST AID MEASURES

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cups of water. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Contact: Remove contaminated clothing. Wash well with soap and water for at least 15 minutes. Launder clothes prior to re-use.

Inhalation: If excessive fumes, remove victim to fresh air. If not breathing, qualified personnel may provide artificial respiration. If no relief is obtained, consult physician.

Eye Contact: Flush with clean tepid water for 15 minutes keeping eyelids open. If irritation persists, consult physician.

Most important symptoms and effects, both acute and delayed: Irritating to respiratory tract and eyes. Breathing mist caused by high temperature or swallowing large quantities may be irritating to skin, respiratory system, mucous membranes and eyes.

SECTION V: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide foam, dry chemicals.
- Unsuitable extinguishing media:** Avoid spreading with water flooding.
- Hazardous combustion products:** Oxides of carbon, sulphur, calcium, phosphorous, nitrogen, zinc, chlorine, hydrogen, chloride, hydrogen sulphide and dense smoke.
- Special extinguishing methods:** Keep containers cool with water spray.
- Special protective equipment and precautions for firefighters:** When fighting fire, treat as petroleum product, wear full protective clothing, including NIOSH approved self-contained breathing apparatus.
- Fire and explosion hazards:** Do not cut, weld, or pressurize empty container. Container may explode in heat of fire.

SECTION VI: ACCIDENTAL RELEASE MEASURES

- Personal protection:** Wear suitable protective equipment. Eliminate sources and or potential sources of ignition.
- Environmental precautions:** Product has very low solubility in water. Do not flush to sewers, streams or other bodies of water. For disposal, see Section XIII.
- Methods for cleaning up:** Absorb on inert material such as sand, earth, vermiculite. Sweep up and collect in a suitable container for disposal. Observe government regulations
- Large spills:** Stop leak if without risk. Dike to contain spill. Pump excess material into suitable container (metal drums, metal tanks, or such).

SECTION VII: HANDLING AND STORAGE

- Handling:** Avoid excess heat, formation of oil mist, breathing vapours and mist from hot oil and prolonged or repeated contact with skin.
- Storage:** Store in a cool well-ventilated area. Keep away from heat spark and open flame.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Exposure Limits:** If used in a way that generates a mist, observe the limits for mineral oil mist.

Component	Exposure Limit (ACGIH)	Exposure Limit (OSHA)	Immediately Dangerous to Life
Mineral Oil Mist	5 mg/m ³ TWA-TLV 10 mg/m ³ STEL-TLV	5 mg/m ³ TWA-PEL Not Established STEL-PEL	2500 mg/m ³

- Engineering controls:** For normal application, special ventilation is not necessary. If the user's operation generates mist, use local ventilation to keep exposure to airborne contaminants below exposure limits.
- Respiratory protection:** None required under normal conditions of use. Use approved respirator with dual organic vapour/mist and particulate cartridge if vapour concentration exceeds permissible exposure limit.
- Eye protection:** Use chemical splash goggles if risk of splashing present.
- Skin protection:** Use rubber or plastic apron.
- Hand protection:** Use oil resistant gloves.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Green-blue tint
Odour:	Odour Mild petroleum odour
Odour Threshold:	Not established at 20°C (68°F)
pH:	Not available
Pour Point:	-35°C (-31°F)
Boiling Point:	>230°C (>446°F)
Flash Point:	244°C (471°F)
Evaporation Rate:	Not available
Upper Flammability Limit:	Not available
Lower Flammability Limit:	Not available
Density:	0.917 g/mL at 20°C (68°F)
Vapour Pressure:	<1.00 mm Hg at 20°C (68°F)
Vapour Density:	Not available
Solubility in Water:	Insoluble
Autoignition Temperature:	Not available
Partitioning Coefficient:	Not available
Kinematic viscosity @ 40c	44.5
Kinematic viscosity @ 100c	9.34
VI	200

SECTION X: STABILITY AND REACTIVITY

Chemical Stability:	Stable
Incompatibility:	Avoid contact with oxidizing agents, reducing agents, strong acids, strong bases, alkali metals, alkaline earth metals and ignition source. Iron, zinc and aluminium avoided at high temperatures
Reactivity:	No reactivity.
Polymerization:	Will not occur.
Decomposition Products:	Oxides of carbon, sulphur, calcium, phosphorous, nitrogen, zinc, chlorine, hydrogen chloride, hydrogen sulphide and dense smoke.

SECTION XI: TOXICOLOGICAL INFORMATION

Effects of Acute and Chronic Exposure:

Skin Contact:	Frequent or prolonged contact may irritate the skin and cause a skin rash.
Skin Absorption:	No evidence of adverse effects from available information. Prolonged contact may cause mild irritation.
Eye Contact:	Irritating to eyes, but will not injure eye tissue.
Inhalation:	When aerosolizing, misting, or heating this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).
Ingestion:	May cause gastrointestinal irritation. Ingestion of large amounts may cause intestinal blockage. If drawn into lungs from swallowing or vomiting, may cause bronchopneumonia or pulmonary edema.
Skin Irritation:	
Polysulfides di-tert-dodecyl (Component):	Slightly irritating. (Rabbit) Irritation Index: 1.4/8.0. (4h)
Eye Irritation:	
Polysulfides di-tert-dodecyl (Component):	Slightly irritating. (Rabbit) Irritation Index: 9.2/104.
Sensitisation:	No skin allergy observed.
Carcinogenicity:	No component is identified as a carcinogen or potential carcinogen by OSHA, NTP, ACGIH or IARC.
Reproductive Toxicity:	No evidence of reproductive effects.
Teratogenicity:	No evidence of teratogen effects.
Embryo toxicity:	No information is available and no adverse effects are anticipated.
Mutagenicity:	No information is available and no adverse effects are

anticipated.

Acute toxicity values:

Polysulfides di-tert-dodecyl (Component):	Oral LD ₅₀ (Mouse) = 20,000 – 25,000 mg/kg Dermal LD ₅₀ (Rat) = > 2000 mg/kg Inhalation: No toxic effects observed. (Mouse) 2h.
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SECTION XII: ECOLOGICAL INFORMATION

Environmental Fate: No specific environmental fate data is available. This product is expected to be readily biodegradable

Environmental Effects: This product contains materials that are considered to be marine pollutants. Avoid releasing into the environment

SECTION XIII: DISPOSAL CONSIDERATION

RCRA 40 CFR 261 Classification: Not Listed

US EPA Waste Number / Classification: None

Waste Disposal: Dispose of waste material in compliance with all federal, state, provincial and local regulations. Incinerate in a furnace or bury in an approved landfill where permitted under appropriate federal, provincial and local regulations.

SECTION XIV: TRANSPORT INFORMATION

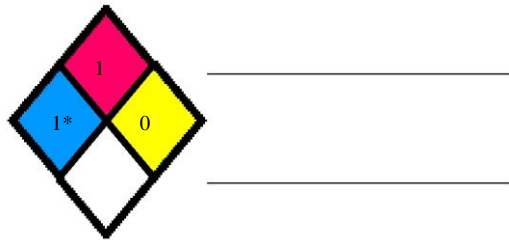
Department of Transport:	Not regulated under DOT
TDG – Canada:	Not regulated under TDG
DOT/TDG Proper Shipping Name:	None
DOT/TDG Hazard Class:	None
UN Number:	None required
Packing Group:	None
DOT/TDG Labels: Primary:	None required
Subsidiary:	None required
DOT/TDG Placards:	None required

SECTION XV: REGULATORY INFORMATION

CPR Compliance:	This product has been classified in accordance with the hazard criteria of <i>the Controlled Products Regulations</i> and the SDS contains all of the information required by those regulations.
OSHA Hazard Communication Standards 29CFR 1910.1200:	This product is not known to contain any of the carcinogens required to be listed under OSHA Hazards Communication Standards 29 CFR 1910.1200.
WHMIS Classification:	This is not controlled product under WHMIS.
CERCLA:	Not listed on CERCLA (40CFR 302.4). If this product is accidentally spilled, it is not subject to special reporting under requirements of the Comprehensive Environmental Response and Liability Act. We recommend you also contact local authorities to determine if there may be other local reporting requirements.
SARA Title III Section 311/312:	Under the provisions of Title III, Section 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard category: NONE
SARA Title III Section 313:	This product does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels reestablished by SARA Title III, Section 313. Not listed on the RCRA (40 CFR 261.33) for hazardous waste.
RCRA:	
NPRI:	Not listed in the NPRI under Canadian EPA.
Chemical Inventory:	Canada: The ingredients of this product are on the DSL. United States: The ingredients of this product are on the TSCA

SECTION XVI: OTHER INFORMATION

HMIS Information



Degree of Hazard

- 4= Severe
- 3= Serious
- 2= Moderate
- 1= Slight 0= Minimal
- *=Chronic

Revision Information

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Phone:	1-587-353-2000
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Revision:	1.0

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