

SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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|--------------------------------|---|
| Product Identifier: | Marinus Valve Actuator Oil |
| Product Use: | Use as valve actuator oil. |
| Restrictions on Use: | Do Not Mix with Alcohol Based or Glycol Based Products |
| Manufacturer: | Awsun Outcomes Inc. Bay 5, 409 38 th Ave. NE Calgary, Alberta T2E 6R9 Canada Phone 1-587-353-2000 |
| Supplier: | Awsun Outcomes Inc. Bay 5, 409 38 th Ave. NE Calgary, Alberta T2E 6R9 Canada Phone 1-587-353-2000 |
| Emergency Phone Number: | CANUTEC – 24 hr Emergency No. 1-613-996-6666 Business Hour Number 1-587-353-2000 (Monday through Friday 8:00am to 4:30pm MST) |
| SDS Prepared By: | Awsun Outcomes Inc. Phone 1-587-353-2000 |
| Date Revised: | 01 JAN 2019 |

SECTION II: HAZARDS IDENTIFICATION

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|----------------------------------|--|
| GHS Classification: | Not classified |
| GHS Label Element: | |
| Signal word : | No signal word |
| Hazard statements: | No known significant effect or critical hazards. |
| Other hazards: | None |
| Precautionary statements: | <p>Prevention: Not applicable</p> <p>Response: Not applicable</p> <p>Disposal: Not applicable</p> <p>Storage: Not applicable</p> |
| Symptoms of Overexposure: | No specific data |

SECTION III: COMPOSITION/ INFORMATION ON INGREDIENTS

| Hazardous Ingredients | Concentration % | C.A.S. # |
|------------------------------|------------------------|-----------------|
| Bis (2-ethylhexyl) adipate | 60 - 100 % | 103-23-1 |

SECTION IV: FIRST AID MEASURES

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| Ingestion: | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| Skin Contact: | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if |

symptoms occur.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Eye Contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Protection of First-aiders:

No action shall be taken involving any personal risk or without suitable training.

Most important symptoms and effects, both acute and delayed:

Repeated skin exposure can produce local skin destruction or dermatitis. May cause mild eye irritation. No other known significant effect or critical hazards.

Notes to Physician:

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific Treatments:

No specific treatment.

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 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:** 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 or Health (IDLH) |
|------------------|--|---|--|
| 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

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| Physical State: | Liquid |
| Appearance: | Amber |
| Odour: | Mild petroleum odor |
| Odour Threshold: | Not established at 20°C (68°F) |
| pH: | Not available |
| Pour Point: | <-60°C (-76°F) |
| Boiling Point: | >230°C (>446°F) |
| Flash Point: | 196°C (385°F) |
| Evaporation Rate: | Not available |
| Upper Flammability Limit: | Not available |
| Lower Flammability Limit: | Not available |
| Density: | 0.920 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: | Not available |
| Autoignition Temperature: | Not available |
| Partitioning Coefficient: | Not available |

SECTION X: STABILITY AND REACTIVITY

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|----------------------------|---|
| 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, phosphorous, nitrogen, and dense smoke. Methacrylates, aldehydes, hydrogen sulphide, alkyl mercaptans and sulphides will also result in case of thermal decomposition.

SECTION XI: TOXICOLOGICAL INFORMATION**Acute Toxicity:**

Bis (2-ethylhexyl) adipate (component): Oral LD₅₀ (Rat) = 7392 mg/kg

Effects of Acute and Chronic Exposure:**Skin Contact:**

Frequent or prolonged contact may irritate the skin and cause a skin rash. Acute exposure is expected to cause only slight irritation, if any.

Skin Absorption:

No evidence of adverse effects from available information. Prolonged contact may cause mild irritation.

Eye Contact:

Slight irritation to eyes, but will not injure eye tissue.

Inhalation:

No inhalation dangers at room temperature as there are no vapours. If the product is misted, high concentrations of vapours and/or mist may cause respiratory tract irritation, experienced as nasal discomfort and discharge.

Ingestion:

No significant hazard. Minimal toxicity. Ingestion of large amounts may cause laxative effects. If drawn into lungs from swallowing or vomiting, may cause chemical pneumonitis or pulmonary edema.

Irritancy:

Slight irritation to eyes. Frequent or prolonged contact may irritate skin. If misted, inhalation of mist may cause irritation.

Sensitization:

Repeated or prolonged contact is no expected to cause sensitization, based on available data and known hazards.

Carcinogenicity:

This product contains material that has NOT been listed as a carcinogen or potential carcinogen by either the National Toxicology Program or the Occupational Safety and Health

Administration. International Agency for Research on Cancer (IARC) = classification 3

Reproductive Toxicity: No information is available and no adverse effects are anticipated.

Teratogenicity: No information is available and no adverse effects are anticipated.

Embryo toxicity: No information is available and no adverse effects are anticipated.

Mutagenicity: No information is available and no adverse effects are anticipated.

Toxicologically Synergistic Products: Not available.

SECTION XII: ECOLOGICAL INFORMATION

Aquatic Ecotoxicity:

| Component | Result | Species | Exposure |
|----------------------------|---|---------------------------------------|-----------------|
| Bis (2-ethylhexyl) adipate | Acute LC ₅₀ 780 µg/L Fresh water | Fish – Fathead minnow | 96 h |
| | Acute LC ₅₀ 780 µg/L Fresh water | Fish – Rainbow trout, donaldson trout | 96 h |
| | Acute LC ₅₀ 780 µg/L Fresh water | Fish – Bluegill | 96 h |
| | Acute LC ₅₀ 660 µg/L Fresh water | Aquatic invertebrates. Water flea | 96 h |
| | Acute LC ₅₀ 780 µg/L Fresh water | Aquatic plants – Green algae | 96 h |

Environmental Fate: Readily biodegradable.

Environmental Effects: Adverse ecological impact is not known or expected under normal use.

Bio-accumulative Potential:

Bis (2-ethylhexyl) adipate (component): LogPow = 8.94
BCF = 27.00

Potential = high

Mobility in Soil: Data is unavailable.

SECTION XIII: DISPOSAL CONSIDERATION

RCRA 40 CFR 261 Classification: Not Listed

US EPA Waste Number / Classification: Not Available

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

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|--------------------------------------|-------------------------|
| 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 *the Controlled Products Regulations* and the SDS contains all of the information required by those regulations.

OSHA Hazard Communication Standards 29 CFR 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.

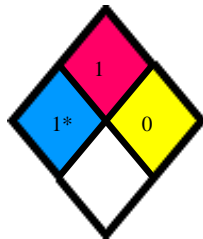
RCRA: Not listed on the RCRA (40 CFR 261.33) for hazardous waste.

NPRI: Contains chemicals listed in the **NPRI** under Canadian EPA. CAS# 103-23-1 Bis (2-ethylhexyladipate)

Chemical Inventory: Canada: The ingredients of this product are on the DSL.
USA: 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

| | |
|------------------------|---------------------|
| Prepared by: | Awsum Outcomes Inc. |
| Phone: | 1-587-353-2000 |
| Effective Date: | 01 JAN 2019 |
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| Revision: | 2.0 |

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