

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	Avermectin B1a
Product #:	A-2651
Synonyms:	5-O-Demethylavermectin A1a; C 076B1a
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Avermectin B1a	65195-55-3	265-610-3	>99

Section 3: Hazards Identification

Symbols



HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
4		0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
4	0	0

Section 4: First Aid Measures

General Overview:

Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

Inhalation:	Supply fresh air or oxygen; call for doctor. In case of unconsciousness place patient stably in side position for transportation.
Skin:	Immediately wash with water and soap and rinse thoroughly.
Eyes:	Rinse opened eye for several minutes under running water. Then consult a doctor.
Ingestion:	Do not induce vomiting; immediately call for medical help.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	No data available
Extinguishing Media:	Use firefighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	Mouth respiratory device.
Flash Point:	No data available


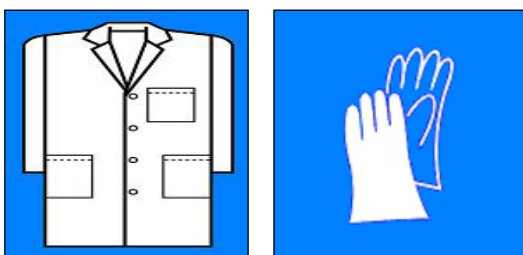

Section 6: Accidental Release Measures

Personal Precautions:	Not required
Environmental Precautions:	Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
Methods for Clean-up:	Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

SECTION 7: Handling & Storage

Storage:	Recommended storage temperature: -20°C
Handling:	Thorough dedusting. Ensure good ventilation/exhaustion at the workplace. Open and handle the receptacle with care.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.</p>
Skin and Body:	 <p>Protective gloves and lab coat.</p>
Eyes:	 <p>Tightly sealed goggles.</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Follow standard good industrial hygiene practices.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Solid. Characteristic odor.
Formula	$C_{48}H_{72}O_{14}$
Molecular Wt.	873.1
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available

Solubility:	Soluble in ethanol, methanol, DMF or DMSO. Poor water solubility.
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	Carbon dioxide, carbon monoxide
Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	CL1200000
ACUTE Toxicity:	Oral LD50 19 mg/kg (mouse) LD20 10 mg/kg (rat)
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA. EPA: No classification on carcinogenic data is available from EPA

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 3 (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms
Mobility:	No data available
Persistence and degradability:	No data available

Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	Very toxic for fish

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	UN2811
ADR / RID (LAND):	N/A
DOT regulations:	<p>UN2811 Toxic solids, organic, n.o.s. (Avermectin B1a) Class 6.1 Toxic substances Label 6.1 Packing group: I</p> <p>Quantity limitations On passenger aircraft/rail: 5 kg On cargo aircraft only: 50 kg</p>
IMDG/IMO (SEA):	<p>UN2811 TOXIC SOLID, ORGANIC, N.O.S. (Avermectin B1a) Class 6.1 Toxic substances Label 6.1 Packing group: I</p> <p>Limited quantities (LQ) 0 Excepted quantities (EQ) Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g</p>
IATA/DGR (AIR):	<p>UN2811 Toxic solids, organic, n.o.s. (Avermectin B1a) Class 6.1 Toxic substances Label 6.1 Packing group: I</p> <p>Remarks: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the</p>

	De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
Special Provisions:	Warning: Toxic substances Hazard identification number (Kemler code): 66 EMS Number: F-A,S-A Stowage Category B

SECTION 15: Regulatory Information

Health Phrases:	Danger! H300+H330 Fatal if swallowed or if inhaled. H311 Toxic in contact with skin. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Risk Phrases:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapors/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 [In case of inadequate ventilation] wear respiratory protection. P301+P310 If swallowed: Immediately call a poison center/doctor. P330 Rinse mouth.
Safety Phrases:	P302+P352 If on skin: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 IF exposed or concerned: Get medical advice/attention. P312 Call a poison center/doctor if you feel unwell. P314 Get medical advice/attention if you feel unwell. P320 Specific treatment is urgent (see on this label). P361+P364 Take off immediately all contaminated clothing and wash it before reuse. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found

U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Acute toxicity - oral (Cat. 2); Acute toxicity - dermal (Cat. 3); Acute toxicity - inhalation (Cat. 1); Toxic to reproduction (Cat. 2); Specific target organ toxicity - repeated exposure; Aquatic acute (Cat. 1); Aquatic chronic (Cat. 1)</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*