



Hangzhou Tianlong Biotechnology Co., Ltd.

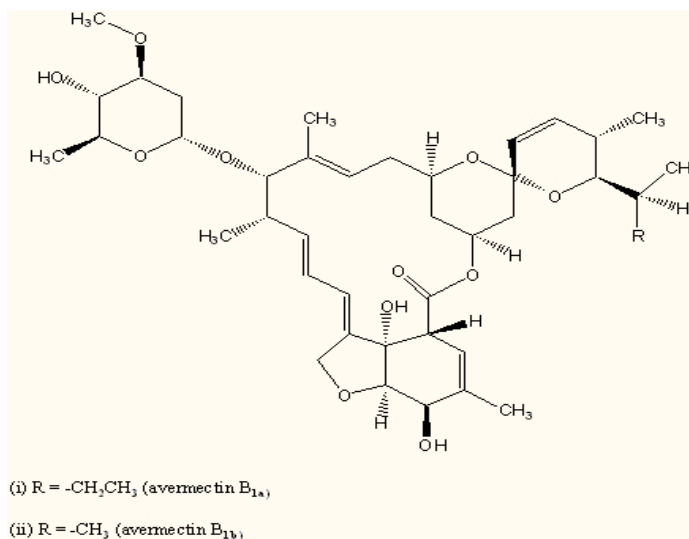
Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

MATERIAL SAFETY DATA SHEET

1. Chemical Product and company Identification

Product Name: Abamectin

Molecular Formula:



Molecular Weight: 873.11

Chemical Name:

5-O-demethylavermectinA1a(i) mixture with 5-O-demethyl-25-de((1-methylpropyl)-
25-(1-methylethyl) avermectinA1a (ii)

CAS No.: 71751-41-2

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

Address: Room 1906, Fengqi Times Tower, No.338 Fengqi East Road, Hangzhou, China, 310020

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2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Abamectin	71751-41-2	95.0
others		5.0

3. Hazards Identification

Eye Contact: Causes eye and skin irritation.

Skin Contact: Abamectin is not readily absorbed through the skin. It is however mildly irritation to the skin. It does not cause allergic reaction to the skin.

Inhalation: Harmful by inhalation and may be irritation to the respiratory system.

Swallowing: Harmful if swallowed.

4. First Aid Measures

Skin: wash thoroughly with soap and water.

Eyes: flush with plenty of water for at least 15 minutes.

Inhalation: move to fresh air.

Ingestion: Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear.

5. Fire-Fighting Measures

Extinguishing media

To be used: Water, sand, foam, carbon dioxide, dry powder

Don't use: not applicable

Particular risk: not applicable

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

6. Accidental Release Measures

Personal cautions: Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Cleaning methods

EX: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust.

Ventilate area and wash spill site after material pickup is complete.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

7. Handling And Storage

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco

products in the storage area. Store this product away from heat, sparks and other sources of ignitions.

8. Exposure Controls / Personal Protection

Personal protective equipment
Respiratory protection: approved respirator
Protective gloves: rubber gloves
Eye protection: goggles
Industrial hygiene: not applicable

9. Physical And Chemical Properties

Appearance: White powder
Melting point: 150-155°C
Relative Density: 1.16@21°C
Bulk density: not applicable
Water solubility: Insoluble
Other solubilities: vs. in acetone, methanol, toluene, chloroform, and ethanol
PH value: 5-8
Flash point: not applicable
Ignition temperature: not applicable

10. Stability And Reactivity

Conditions to avoid: fire, feed, food and beds of water
Products to avoid: strong oxidizing agents, alkalis and acids.
Thermal decomposition: not applicable
Hazardous decomposition products: not applicable
Hazardous reaction: none

11. Toxicological Information

Acute toxicity: Abamectin is highly toxic to insects and may be highly toxic to mammals as well. Emulsifiable concentrate formulations may cause slight to moderate eye irritation and mild skin irritation. Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma. Abamectin acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing symptoms of nervous system depression such as incoordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure. Abamectin is not readily absorbed through skin. Tests with monkeys show that less than 1% of dermally applied abamectin was absorbed into the bloodstream through the skin. Abamectin does not cause allergic skin reactions. The oral LD50 for abamectin in rats is 10 mg/kg, and in mice ranges from 14 mg/kg to greater than 80 mg/kg. The oral LD50 for the product Avid EC in rats is 650 mg/kg. The dermal LD50 for technical abamectin in rats and rabbits is greater than 330 mg/kg.

Reproductive effects:

Rats given 0.40 mg/kg/day of abamectin had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data suggest that abamectin may have the potential to cause reproductive

effects at high enough doses.

Teratogenic effects:

Abamectin produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers. There were no birth defects in the offspring of rats given up to 1 mg/kg/day. Abamectin is unlikely to cause teratogenic effects except at doses toxic to the mother.

Mutagenic effects:

Abamectin does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin was shown to be nonmutagenic in the Ames test.

Carcinogenic effects:

Abamectin is not carcinogenic in rats or mice. The rats were fed dietary doses of up to 2 mg/kg/day for 24 months, and the mice were up to 8 mg/kg/day for 22 months. These represent the maximum tolerated doses.

Organ toxicity:

Animal studies indicate that abamectin may affect the nervous system.

Other data: not applicable

12. Ecological Information

Fate in humans and animals:

Tests with laboratory animals show that ingested avermectin B1a is not readily absorbed into the bloodstream by mammals and that it is rapidly eliminated from the body within 2 days via the feces. Rats given single oral doses of avermectin B1a excreted 69 to 82% of the dose unchanged in the feces. The average half-life of avermectin B1a in rat tissue is 1.2 days. Lactating goats given daily oral doses for 10 days excreted 89% of the administered avermectin, mainly in the feces. Less than 1% was recovered in the urine.

Effects on birds:

Abamectin is practically nontoxic to birds. The LD50 for abamectin in bobwhite quail is >2000 mg/kg. The dietary LC50 is 3102 ppm in bobwhite quail. There were no adverse effects on reproduction when mallard ducks were fed dietary doses of 3, 6, or 12 ppm for 18 weeks.

Effects on aquatic organisms:

Abamectin is highly toxic to fish and extremely toxic to aquatic invertebrates. Its LC50 (96-hour) is 0.003 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. Its 48-hour LC50 in *Daphnia magna*, a small

freshwater crustacean, is 0.003 mg/L. The 96-hour LC50 for abamectin is 0.0016 mg/L in pink shrimp, 430 mg/L in eastern oysters, and 153 mg/L in blue crab. While highly toxic to aquatic organisms, actual concentrations of abamectin in surface waters adjacent to treated areas are expected to be low. Abamectin did not bioaccumulate in bluegill sunfish exposed to 0.099 ug/L for 28 days in a flow-through tank. The levels in fish were from 52 to 69 times the ambient water concentration, indicating that abamectin does not accumulate or persist in fish.

Effects on other organisms:

Abamectin is highly toxic to bees, with a 24-hour contact LC50 of 0.002 ug/bee and an oral LD50 of 0.009 ug/bee.

13. Disposal Considerations

Product disposal: Pesticides spray mixture or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides. Dispose of in compliance with all state and local laws and regulation.

Container disposal: Triple rinse (or equivalent) and dispose of in an incinerator or landfill approved for pesticide containers.

14. Transport Information

Class: 6.1

UN No.: 2588

Packing group: II

15. Regulatory Information

Risk phrases:

Harmful by inhalation, in contact with skin and swallowed.

Irritation to skin and eyes.

Very toxic to aquatic organisms.

Safety phrases:

Keep out of the reach children.

Wear suitable protective clothing and gloves.

Wear eye/face protection.

In case of insufficient ventilation wear suitable respiratory equipment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce

formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.