

SAFETY DATA SHEET

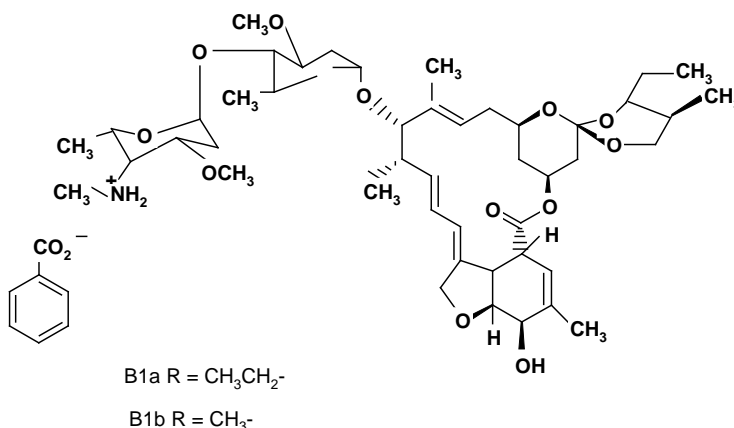
RADICAL

Emamectin Benzoate 0.5% EC

SECTION 1. IDENTIFICATION OF THE SUBSTANCE

Common Name: Emamectin Benzoate
 Chemical Name:
 (4" *R*)-5-*O*-demethyl-4"-deoxy-4"-(methylamino)avermectin A_{1a} + (4" *R*)-5-*O*-demethyl-25-de(1-methylpropyl)-4"-deoxy-4"-(methylamino)-25-(1-methylethyl)avermectin A_{1a} (9:1)

CAS No.: 155569-91-8
 Formula: B1a: C₅₆H₈₁NO₁₅ ; B1b: C₅₅H₇₉NO₁₅
 Mol. wt: B1a: 1008.3; B1b: 994.2
 Structure:



SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Conc.	Uses
Inert ingredient		
Emamectin Benzoate	0.5%	Insecticide
Inert ingredient		
Emulsifier	12%	
Solvent	Up to 100%	
TOTAL	100%	

SECTION 3. HAZARDS IDENTIFICATION

Effects of overexposure

Harmful if inhaled or swallowed. Can cause severe eye irritaiton. Injury may be permanent. May cause skin irritaiton. Exposure to high vapor levels may cause headache, dizziness, mumbness, nausea, incoordination, etc.

Hazardous Decomposition Products

Maybe decompose at high temperature forming toxic gases.

SECTION 4. FIRST AID MEASURES

Eye: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

Ingestion: Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation: Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

Note to physician:

There is No specific antidote. Treat patient symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Flash point: $\geq 80^{\circ}\text{C}$

Flammability: Combustible liquid

Extinguishing media:

Foam, Carbon dioxide, Dry chemical or Water spray (fog)

Thermal decomposition products: Non known

Special fire fighting methods: Use self contained breathing apparatus

Unusual fire or explosion hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

SECTION 6. ACIDENTAL RELEASE MEASURES

Isolate area. Use recommended protective equipment while carefully sweeping up and place in covered container for re-use if possible. Scrub contaminated area with soap and water. Repeat and rinse with water. Prevent contamination of streams, sewers or other waterways.

SECTION 7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, drink in areas where they may become contaminated with this material. Wash thoroughly after contact the material. Do not contaminate streams, sewers or other waterways.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly with soap and water after handling.

Eye protection: To avoid eye contact, wear chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin protection: To avoid skin contact, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposures limits.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Flash point	65°C
Density	0.89 gm/cm ³ (CIPAC F p.11 MT 3)
pH value	4 : 4.4 (CIPAC F p.205 MT 75)
Acidity (active ingredient)	0.3 as H ₂ SO ₄
Corrosion properties	Non corrosion
Color	yellow

SECTION 10. STABILITY AND REACTIVITY

<u>Chemical Stability:</u>	Stable at normal temperatures and storage conditions.
<u>Condition to avoid:</u>	Heat, light
<u>Materials to avoid:</u>	Strong oxidizing agents
<u>Polymerization:</u>	Polymerization will not occur.

Hazardous decomposition products:

Maybe decompose at high temperature forming toxic gases.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity:	LD50 for rats 2950 mg/kg
Acute dermal toxicity:	LD50 for rats >2000mg/kg
Acute inhalation toxicity:	LC50 (rat, 4hr) for rats 9.6mg/l
Skin irritation:	Slight Irritant to skin (rabbit)
Eye irritation:	Severely irritant to eye (rabbit)
Sensitization:	Not a skin sensitizer (Guinea pig)
Reproductive/ developmental effects:	None observed
Chronic/Subchronic toxicity:	None observed
Carcinogenicity:	None observed
Other toxicity information:	Toxicology study
Toxicity class:	WHO (a.i.) II

SECTION 12. ECOLOGICAL INFORMATION

Eco-Acute toxicity

Birds	LC50 (8d) bobwhite quail 1318ppm LC50 (8d) mallard duck 570ppm
Fish:	LC50 (96h) for rainbow trout 0.174ppm LC50 (96h) for bluegill 0.18ppm LC50 (96h) for sheephead minnows 1.43ppm

Daphnia: LC50 0.001mg/l (tech)
Bees: LD50 0.0036µg/bee

Environmental Fate

Rapidly degraded, low bioaccumulation potential. Persistent in soil. Stable in water. Immobile in soil.

SECTION 13. DISPOSAL INSTRUCTION

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are acutely hazardous. Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning. If allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

Considered non-hazardous for transport. UN Hazard Class: 6.1. transported or stored in clearly labelled rigid and leakproof containers, under lock and key, secure from access by unauthorized persons and children. No food or drink should be transported or stored in the same compartment.

SECTION 15. REGULATORY INFORMATION

UN NO.: 3082
Class: 9

SECTION 16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

Proper use is as an agricultural insecticide. Use according to label instructions.