



MATERIAL SAFETY DATA SHEET

EMAMECTIN BENZOATE 19.2 G/L EC

1. PRODUCT IDENTIFICATION

Product name: EMAMECTIN BENZOATE 19.2 G/L EC

Chemical name: Avermectin B1, 4"-deoxy-4"-(methylamino)-,(4"R)-, benzoate (salt)

CAS No.: 155569-91-8

Chemicals Class: Insecticides

Company: Sinochem AGRO CO., LTD

ADD:4TH/FL., SINOCHEM INTERNATIONAL PLAZA, NO. 233, NORTH CHANGQING ROAD,
PUDONG NEW AREA, SHANGHAI, 200125, P.R.CHINA

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient	content	CAS NO.
Emamectin Benzoate	19.2	137512-74-4
Emulsifier OP-10	98.8	--
Emulsifier 0204	98	--
Emulsifier ST-910	54	--
Xylene	730	1330-20-7

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Harmful if inhaled or swallowed. Causes severe eye irritation. Injury may be permanent. May cause skin irritation.

Inhalation can cause irritation to the respiratory tract and can result in chemical pneumonitis if aspirated. Ingestion results in central nervous system effects such as muscle tremors, decreased activity, ataxia (unsteadiness or incoordination), and dilated pupils (mydriasis).

Exposure to high vapor levels may cause headache, dizziness, numbness,

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nausea, incoordination, or other central nervous system effects.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Pale yellow liquid

Odor: Sweet, oily

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Combustible liquid. 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.

4. FIRST AID MEASURES

Ingestion: If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting. Do not give anything by mouth to an unconscious person.

Skin contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: If in eyes: 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. Call a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.



Notes to physician: Contains petroleum distillate - vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage. Early signs of intoxication include dilation of pupils, muscular incoordination and muscular tremors. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash point (Test Method): 143°F

Flammable limits (% in Air): Lower: 1.0% Upper: 8.0%

Autoignition Temperature: 559°F

Flammability: Combustible liquid

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion. Combustible liquid. 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.

In Case of Fire Use appropriate extinguishing media for combustibles in the



area. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

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, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash



thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact: Where contact is likely, 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 exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

8. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light Yellow liquid

Odor: sweet, oily

Melting point: n/a

Boiling point: n/a

Specific gravity/density: 0.9g/ml

pH: 4.0-7.0

Solubility in water: Emamectin Benzoate: 0.024g/L

Vapor pressure: Emamectin Benzoate: 3×10^{-8} mmHg



9. STABILITY AND REACTIVITY

Stability: stable under normal use and storage conditions

Hazardous Polymerization: Will not occur

Conditions to Avoid: Heat/ Light

Materials to Avoid: Strong oxidizers

Hazardous Decomposition products: Can decompose at high temperatures forming toxic gases.

10. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Slight Toxic Oral (LD50 Rat): =2950mg/kg body weight

Dermal: slight toxic dermal (LD50 Rabbit) >2000mg/kg body weight

Inhalation: Practically non-toxic Inhalation (LC50 Rat): = 9.6mg/l air-4 hours

Eye contact: severely irritating (Rabbit)

Skin Contact: Slightly irritating (Rabbit)

Skin Sensitization: Not Available

Reproductive/Developmental Effects

Emamectin Benzoate: Developmental and reproductive toxicity observed in dosages that are toxic to mature animals.

Chronic/Subchronic Toxicity Studies

Emamectin Benzoate: Tremors and nerve lesions observed at lowest dose tested in rabbits. Bladder changes reported in rats.

Carcinogenicity

Emamectin Benzoate: None observed.

Other Toxicity Information: none

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11. ECOLOGICAL INFORMATION

Summary of Effects

Emamectin Benzoate: Very toxic to aquatic organisms. Toxic to bees. May cause long-term adverse effects in the environment

Eco-Acute Toxicity

Emamectin Benzoate:

Bees LC50/EC50 0.0036 ug/bee

Invertebrates (Water Flea) LC50/EC50 0.001 ppm

Fish (Trout) LC50/EC50 0.174 ppm

Fish (Bluegill) LC50/EC50 0.18 ppm

Birds (8-day dietary - Bobwhite Quail) LC50/EC50 1,318 ppm

Birds (8-day dietary - Mallard Duck) LC50/EC50 570 ppm

Eco-Chronic Toxicity: N/A

Environmental Fate

No data available for the formulation. The information presented here is for the active ingredient, emamectin benzoate.

Low bioaccumulation potential. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

12. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

13. TRANSPORT INFORMATION



II, Class 3-UNNO. 1993

Insecticides, N.O.I. O/T poison

Comments None.

14. REGULATORY INFORMATION

EPCRA SARA Title III Classification

15. REGULATORY INFORMATION

Regulations:

Information on risk and safety according to the label:

Avoid eyes, skin or clothing contact with the product.

Avoid inhale vapors or mixtures.

Handle the product only under appropriate ventilation

Store in an appropriate packaging, duly closed.

Immediately remove and wash contaminated clothing.

Do not eat, drink or smoke during product handling.

When opening a packaging, do it in a way to avoid leaks.

Do not use damaged and/or defective PPE and applying equipment.

Do not wash packaging in lakes, fountains, rivers and other water courses.

Avoid water contamination.

Discard the packaging and residues of the product correctly.

16. OTHER INFORMATION

"This Sheet was elaborated by Sinochem Shanghai Co., Ltd, from the data provided by the registering Company. The information of this MSDS represents the present data and reflect, precisely, our best knowledge for the appropriate handling of this product according to the specific application in the



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label and/or literature. Any other use of the product that are not recommended is a responsibility of the user".

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