



MATERIAL SAFETY DATA SHEET

PRODUCT : Emamectin benzoate Technical

PRODUCT DESIGNATION : Insecticide

Section 1. Product & Company Identification

Common Name : Emamectin benzoate

Grade : Technical

Active Ingredient : Emamectin benzoate

Chemical Name of Active Ingredient (IUPAC) : (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) (CA)

CAS NO. : 155569-91-8

Chemical Family of A. I. : Avermectin

Molecular Formula of A. I. : C₅₆H₈₁NO₁₅

Molecular Mass of A. I. : 1008.2 g/mol

Manufacturer & Supplier : **M/s PERFECT SOLUTIONS**
Office Add: B-371, Paschim Vihar, New Delhi -
110063 (India)
Factory Add: 15/1, 15/2, 15/3 Industrial Estate,
Vidisha - 464001 (M.P)

Telephone Number : +91 8375844625

Section 2. Composition / Information on Ingredients

Components	Composition
Emamectin benzoate a.i	95.00 % w/w
Other components	05.00 % w/w
Total	100.00% w/w



3. HAZARDS IDENTIFICATION

Eyes:	Thoroughly wash the eyes with water for at least 15 minutes.
Skin:	Wash the contaminated skin with Soap and water. If irritation persists seek medical attention.
Inhalation:	Remove the victim from the source of exposure. If the person is affected by the products of Sulphur decomposition, give the fresh air immediately and seek the medical attention. If breathing is irregular, administer artificial respiration and the Oxygen if necessary.
Ingestion:	Amount swallowed incidental to normal handling procedures and use are not expected to cause injury, Burning sensation and diarrhea may occur.
Other information:	Non Toxic in general

Section 4. First Aid Measures

Eyes:	Immediately rinse eyes with a large amount of running water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Hold eyelids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on the advice of a physician.
Skin:	Remove contaminated clothing. Wash skin immediately with plenty of soap and water, including hair and under fingernails. Do not apply any medicating agents except on the advice of a physician. Obtain medical attention if irritation persists. Decontaminate clothing prior to re-use.
Inhalation:	Move victim from the contaminated area to fresh air. If the individual is not breathing, call an ambulance and begin artificial respiration.
Ingestion:	



If victim is fully conscious, give a large quantity of water to drink. Do not induce vomiting unless under the direction of a physician. Never give anything by mouth to an unconscious or convulsing person.

Section 5. Fire Fighting Measures

Extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Hazards Arising from the Substance or Mixture:

Carbon oxides, Nitrogen oxides

Advice for Firefighters:

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6. Accidental Release Measures

Personal precautions:

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling & Storage

Precautions in Handling:

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage:

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

Storage conditions: Refrigerator



Section 8. Exposure Control, Personal Protection

Control Parameters: Contains no components with established occupational exposure limits.

Exposure Controls:

Appropriate Engineering Controls: A laboratory fumehood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

Personal Protective Equipment: All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

Eye/Face Protection: Safety goggles or face shield. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

Skin Protection: Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Body Protection: Fire resistant (Nomex) coveralls or chemical-resistant bodysuit (laminated Tychem SL or equivalent).

Respiratory Protection: Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

Section 9. Physical and Chemical Properties

Appearance / state	:	Slight yellow crystals
Colour	:	Slight yellow
Odour	:	Faint characteristic
Melting point	:	146-150°C
Vapour pressure	:	4 x 10 ⁻³ mPa (21°C)
Density	:	1.2g/cm ³ @ 25°C



Water Solubility : 0.024 g/l (pH 7, 25°C)

PH : 5.7

Section 10. Stability & Reactivity

Chemical stability: Stable under normal use and storage conditions.

Section 11. Toxicological Information

Acute Oral Toxicity- LD₅₀	Rat:76- 89 mg/kg bw
Acute Dermal Toxicity- LD₅₀	Rat: > 2,000 mg/kg body weight
Acute Inhalation - LD₅₀	Rat: >2.12- 4.44 mg/m ³ air
Eye irritation	Non Irritating to eyes
Skin Irritation	Non irritating
Skin Sensitization	Not a skin sensitizer

Section 12. Ecological Information

Toxicity to Fishes	Rainbow trout 174 µg/l
	Sheephead minnows 1430 µg/l
Toxicity to Bees	LD ₅₀ 3.6 µg/bee (contact)
	LD ₅₀ 2.4 µg/bee (oral)
Toxicity to Birds	Bobwhite LD ₅₀ : 264 mg/kg
	Mallard duck LD ₅₀ : 46mg/kg

Section 13. Disposal Consideration

Waste Treatment Methods

Product



Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.

Contaminated Packaging

Dispose of as above

C) Other Considerations

Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

Section 14. Transport Information

IMDG Classification

Shipping name : TOXIC SOLIDS, ORGANIC, N.O.S. (Emamectin Benzoate)
Class : 6.1
Packing group : III
UN number : 2811
Marine pollutant : Yes

Section 15. Regulatory Information

Hazard Symbol H1; F-1; R 0

Risk phrases & Safety Phrases Sweep spilled substance into containers, if appropriate & moisten first to prevent dusting (Extra personal protection P2 filter respirator for harmful particles)

Section 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 resented 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



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Safety Division : PERFECT SOLUTIONS, SAFETY DIVISION