



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Emamectin Benzoate 5% SG
Chemical Name : (4''R)-5-O-demethyl -4''-deoxy-4''-(methyl amino) avermectin A1a
+ (4''R)-5-Odemethyl-25-de (1-methylpropyl)-4''-deoxy-4''-(methyl
amino)-25-(1-methylethyl) avermectin A1a (9:1); 4''-(methyl amino)
avermectin B1
Users : Insecticide
Molecular Formula : C56H81NO15 (B1a); C55H79NO15 (B1b)
Supplier: BR Agrotech Limited

Address: 620/3, GIDC, Panoli, Ankleshwar-394115. Dist. Bharuch. GUJARAT, INDIA.

Website <http://www.bharatgroup.co.in>

2. Composition / Information on ingredients

Chemical Name	Cas No	Percent Or Content(W/W)
Emamectin benzoate A.I.	155569-91-8	05.00 %
Other ingredients	---	95.00 %

3. Health Hazards Identification

Symptoms of Acute Exposure: - Causes severe eye irritation. Irritating to skin. Inhalation can cause irritation to the respiratory tract. Ingestion results in central nervous system effects. Vapours may cause drowsiness and dizziness. May decompose at high temperature forming toxic gases.

4. First Aid Measures

Ingestion: Do not give anything liquid to the person. Do not induce vomiting. Call a physician. Do not give anything by mouth to an unconscious person.

Skin: Wash off skin immediately with plenty of soap and water for 15-20 minutes. Take off all contaminated clothing immediately. Call a physician.

Inhalation: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician.

Eye irritation: Rinse immediately with plenty of water and also under the eyelids for at least 15 minutes. Seek medical attention if irritation persists.

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)

WORKS : Unit-I : Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmour - 173030, (H.P.) Phones : 01702 - 238757, 01734 - 325300
Unit-II : Industrial Area, SIDCO, Kathua - 184101 (J&K) Phone : 01922 - 203025 Telefax : 01922 - 232165
Unit-III: 620/3, Nr. Ganesh Chokadi, GIDC, Panoli - 394115 (Gujarat)



Note to Physician: This material believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patient with potentially toxic mectin exposure. Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

5. Fire Fighting Measures

Suitable extinguishing media: Extinguishing media-Small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Extinguishing media-Large fires Alcohol resistant foam or water spray. **Extinguishing media which shall not be used for safety reasons:** Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: As the entire product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be hazardous to health.

Special protective equipment for fire fighters: Wear full protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions : Avoid dust formation.

Environmental Precautions: Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations. Do not create a powder cloud by using or compressed air. Clean contaminated surface thoroughly.

Additional Information If the product contaminates rivers and lakes or drains inform respective authorities.

7. Handling and Storage

Safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using, do not eat, drink or smoke.

Storage: Keep containers tightly closed. Store in a cool dry and well ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

8. Exposure Controls/Personal Protection

Engineering Controls: If air borne dust is generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep air borne levels below relevant exposure limit.

Protective measures: The use of technical measures should always have apriority over the use of personal protective equipment.

Respiratory Protection: A particulate filter respiration may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)

WORKS : Unit-I : Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmour - 173030, (H.P.) Phones : 01702 - 238757, 01734 - 325300
Unit-II : Industrial Area, SIDCO, Kathua - 184101 (J&K) Phone : 01922 - 203025 Telefax : 01922 - 232165
Unit-III: 620/3, Nr. Ganesh Chokadi, GIDC, Panoli - 394115 (Gujarat)



contaminated breathing apparatus in case of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand protection: Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer.

Gloves should be changed when breakthrough is suspected. Suitable material: Nitrile rubber.

Eye/Face: Eye protection is not usually required. Follow any site specific eye protection policies.

Skin and body protection: Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation/penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use or use disposable equipment (suits, aprons, sleeves, boots etc.). Wear as appropriate: Dust impervious Protective suit.

9. Physical and Chemical Properties

Appearance	: Granules
Colour	: White to tan
pH	: 4-8 at 1% w/v
Flammability (Solid, gas)	: Not highly flammable
Oxidizing Properties	: Not oxidizing
Explosive properties	: Not Explosive
Miscibility	: Not miscible

10. Stability and Reactivity

Stability: Stable under normal conditions.

Hazardous Polymerization: Not known to occur.

Hazardous decomposition: Combustion or thermal decomposition will evolve toxic and irritant vapours.

11. Toxicological Information

Acute Oral Toxicity	LD50 (rats) 1516 mg/kg
Acute Dermal Toxicity	LD50 (Rats) >2000 mg/kg
Acute Inhalation	LC50 (rats): > 6.28 mg/L, 4 h
Eye Irritation	Rabbit: Mildly irritant
Skin Irritation	Rabbit: Non irritant
Skin Sensitization	Guinea pig : Not a skin sensitizer in animals tests

12. Ecological Information

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADIBILITY)

Bioaccumulation : Emamectin benzoate does not bio accumulate.

Stability in water : Emamectin benzoate is not persistent in water.

Stability in soil : Emamectin benzoate is not persistent in soil.

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)

WORKS : Unit-I : Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmour - 173030, (H.P.) Phones : 01702 - 238757, 01734 - 325300
Unit-II : Industrial Area, SIDCO, Kathua - 184101 (J&K) Phone : 01922 - 203025 Telefax : 01922 - 232165
Unit-III: 620/3, Nr. Ganesh Chokadi, GIDC, Panoli - 394115 (Gujarat)



BR AGROTECH LIMITED

Regd. Off. : 1505, Vikram Tower, Rajendra Place, New Delhi - 110008
Ph. : +91-11-43661111 (30 lines) • Fax: +91-11-43661100, 41538600
E-mail : info@bharatgroup.co.in • Website : www.bharatgroup.co.in
CIN : U74899DL2000PLC103860

Mobility : Emamectin benzoate is immobile in soil.

ECOTOXICOLOGY EFFECTS

Daphnia : EC50 (48 h) 0.08 mg/L

Fish : LC50 (96 h) for Carp 6.8 mg/L

Green Algae: EbC50 (72 h) (*Selenastrum capricornutum*) 28.4 mg/L ErC50 (72 h) (*Selenastrum capricornutum*) 157 mg/L

13. Disposal Considerations

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated Packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. Transport Information

Rail/Road (RID/ADR)		
Proper Shipper Name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class	:	9
UN No.	:	3077
Packing Group	:	III
Sea (IMDG – Code)		
Proper Shipper Name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class	:	9
UN No.	:	3077
Packing Group	:	III
Air (IATA-DGR)		
Proper Shipper Name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class	:	9
UN No.	:	3077
Packing Group	:	III

Packing Instructions: Packing instructions on sea: P002/LP02 Packing instructions on air: Y911/911

15. Regulatory Information

Hazard Symbol	Xn	Harmful
	N	Dangerous for the environment

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)

WORKS : Unit-I : Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmour - 173030, (H.P.) Phones : 01702 - 238757, 01734 - 325300
Unit-II : Industrial Area, SIDCO, Kathua - 184101 (J&K) Phone : 01922 - 203025 Telefax : 01922 - 232165
Unit-III: 620/3, Nr. Ganesh Chokadi, GIDC, Panoli - 394115 (Gujarat)



BR AGROTECH LIMITED

Regd. Off. : 1505, Vikram Tower, Rajendra Place, New Delhi - 110008
Ph. : +91-11-43661111 (30 lines) • Fax: +91-11-43661100, 41538600
E-mail : info@bharatgroup.co.in • Website : www.bharatgroup.co.in
CIN : U74899DL2000PLC103860

Special Risks (R-Phrases)	R22	Harmful if swallowed
	R 23/25	Toxic by inhalation and if swallowed
	R 36	Irritating to eyes
	R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
	R50/53	Very toxic to aquatic organism, may cause long term adverse effects in the aquatic environment.

	R68/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Advice (S- Phrases)	S 2	Keep out of the reach of children
	S 13	Keep away from the food, drink and animal feeding stuffs
	S 20/21	When using do not eat, drink or smoke.
	S 35	This material and its container must be disposed of in safe way.
	S 36/37	Wear suitable protective clothing and gloves.
	S 57	Use appropriate container to avoid environmental contamination.
International WHO Toxicity Classification	II	Moderately hazardous

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)

WORKS : Unit-I : Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmour - 173030, (H.P.) Phones : 01702 - 238757, 01734 - 325300
Unit-II : Industrial Area, SIDCO, Kathua - 184101 (J&K) Phone : 01922 - 203025 Telefax : 01922 - 232165
Unit-III: 620/3, Nr. Ganesh Chokadi, GIDC, Panoli - 394115 (Gujarat)