

MAGMECTIN 19.2 EC

INSECTICIDE

A broad spectrum insecticide which controls mainly Lepidoptera caterpillars such as Diamondback moth in Brassicas, American bollworm in Tomatoes, Budworms in Tobacco and other Caterpillars in other crops as listed on the label.

Reg. No.:
TRB Reg. No.:

Composition	mass/vol
Emamectin Benzoate	19.2 g/l
inert ingredients	980.8 g/l

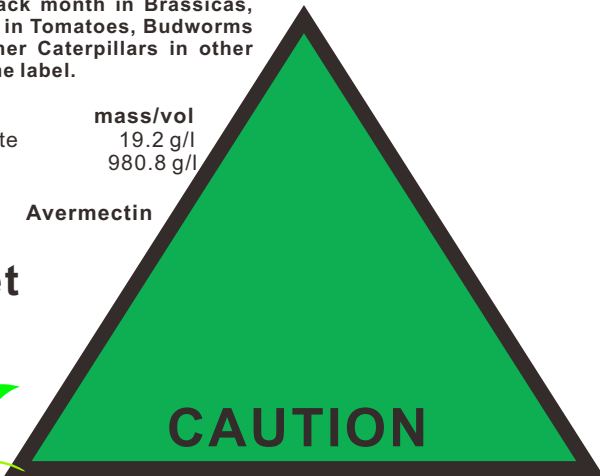
Chemical group: Avermectin

5Litres Net

Supplied by Maguires-

A member of

CropLife
ZIMBABWE



CAUTION

HARMFUL IF SWALLOWED
TO CAUSE A HAZARD IN THE USE,
STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

KEEP OUT OF REACH OF CHILDREN

Manufactured by:

NOVAAGRO (HK) LTD
6TH FLOOR, WYNDHAM PLACE,
44 WYNDHAM STREET,
CENTRAL HONG KONG

Registration held by:

MAGCHEM (PVT) LIMITED
2274 TILBURY ROAD,
WORKINGTON, HARARE,
ZIMBABWE

SAFETY PRECAUTIONS

1. Handle with care. Avoid splashing/contact. Poisonous by swallowing, inhalation and contact with the skin.
2. **WEAR FULL PROTECTIVE CLOTHING** i.e. overalls, rubber boots, rubber gloves and a respirator for ULV application.
3. **DO NOT eat, drink or smoke** while handling this product.
4. Remove protective clothing on completion of application and wash hands and face thoroughly with soap and water.
5. **DANGEROUS TO ANIMALS, BIRDS AND FISH. DANGEROUS TO LIVESTOCK AND DOMESTIC PETS.**
6. **TOXIC TO FISH. DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS AND WATERWAYS.**
7. **KEEP OUT OF REACH OF CHILDREN.**
8. **KEEP AWAY FROM FOOD AND FOODSTUFFS.**
9. Store in original container and **KEEP UNDER LOCK AND KEY.**
10. Avoid spray drift to non-target areas.
11. Destroy empty container after use. **DO NOT use for any other purpose.** Dispose of empty containers by crushing and burying.

SYMPTOMS OF POISONING

Lack of coordination, tremors, dilation of pupils.

FIRST AID

Eye contact: Rinse eyes immediately with clean water for fifteen minutes. Go to a doctor immediately.

Skin contact: Remove contaminated clothing. Wash affected skin with soap and water. Go to a doctor if skin is affected.

If inhaled: Move to clean air.

If swallowed: Seek medical advice immediately and show this container or label. Have the person sip a glass of water if able to swallow. **DO NOT** induce vomiting.

Note: Never give anything to an unconscious patient.

NOTE TO PHYSICIAN

This material 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 metrin exposure. Repeatedly administer medicinal charcoal in plenty of water. If toxicity from exposure has progressed to cause severe vomiting, the extent of 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.

No specific antidote is known. Apply symptomatic therapy.

WARRANTY

The user bears the risk for damage resulting from factors beyond the manufacturer's control. All recommendations for use of the product are based on the current state of the manufacturer's knowledge. Since the manufacturer cannot control the application, use, storage or processing of the product, the manufacturer cannot accept responsibility therefore. Since the occurrence of resistance cannot be foreseen, the manufacturer accepts no responsibility for any loss or damage to crops resulting from failure.

Shelf life: Two years from date of manufacture if kept in the original unopened container under constant cool and dry conditions.

SAFETY PRECAUTIONS

Empty container disposal

Invert the empty container over the spray tank or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of 10% of the container. Add the rinsings to the contents of the spray tank. Destroy the empty container by perforation and flattening. Return to supplier for recycling. **DO NOT use for any other purpose.** Dispose of the wash water at a site for the disposal of pesticides.

Decontamination of sprayer

Clean applicator thoroughly after use and ensure that all traces of **MAGMECTIN 19.2 EC** are removed. Make use of the following method;

- (a) Drain and rinse tank, spray boom and hoses with clean water for at least 10 minutes
- (b) Fill tank with clean water and add it to 1 litre household bleach (5%) or 1.5 Litres of household bleach (3.5%) per 200 Litres of water. Rinse hoses and spray boom and leave in tank for 15 minutes whilst agitating. Drain through nozzle outlets.
- (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.

DIRECTION FOR USE MIXING INSTRUCTIONS

Half-fill the sprayer tank with clean water. Add the recommended quantity of **MAGMECTIN 19.2 EC** to the water while agitating. Top up tank with required volume of water. Always stir the spray mixture well and apply within a few hours. **DO NOT** prepare more spray mixture than is needed for the immediate operation.

APPLICATION:

In all cases, apply as a full cover spray. Avoid run-off. Make sure the equipment is properly calibrated to give even distribution at the correct volume. **DO NOT** spray during the hot hours of the day, if the foliage is wet or if rain is imminent or if windy.

COMPATIBILITY:

MAGMECTIN 19.2 EC is compatible with most insecticides and fungicides. As compatibility can be adversely affected by the quality of the water used in the mixture, the manufacturer recommends that a trial mixture be done using the water intended for spraying.

CROP	PEST	RATE	APPLICATION DETAILS
Brassicas, Leafy vegetables and Salad crops e.g. cabbages, broccoli, cauliflower, kale, lettuce, spinach.	Lepidoptera: Diamondback moth (DBM); <i>Plutella xylostella</i>); Other caterpillars (<i>Helicoverpa/helicthis spp.; Spodoptera spp.; Trichoplusia SPP</i>)	400 ml (1-6 sprays) in 200 lt water/ha	Application timing and frequency should be based on economic thresholds. Apply as required by scouting. Add wetting agent to waxy Brassica crops. Insect Resistance Management: Alternate with insecticides with different mode of action.
Fruiting vegetables: e.g. tomatoes, chillies, eggplants	Lepidoptera: American bollworm (<i>Helicoverpa armigera; Heliothis spp.</i>); Other caterpillars (<i>Spodoptera spp.; Trichoplusia spp</i>)	500 ml (1-6 sprays) in 200 lt water/ha	Application timing and frequency should be based on economic thresholds. Apply as required by scouting. To control boring species, time applications to control larvae before they bore into the plant.
COTTON	Heliothis Bollworm	400-500 ml in 200 lt water/ha	Apply at 7 day intervals

Tobacco (TRB Reg No:)

CROP	PEST	RATE	APPLICATION DETAILS
Tobacco Lands	Tobacco budworm	400 ml in 200 lt water/ha	Apply as a full cover spray when more than 10 budworms per 100 plants are observed. On untopped plants penetration of the bud is essential and best achieved by applying about 250 litres of water/ha, with nozzle approximately 15 cm above the heart of the plant.

PRE-HARVEST INTERVAL:

Minimum number of days between last application and harvesting.

Brassicas: 7 days

Tomatoes: 1 day

Leafy vegetables (Lettuce, celery, spinach): 7 days

Tobacco: 7 days



1. Triple rinse clean container after use.
2. Puncture holes in bottom.
3. Return to Magchem recycling facility/or Return to your nearest recycling facility.

Date of Manufacture:

Batch Number:

Manufactured by:

Registration held by:

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PRODUCT : MAGMECTIN 19.2EC

EFFECTIVE DATE : March 2020

REVISION No. : 0

PAGES : 6

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product name MAGMECTIN 19.2EC
Common name Emamectin benzoate
Chemical name Avermectin B1, 4"-deoxy-4"-(methylamino)-,(4"R)-, benzoate (salt)

Supplier **NOVA AGRO (HK) LIMITED**
(Reg. No. 1023146)
6th Floor Wyndham Place
44 Wyndham Street
CENTRAL HONG KONG.

Emergency Tel/Fax +27(0) 83 676 1998

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: Emamectin benzoate

CAS No.: 155569-91-8

Chemical Family: Avermectin

Chemical Formula: C₅₆H₈₁NO₁₅(B1a); C₅₅H₇₉NO₁₅(B1b)

Molecular weight: 1008.3 (B1a); 994.2 (B1b)

Use: Non-systemic insecticide which penetrates leaf tissues by translaminar movement. Paralysis the Lepidoptera, which stop feeding within hours of ingestion, and die within 24 hours.

Formulation: 19.2g/litre emulsifiable concentrate (EC)

Hazardous ingredients of toxicological concern:

Emamectin benzoate ± 2%

Risk-Phrases: R22, R36/37/38, R41, R51/53, R61, R65

Safety-Phrases: H302, H304, H315, H318, H319, H335, H360, H411

3. HAZARDS IDENTIFICATION

- Harmful if swallowed.
- Possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
- Danger of serious damage to health by prolonged exposure if swallowed.
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES**Inhalation:**

Remove to fresh air. If breathing is irregular or has stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.

PRODUCT : MAGMECTIN 19.2EC**EFFECTIVE DATE** : March 2020**REVISION No.** : 0**PAGES** : 6**Skin contact:**

Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with clean, cold water and non-abrasive soap. Obtain medical attention if irritation persists.

Eye contact:

Immediately flush eyes with copious amounts clean, cold water for at least 15 to 20 minutes, holding the eyelid(s) open. Remove contact lenses if present. Obtain medical attention immediately.

Ingestion:

Do not induce vomiting. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately. If the person is alert, rinse mouth thoroughly with water and give one or two glasses of water to drink.

Note to physician: No specific antidote known. Treat symptomatically and give supportive therapy.

5. FIRE FIGHTING MEASURES**Extinguishing agents:**

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

Large fires: Alcohol-resistant foam or water spray.

Do not use a solid water stream as it may scatter and spread fire.

Fire fighting:

Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material.

Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk.

Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment:

Fire may produce irritating or toxic fumes such as oxides of carbon, and nitrogen, hydrogen chloride and other mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions:**

Avoid contact with skin and eyes. Do not inhale spray or fumes.

For personal protection see Section 8.

Environmental precautions:

Dispose of this material and its container at hazardous or special waste collection point in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. Contaminated soil layers have to be dug out.

Occupational spill:

In the event of minor spillage, absorb in sand or other inert material. Use appropriate container to avoid environmental contamination. Ventilate area. Remove all sources of ignition. Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal.

7. HANDLING AND STORAGE**Handling:**

Harmful if swallowed. Avoid contact with eyes and skin, and of spray and vapour. Use with adequate ventilation.

Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily.

Remove clothing immediately if the pesticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage:

Keep out of reach of unauthorised persons, children and animals.

Store in its original labelled container in isolated, dry, cool and well ventilated area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment.

Respirator:

A particulate filter respirator may be necessary if effective engineering controls are not in place. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Clothing:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves:

Employee must wear appropriate protective gloves to prevent contact with this substance. Nitrile rubber is suitable.

Eye protection:

Eye protection is not usually required. Any safety policies for a specific site should be followed.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State at 20°C: Liquid
Colour: Slightly yellow
Odour: Sweet, faint odour
pH: 5-8
Flash point: >61
Relative density: 0.92-0.96 g/cc
Auto-ignition temperature: 290

10. STABILITY AND REACTIVITY

Stability:

The product is stable for 2 years, when stored under normal storage conditions at normal temperatures. Avoid extreme heating conditions, as vapours can be released which can be ignited.

Conditions and Materials to Avoid:

Keep the product in a cool, dry place, at below 30°C. Protect from sunlight, open flame and sources of heat. Avoid contact with oxidizing agents, strong acids and bases. Not corrosive.

Hazardous decomposition products:

Fire may produce irritating or toxic fumes such as oxides of carbon, and nitrogen, hydrogen chloride and other mists or other products of combustion.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀ rats:

Emamectin technical: 56-63 mg/kg

Formulation calculated: >2000 mg/kg

Acute dermal LD₅₀ rats:

Emamectin technical: >2000 mg/kg

Formulation calculated: >2000 mg/kg

Inhalation:

Emamectin technical: LC₅₀ (4hours): >1.05 - 0.66 mg/L

Formulation: 5.5 mg/L

Acute skin irritation: Moderate

Acute eye irritation: Moderate

Dermal sensitization: Not a skin sensitizer.

Carcinogenicity: Not carcinogenic.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation:

Emamectin is rapidly degraded in the soil and environment.

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Metabolism has been investigated in lettuce, cabbage and sweet corn. It is non-systemic, and rapidly degrades in sunlight to various complex residues in which non-degraded parent is the only significant residue. The residues were very low.

ECOTOXICOLOGY:**Birds:**

Oral LD₅₀: Bobwhite quail: 264 mg/kg

Mallard ducks: 76 mg/kg

Fish: Low acute risk to fish.

LC₅₀ (96 hours): rainbow trout: 174 µg/L

Sheepshead minnow 1430 µg/L

Daphnia:

LC₅₀ (48 hours): 0.99 µg/L

Bees: Very toxic to bees.

Worms: LC₅₀: >1000 mg/kg dry soil

13. DISPOSAL CONSIDERATIONS**Product disposal:**

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Comply with local legislation applying to waste disposal.

Container disposal:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the mixing tank and destroy the empty container thereafter. Destroy the empty container by perforation and burying it.

Never re-use the empty container for any other purpose. Do not burn the empty container. Refer to label attached.

Comply with any local legislation applying to disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 3082

CLASS: 9

PACKAGING GROUP: III

Proper shipping name: Environmentally Hazardous Substance, Liquid.

Road Transport ADR/RID: 3082

Maritime Transport IMDG/IMO: 3082

EMAMECTIN IS CONSIDERED A MARINE POLLUTANT

15. REGULATORY INFORMATION

Symbol: Xn Harmful

N Dangerous for the environment.

Risk phrase(s):

R 22 Harmful if swallowed.

R36/37/38 – irritating to eyes, respiratory system and skin.

R41- Risk of serious damage to eyes.

R 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R51/53 Very toxic to aquatic organisms, 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 phrases:

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H360 May damage the unborn child.

H411 Toxic to aquatic life with long lasting effects.

16. OTHER INFORMATION

Packaging:

Packed in 500ml, 1L, 5L and 20L HDPE plastic containers and shipper paper boxes and labelled according to International regulations and guidelines.

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product, nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.