

Read the label before opening the container.

For full particulars, see enclosed leaflet.

**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

# ABAMEC X&M

South Africa Reg. No: L10933 Act No. 36 of 1947

**IRAC INSECTICIDE GROUP CODE: 6**

An emulsifiable concentrate translaminar insecticide/acaricide acting as a stomach and direct contact pesticide for the control of thrips, leaf miners and mites on crops as listed.

## ACTIVE INGREDIENT:

Abamectin (avermectin).....18g/ℓ

**Product Information: 072 678 8226**  
**In case of poisoning: 082 446 8946**

## HAZARD STATEMENTS

- Highly flammable liquid and vapour.
- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye irritation.
- Harmful if inhaled.
- Suspected of damaging unborn child.
- May cause damage to organs, eyes and Central Nervous system.
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects.



**DANGER**

## PRECAUTIONARY STATEMENTS

- Do not eat, drink, or smoke when using this product.
- Use only outdoors or in a well-ventilated area.

**enviro**  
bio-chem

**Registration holder: Enviro Bio-Chem (Pty) Ltd**

Co. Reg. No: CK 2013/194774/07

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Expiry Date:

Batch No:

Date of Manufacture:

**UN No. 3021**

## **WARNINGS:**

Allow the following minimum number of days between the last application and harvesting:

|        |         |          |         |
|--------|---------|----------|---------|
| Citrus | 7 days  | Pears    | 7 days  |
| Apples | 14 days | Potatoes | 14 days |
| Barley | 30 days | Wheat    | 30 days |

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- Harmful if inhaled.
- Suspected of damaging unborn child.
- May cause damage to organs, eyes and Central Nervous system.
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects.
- Toxic to bees when exposed to direct spray contact - do not spray during high bee activity.
- Do not allow animals to feed on treated foliage.
- Re-entry: Do not enter treated area within 2 days after treatment unless wearing protective clothing.
- Unprotected workers must vacate the area before it is treated.
- Do not use in orchards interplanted with other crops.
- Store under lock and key in a cool place, away from food, feedstuffs and seed.
- FLAMMABLE - do not store or handle ABAMEC X&M near heat or open flame.
- Keep out of reach of children, uninformed persons and animals.
- In case of poisoning call a doctor and make this label available to him.
- Aerial application: Notify all inhabitants in the area to be sprayed and issue the necessary warnings.

Although this insecticide has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be effected by factors such as abnormal soil, climactic and storage conditions; quality of dilution water; compatibility with other substances not indicated on the label and the occurrence of resistance of the pest against the insecticide concerned as well as by the method, time and accuracy of the application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the insecticide concerned due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in event of any uncertainty.

## **PRECAUTIONS:**

- Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
- Do not breathe mist/spray.
- Wash hands, forearms, and face thoroughly after handling
- Do not eat, drink, or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
- Take off contaminated clothing and wash it before reuse.
- Wash hands and face with soap and water after handling.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean spray equipment thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

- Triple rinse empty container in the following manner: Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsings to the content of the spray tank. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.
- Collect spillage

### **RELEVANT SUBSTANCES:**

Abamectin 2%

Methanol <50%

Calcium dodecyl benzenesulfonate <5%

Xylene <50%

### **SYMPTOMS OF HUMAN POISONING:**

Initially dilation of pupils, slow breathing and sedation. More severe poisoning may cause lethargy, muscle tremors and convulsions.

### **FIRST AID TREATMENT:**

Remove patient from source of poisoning and keep him quiet and reassured.

INGESTION: Immediately call a POISON CENTER or doctor/physician.

SKIN CONTACT: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

INHALATION: Remove person to fresh air and keep comfortable for breathing.

### **NOTE TO PHYSICIAN:**

There is no known specific antidote for acute abamectin poisoning. Provide supportive treatment depending on symptomatology to maintain life functions.

### **RESISTANCE WARNING:**

For resistance management, ABAMEC X&M is a group code 6 insecticide. Any insect population may contain individuals naturally resistant to ABAMEC X&M and other group code 6 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by ABAMEC X&M or any other group code 6 insecticides.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticide from the same insecticide group code.
- Alternate or tank mix with products from different insecticide group codes.
- Integrate other control methods (chemical, cultural, biological) into insect control programmes.
- For specific information on resistance management contact the registration holder of this product.

*Abamectin and emamectin benzoate are IRAC mode of action group 6 insecticides. These active ingredients are registered for the control of pests on various crops, including tree nuts, citrus fruit, pome fruit, stone fruit, grapevine, and various vegetables. Although these active ingredients have the same mode of action, they target different pests whose life cycles often overlap. To delay the onset of resistance, these insecticides may not be applied within 30 days of each other. If an application of abamectin is made, an application of emamectin benzoate can only be made 30 days thereafter, and vice versa. This waiting period should be increased in the case of target insects with a longer lifecycle to ensure insects from consecutive generations are not exposed to the same mode of action group insecticide. Apply registered insecticides with a different mode of action within the 30-day period following an application or block applications of abamectin or emamectin benzoate. Always conform to all label recommendations and only use registered dosages.*

## **AERIAL APPLICATION:**

Aerial application of ABAMEC X&M may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- **Volume:** A spray mixture volume of 30ℓ per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target
- **Droplet size:** A droplet spectrum with a VMD of 250 to 280 microns is recommended. Limit the production, of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3 to 4 meters above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable **atomizing equipment** that will produce the desired droplet size and coverage, but which will 'ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible relative span.
- Position all the atomizers within the inner 60 to 75% of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
  - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

## **DIRECTIONS FOR USE:** Use only as directed.

1. ABAMEC X&M controls immature and adult mites, larval American leaf miner and thrips. It is slow acting and may require 3 to 5 days for mortality.
2. Do not apply more than
  - 2 consecutive sprays of ABAMEC X&M to citrus or
  - 4 sprays of the recommended rate per season on apples and pears or
  - 5 sprays per season on potatoes.
3. Use suitable spray equipment correctly calibrated. Do not overspray.
4. On apples and pears ABAMEC X&M is most suited for use in an Integrated Pest Management (IPM) programme.

## **NOTE:**

- (i) At all recommended rates some mites will survive to encourage buildup of predatory mites.
- (ii) Due to the inherent risk of resistance development to any product, it is strongly recommended that ABAMEC X&M be used in a sound resistance management programmes that includes the use of products with a different mode of action and applications are made only when necessary and based on sound IPM programmes.

## **Compatibility:**

1. ABAMEC X&M must be mixed with a registered light mineral oil for use on apples and pears.
2. ABAMEC X&M does not require the addition of surfactants/adjuvants to spray mixture.

NOTE: Since all combinations and sequences of sprays used have not been fully evaluated, it is recommended not to tank mix with ABAMEC X&M until greater experience is gained.

**GENERAL DIRECTIONS:**

1. Potatoes
 

Use fine spray at high pressure and apply to the point of run off.
2. Apples and Pears
 

Apply as high volume, high pressure spray to the point of run off. Add 0.25% by volume light mineral oil in the diluted spray mixture.

Thorough coverage is essential.
3. Citrus
 

ABAMEC X&M is most effective after ingestion (2 to 3 days after application) by pest. It should not be used for control of high numbers of citrus thrip (more that 40% fruit infestation) where a knockdown treatment is required.

**Mixing Instructions:**

- Half fill the spray tank with clean water.
- Measure out the required quantity of ABAMEC X&M and premix this with at least 10ℓ of clean water. If any other product is also to be added to the tank mixture, measure out the required amount and also premix it.
- Agitate the spray tank water and add the premixed product(s) to the tank.
- Fill the tank to the required volume with water and constantly agitate.
- Maintain agitation during spraying.
- Use prepared mixture immediately and do not allow standing overnight.
- ABAMEC X&M can be used with varying water pH's and hardness normally encountered in agricultural conditions.

| CROP/PEST                                                                                                | DOSAGE                                                                                                 | REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>APPLES &amp; PEARS</b><br>Red spider mite (Tetranychus urticae) & European red mite (Panonychus ulmi) | 35mℓ<br>Plus 250mℓ light mineral oil/100ℓ water<br><br>(750 - 1 500mℓ/ha plus 0,25% light mineral oil) | Apply ABAMEC X&M when red spider mite population reaches the economic threshold level and repeat when necessary. Apply a high volume full cover spray (2 150 to 4 300ℓ per hectare spray mixture) to the point of run off. If less than 2 150ℓ per hectare spray mixture is used, then use a minimum of 750mℓ ABAMEC X&M, plus 0,25 % mineral oil per hectare in sufficient water and ensure good coverage. Do not exceed 1 500mℓ per hectare per application or 3000ml ABAMEC X&M per hectare in one growing season.<br><br>Apples: Apply only to orchards where the IPM program is not maintaining effective control of mites. |

| CROP/PEST                                                                                                                                                                                      | DOSAGE                                                                                      | REMARKS                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CITRUS</b><br>Citrus thrips<br>(Scirtothrips aurantii)                                                                                                                                      | 10mℓ<br>Plus 300mℓ light or<br>medium narrow range<br>mineral oil/100ℓ water                | Apply ABAMEC X&M when thrip numbers start to increase. Apply as a light cover spray and avoid run off. Do not apply more than two consecutive applications or three times in one season. ABAMEC X&M should be alternated with other registered thripicides to retard resistance development. Do not use when more than 40% of the fruit is infested. |
| <b>POTATOES</b><br>Leafminer<br>(Lyriomyza spp.)                                                                                                                                               | 500mℓ/ha<br>Plus 500mℓ<br>Medium grade mineral<br>oil/ha<br>OR<br>2ℓ/ha light paraffin oil. | Apply ABAMEC X&M 20 to 30 days after crop emergence, as high volume spray, using 600 litres spray mixture per hectare. A minimum of 300 litres spray mixture per hectare must be applied, to provide full cover spray.<br>Thoroughly wet all foliage surfaces to run off point.                                                                      |
| <b>BARLEY &amp;<br/>WHEAT</b><br>Larvae of<br>Leafminer<br>(Agromyza<br>ocularis)                                                                                                              | 1 200mℓ/ha                                                                                  | Apply ABAMEC X&M at first signs of infestation. Apply in a minimum of 300 litres water per hectare for the control of Leafminer in wheat and barley grown under irrigation.                                                                                                                                                                          |
| <p>Economic Threshold Levels for Apples and Pears:</p> <p>Apples: 2 females per leaf up to the end of March and thereafter 1 female</p> <p>Pears: 1 female per leaf throughout the season.</p> |                                                                                             |                                                                                                                                                                                                                                                                                                                                                      |