

# **TRIVOR®**

Reg. no. L10879 Act/Wet 36 of/van 1947 N-AR 2152

## READ THE LABEL BEFORE USE KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP 4A/7C INSECTICIDE

A dispersible concentrate contact and stomach insecticide with insect growth-regulant activity for the control of pests in citrus and grapes, as indicated.

'n Dispergeerbare konsentraat insekdoder met kontak- en maagaksie en insekgroeireguleerderaktiwiteit vir die beheer van plae in sitrus en druiwe, soos aangedui.



#### **WARNING**

#### Hazard statements

Harmful if swallowed.

Very toxic to aquatic life with long lasting effects.

## **Precautionary statements**

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

## **ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL**

acetamiprid (neonicotinoids) pyriproxyfen	J	asetamiprid (neonikotinoïede) piriproksifer			
NET VOLUME/NETTO VOLUME					

## REGISTRATION HOLDER/REGISTRASIEHOUER

ADAMA South Africa (Pty) Ltd;
Reg. no. 1992/001741/07
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## IN CASE OF POISONING, CALL THE FOLLOWING NUMBERS:

Griffon Poison Information Centre: +27 82 446 8946 or

Tygerberg Poison Information Centre:

+27 861 555 777

**EMERGENCY NUMBER:** 

SPILL TECH: +27 86 100 6366 or +27 83 253 6618

UN no.: 3082

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 Lotnommer
 Datum van vervaardiging
 Vervaldatum



GHS information

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#### **WARNINGS**

- Harmful if swallowed.
- Very toxic to aquatic life with long lasting effects.

Withholding periods (minimum number of days between last application and harvest):

Citrus 84 days
Grapes 42 days

**Export crops:** The local maximum residue levels (MRLs) will not be exceeded if **TRIVOR**® is used according to the label instructions. However, ADAMA South Africa (Pty) Ltd cannot be held responsible if export MRLs are exceeded. The local export marketing bodies must be consulted regarding application timing, withholding periods and specific tolerances of countries where produce will be exported to.

- Handle with care.
- Toxic to birds.
- Moderately toxic to bees.
- Store in the closed, original container in a cool, well-ventilated area, away from direct sunlight, food, feed and other agricultural chemicals.
- Not flammable but avoid contact with heat, flames and sparks and extremely high temperatures.
- In case of poisoning call a physician and show this label to him/her.
- **Re-entry interval:** Do not enter treated field until spray deposit has dried unless wearing protective clothing and gloves.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be effective under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic 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 remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to humans or animals or for lack of performance of the remedy 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 the event of any uncertainty.

#### **PRECAUTIONS**

- Keep out of reach of children.
- Do not eat, drink or smoke when using this product.

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- Avoid release to the environment.
- Dispose of contents/container in accordance with national regulation.
- Do not inhale spray or spray mist, fumes or vapours.
- Avoid contact with skin, eyes and clothes.
- Wear rubber gloves, face shield or goggles and protective clothing when handling and using the
  concentrate or the prepared product. In the event of eye contact, flush out at once. In the event
  of skin contact, wash off at once. If spilt on clothes, change and wash the clothes.
- Daily wash contaminated clothes and other protective equipment before reuse.
- Prevent contamination of food, feed, drinking water and eating utensils.
- While applying the product, avoid contact with the spray as far as possible. Avoid spray drift onto other crops, grazing, rivers or dams.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- 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 in succession with one quarter on the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za).
- Do not bury or donate the container to any other parties that may use it as a container for food or beverages.

## **RELEVANT SUBSTANCES**

Chemical name	Weight %	CAS no.
Propylene carbonate	30 – 60%	108-32-7
Acetamiprid	10 – 30%	135410-20-7
Pyriproxyfen	10 – 30%	95737-68-1
Poly(oxy-1,2-ethanediyl), .alphaphenylomega hydroxy-, styrenated	<10%	104376-75-2

## **FIRST AID**

In case of accident or unwellness, seek medical advice immediately. Provide this label and SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.

Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm and covered up. First Aid personnel should pay attention to their own safety.

Take the container label or product name with you when seeking medical attention.

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**Eye contact**: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin contact:** Remove all contaminated clothing and shoes. Rinse the skin immediately with plenty of water for 15 to 20 minutes under the safety shower. Contact a poison control centre or medical practitioner if irritation occurs or persists.

**Inhalation:** Immediately remove the affected victim from exposure to an area with fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain immediate medical attention.

**Ingestion:** Obtain immediate medical attention - call a poison control center or medical practitioner immediately for treatment advice. If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting unless directed to do so by a medical professional. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth and administer more water.

## **TOXICOLOGICAL INFORMATION**

#### **Antidotes**

Treat symptomatically.

## Symptoms of human poisoning

None known.

NOTICE TO THE USER: This agricultural remedy is to be used only according to the directions of this label. It is an offense under the Act to use this product inconsistent with the directions on the label.

## **RESISTANCE WARNING**

For the purpose of resistance management **TRIVOR**® is classified as a group code 4A and 7C insecticide. Any pest population may contain individuals naturally resistant to **TRIVOR**® and other group code 4A and 7C insecticides. The resistant individuals can eventually dominate the pest population if these insecticides are used repeatedly. These resistant pests may not be controlled by **TRIVOR**® or any other group code 4A and 7C insecticides.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank-mix with products from different insecticide group codes.
- Integrate the control methods (chemical, cultural, biological) into insect control programmes.

For more information regarding resistance management contact the registration holder of this product.

## MODE OF ACTION

4A: Nicotinic acetylcholine receptor (NACHR) competitive modulars – Bind to the acetylcholine site on nAChRs, causing a range of symptoms from hyper-excitation to lethargy and paralysis. Acetylcholine is the major excitatory neurotransmitter in the insect central nervous system.

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7C: Juvenile hormone mimics – Applied in the pre-metamorphic instar, these compounds disrupt and prevent metamorphosis.

#### **DIRECTIONS FOR USE**

Use only as indicated.

#### General

**TRIVOR**® is a combination of two active substances with different modes of action, namely pyriproxyfen and acetamiprid.

Pyriproxyfen is an insect growth regulator (Group 7C) that suppresses embryogenesis (egg development) and inhibits metamorphosis and development into adult insects. Its effects are slow to appear, but irreversible. Pyriproxyfen acts primarily through ingestion by the target insect with some contact and ovicidal activity that allows for extended residual control. The activity of pyriproxyfen depends on the insect development stage.

Acetamiprid is a member of the neonicotinoid (Group 4A) insecticide family and interferes with neurotransmission in target insects, causing feeding to cease within hours or even minutes and achieves mortality within 24 to 48 hours. Acetamiprid is absorbed through contact and ingestion by the insect. Some translaminar movement within plant tissue could occur.

Due to the mode of action of **TRIVOR**<sup>®</sup>, evidence of activity may be slower to appear than in the case of conventional contact insecticides.

## **Use restrictions**

- Do not apply **TRIVOR**® by air.
- Do not apply **TRIVOR**® if rainfall that is likely to produce runoff is forecast within 48 hours of application.
- Do not apply TRIVOR® more than twice per growing season in citrus and more than once per growing season in grapes.
- Avoid application TRIVOR® while pollinators (bees) are actively foraging.
- Do not treat trees or plants that are under stress, for instance due to water logging, drought, soil compaction, nutrient deficiencies, root and stem diseases, or nematodes.

## Compatibility

The compatibility of **TRIVOR**® with other products can be influenced by the formulation of those products and the quality of the dilution water. As formulations of products can change without the knowledge of ADAMA South Africa (Pty) Ltd and the quality of water can differ from farm to farm, a physical compatibility test should always be carried out prior to application.

For more information regarding product compatibility contact ADAMA South Africa (Pty) Ltd.

## **Mixing instructions**

Shake the container prior to opening. Half fill the spray tank with clean water. Add the required quantity of **TRIVOR**® to the spray tank while agitating. Fill the spray tank with water to the required volume while agitating. Ensure constant effective agitation during mixing and application. Only

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prepare enough spray mixture for one day's use. Spray mixture should not be allowed to stand overnight.

## **APPLICATION**

**TRIVOR**® can be applied with a suitable, correctly calibrated air-assisted sprayer, equipped with an efficient agitation mechanism, and that will be able to distribute the spray mixture evenly over the target area.

## **APPLICATION RATES**

CROP AND TARGET	RATE	REMARKS
Citrus  Mealy bug (Plannococcus citri)	40 ml/100 L	Apply <b>TRIVOR</b> ® at 90 % petal drop, as a full cover spray to the point of runoff, ensuring thorough coverage of fruit and foliage throughout the crop canopy.
Thrips (Scirtothrips aurantii) Red scale (Aonidiella aurantii)		Monitor for thrips from the start of flowering and apply when the action threshold is reached, typically before calyx closure. Do not apply to well-established populations dominated by mature adult insects. Continue monitoring for thrips, and if numbers are moderate to high apply a second application after a minimum spray interval of 14 days.
		Monitor for mealy bug and red scale crawlers and apply when first crawlers are noticed. Do not apply to well-established populations dominated by mature adult insects. Continue monitoring for crawlers, and if required apply a second application after a minimum spray interval of 14 days.
		To delay the development of resistance, apply <b>TRIVOR</b> ® as part of an integrated management strategy for the control of the pests indicated, followed by or alternating with insecticides with a different mode of action.
Grapes (grapevines) Mealy bug (Planococcus ficus)	50 ml/100 L	Apply <b>TRIVOR</b> <sup>®</sup> as a full cover spray to the point of runoff, ensuring thorough coverage of foliage throughout the crop canopy. Apply from 28 cm shoot length, but before the onset of flowering.
		Monitor for mealy bug crawlers and apply when first crawlers are noticed. Do not apply to well-established populations dominated by mature adult insects.
		To delay the development of resistance, apply <b>TRIVOR</b> ® as part of an integrated management strategy for the control of the pest, by using insecticides with a different mode of action for follow-up applications.

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