



The miracles of science™

# ALTACOR™

Reg. No. L8467 Act No. 36 of 1947

Reg. Nr. L8467 Wet Nr. 36 van 1947

A water dispersible granule stomach and contact insecticide for the control of codling moth and American (African) bollworm in apples and pears.

'n Water disperseerbare korrel maag en kontak insekdoder vir die beheer van kodlingmot en Amerikaanse (Afrika) bolwurm in appels en pere.

INSECTICIDE GROUP CODE 28 INSEKDODER GROEP KODE

### ACTIVE INGREDIENT

chlorantraniliprole  
(anthranilic diamide)

350 g/kg

### AKTIEWE BESTANDDEEL

chlorantraniliprool  
(antraniliese diamied)

### Net Mass

50g, 100g  
& 500g

### Netto Massa

### REGISTERED BY / GEREGISTREER DEUR:

DUPONT DE NEMOURS SOUTH AFRICA  
(PTY) LTD  
Co.Reg.No. 2009/014079/07  
P O BOX / POSBUS 3332  
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**24 Hour/Uur Emergency  
Number/Noodnommer:  
083 123 3911**

BATCH NUMBER  
DATE MANUFACTURED

LOTNOMMER  
DATUM VERVAARDIG

UN No. / VN Nr. 3077

**CAUTION  
VERSIGTIG**

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## **WARNINGS:**

- WITHHOLDING PERIODS: The following minimum number of days (withholding periods) between last application and harvest must be adhered to:

Apples	14
Pears	14
- Handle with care.
- This product is not likely to be hazardous by inhalation or skin contact.
- This product is toxic to aquatic invertebrates.
- Keep out of the reach of children, uninformed persons and animals.
- Store in the closed labelled original container at temperatures not exceeding 25°C away from food and feed.
- Use of this material in a manner or at a time other than in accordance with the directions may cause excessive residues or other undesirable results.
- RE-ENTRY: Do not enter treated area until spray deposit has dried.

**Although this remedy 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 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 man or animal 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 immediately in the event of any uncertainty.**

## **PRECAUTIONS:**

- Do not inhale spray mist.
- Do not enter treated areas until the sprayed solution has dried.
- Persons in contact with the insecticide should wear protective clothing, (long-sleeved shirts and long pants, shoes with socks and gloves).
- Wash yourself after application of the product.
- Wash contaminated clothing after working with the product.
- In case of eye contact wash immediately with plenty of water.
- In case of ingestion call a physician or poison centre.
- Do not eat, drink or smoke whilst applying or mixing, or before washing hands and face.
- Prevent contamination of feed, food, eating utensils and drinking water.
- DO NOT APPLY DIRECTLY TO AND PREVENT DRIFT ONTO OTHER EDIBLE CROPS THAN INDICATED ON THE LABEL, GRAZING, RIVERS, DAMS AND AREAS NOT UNDER TREATMENT.
- Clean applicator after use and dispose of wash water where it will not contaminate crops, grazing, food or water.
- Rinse the empty container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsate to the contents of the spray tank before destroying the container.
- Destroy empty container by perforation and flattening, and never re-use for any other purpose.

## RESISTANCE WARNING

**ALTACOR™** is a group code 28 insecticide. Any insect population may contain individuals naturally resistant to **ALTACOR™** and other group code 28 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **ALTACOR™** or any other group code 28 insecticide.

### To delay insecticide resistance:

- ❑ Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate 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.

Some insects (e.g. *Cydia pomonella*, *Helicoverpa armigera*, etc.) have been able to develop resistance to commercially available products. When resistance occurs, recommended rates fail to suppress the pest population below economic thresholds. The onset of resistance cannot be predicted and local advisors should be consulted for resistance management recommendations. As a result of its unique mode of action, **ALTACOR™** is ideally suited for applications where resistance management is important. Whilst there is no evidence of insect resistance to chlorantraniliprole, these guidelines will maximise the effective life of the product:

1. Where appropriate, alternate **ALTACOR™** with compounds from different chemical classes (oxadiazine, pyrethroid, organophosphate, neonicotinoid, spinosyn, diacylhydrazine or other insect growth regulators). We recommend alternation with registered products from these classes and not to exceed the maximum number of **ALTACOR™** applications per season as per the instructions under **DIRECTIONS FOR USE** on this label.
2. Monitor insect populations and apply **ALTACOR™** according to the label instructions when locally determined economic thresholds are reached. It is recommended that two to three consecutive **ALTACOR™** applications are applied as a block spray. Follow the label recommendations precise for dosage rates and spray intervals and the optimum timing to apply **ALTACOR™**.
3. **ALTACOR™** conserves most beneficial arthropods e.g. insects and mites (parasites and predators). Such beneficials that will remain after treatments can help control/reduce pest re-infestation. Beneficials provide additional pressure on the pest population and can therefore aid in the reduction of resistance potential.
4. **ALTACOR™** can be effectively used in combination with mating disruption in orchards under mating disruption.

### GENERAL INFORMATION:

**ALTACOR™** has a novel mode of action and acts by binding to and activating insect ryanodine receptors. This activation stimulates release and depletion of calcium from the internal stores of muscles, resulting in impaired muscle regulation, paralysis and ultimately insect death. Death of the pest occurs within 2-3 days, but inhibition of insect movement and feeding occurs rapidly.

**ALTACOR™** is active as a larvicide through ingestion (stomach action) and through cuticular absorption (contact action).

**ALTACOR™** controls mainly Lepidopteran insect pests, but also some insect pests in other Orders e.g. Coleoptera, Diptera etc. Applications of **ALTACOR™** have been shown to leave substantial populations of many beneficial insects (predators, parasitoids and pollinators) as well as predatory mites and can therefore be used effectively in Integrated Pest Management (IPM) programmes.

**BEES** - **ALTACOR™** is moderately toxic to honeybees. It is recommended that **ALTACOR™** not be sprayed directly onto foraging bees. Once the spray deposit has dried bees can be allowed to forage.

**RAINFASTNESS** - Once the spray mixture has dried on foliage and fruit (which can take up to 2 hours after application) on the target area, **ALTACOR™** will not be washed off by rainfall or sprinkler irrigation and the normal residual activity of the product should not be affected. Nevertheless repeated abnormal rainfall / overhead irrigation subsequent to application may reduce product effectiveness.

#### **DIRECTIONS FOR USE:**

**USE ONLY AS DIRECTED**

#### **COMPATIBILITY:**

The compatibility of **ALTACOR™** has not been fully investigated. **ALTACOR™** is compatible with Nustar® 100 EW (Reg. No. L6870 Act No. 36 of 1947), Dithane® M-45 800 WP (Reg. No. L2914 Act No. 36 of 1947) and Dithane® 750 WG Neotec (Reg. No. L4213 Act No. 36 of 1947)

For more compatibility information, or in the event of uncertainty, contact your nearest DuPont representative.

It is recommended that users premix a small quantity of a desired tank mixture containing **ALTACOR™** and observe for possible adverse changes (settling out, flocculation, etc.). Avoid tank mixtures of several products.

#### **TANK MIXING:**

Spray equipment must be clean and free of previous pesticide deposits before applying **ALTACOR™**. Fill spray tank ¼ to ½ full of clean water. Pre-mix **ALTACOR™** with some clean water before adding to spray tank. Mix thoroughly so as to fully disperse the **ALTACOR™**. Once dispersed, continuous agitation by mechanical or hydraulic means is required.

#### **MIXING SEQUENCE:**

If **ALTACOR™** is tank mixed with other products, always add water dispersible granules e.g. **ALTACOR™** to the spray tank first followed by other formulations (where applicable) in the following order:

- wettable powders
- suspension concentrates
- water soluble concentrates
- oil-based suspension concentrates
- emulsifiable concentrates (e.g. DuPont Nustar® 100 EW)
- adjuvants, surfactants and spray oils

Allow enough time for complete mixing and dispersion after addition of each product before the next product is added. Also refer to **COMPATIBILITY** statement above.

## APPLICATION:

Apply **ALTACOR™** as a full cover application with conventional orchard spray equipment which is correctly calibrated to provide thorough coverage of the target crop and correct dosage rate per hectare.

The dosage of **ALTACOR™** per hectare should be calculated according to the tree-row-volume (TRV) of the orchard, irrespective of the actual volume of water applied. The TRV is the water volume required when the trees are in full leaf and is calculated according to the formula:

$$\text{TRV} = \frac{\text{Tree Height}^* (\text{m}) \times \text{Tree Diameter}^* (\text{m}) \times 937}{\text{Row width (m)}}$$

\*(Tree height and tree diameter should be measured during summer when trees are in full flush)

**ALTACOR™** can be applied as either a high volume application (water volume/ha equal to TRV) or concentrated, low volume application, where the actual water volume is lower than TRV. In either case, the amount of **ALTACOR™** per hectare remains constant (according to TRV). Do not apply **ALTACOR™** in a water volume of less than ¼ of TRV (i.e. not higher than 4x concentration).

Application (water) volumes recommended at different growth stages of the tree:

Growth Stage	% of TRV requirement/ha
From green tip to ± 30 % blossom	60 %
From ± full blossom to ± mid November	80 %
From ± beginning of December	100 %

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
<p><b>APPLES &amp; PEARS:</b> Codling moth (larvae) <i>Cydia pomonella</i></p>	<p>10g/100l spray mixture (maximum 300g/ha)</p>	<p>Apply <b>ALTACOR™</b> as a full cover application at spray volumes from 800 up to 3000 litres spray mixture per hectare depending on the size of the trees and stage of the crop. Ensure thorough coverage of the foliage and developing fruit. <b>ALTACOR™</b> can be applied against the first, second or third generation of the pest. In order to prevent the development of resistance, apply products with a different mode of action against different generations of codling moth, e.g. <b>STEWARD®</b> in the first generation, especially when banded fruit weevil (snout beetle) is also present. Refer to <b>STEWARD®</b> label for full details. If <b>ALTACOR™</b> is applied against the first codling moth generation, application must commence no later than 75% petal drop. Always apply <b>ALTACOR™</b> in a spray programme, not exceeding 14 day intervals between applications. Do not exceed 3 <b>ALTACOR™</b> applications per season in total, including applications made with this product against American bollworm (refer below).</p> <p><b>Allow 14 days between last ALTACOR™ application and harvest.</b> <b>IMPORTANT NOTE:</b> The withholding period or pre-harvest interval (PHI), i.e. number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying <b>ALTACOR™</b> consult your local DuPont representative, as well as the latest Deciduous Fruit Producers' Trust (DFTP) lists with MRL information and recommended PHI as published on the DFTP web site for updated detail on produce intended for export.</p>
<p>American (African) bollworm (larvae) <i>Helicoverpa armigera</i></p>	<p>10g/100l spray mixture (maximum 300g/ha)</p>	<p>Apply <b>ALTACOR™</b> preventively or when eggs or larvae are present, but before larvae enter the fruit. Apply <b>ALTACOR™</b> in 800 up to 3000 litres spray mixture per hectare. A follow-up <b>ALTACOR™</b> application may be necessary 10-14 days later depending on re-infestation of the pest. Thorough coverage of the foliage and developing fruit is essential. Do not exceed the 3 <b>ALTACOR™</b> applications per season, including applications made with this product against Codling moth (refer to recommendations above).</p> <p><b>Allow 14 days between last ALTACOR™ application and harvest.</b> <b>IMPORTANT NOTE:</b> The withholding period, i.e. number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Also refer <b>IMPORTANT NOTE</b> above.</p>

**ACKNOWLEDGEMENT OF TRADE MARKS:**

Dithane is the registered trademark of Dow AgroSciences (Pty) Ltd.