



READ SAFETY DIRECTIONS BEFORE OPENING OR USING

ACTIVE CONSTITUENT:

700 g/kg CHLORANTRANILIPROLE

CONTENTS:

1 kg – 20 kg



For the control of Lepidopteran species of insect pests in certain Fruit and nut crops, as per the Directions for Use.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with eyes. When using together with other products, consult their label safety directions. Wash hands after use.

FIRST AID

First aid is not generally required. If in doubt, contact a Poisons Information Centre (phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

GENERAL INSTRUCTIONS

Altacor[®] X-Force insecticide has been specifically designed for use in Integrated Pest Management (IPM) schemes. Altacor[®] X-Force insecticide is an anthranilic diamide insecticide in the form of a water dispersible granule. Altacor[®] X-Force insecticide is particularly active on Lepidopteran insect pests, primarily as a larvicide.

Before application monitor insect populations to determine whether or not there is a need for application of Altacor[®] X-Force insecticide based on locally determined economic thresholds. More than one treatment of Altacor[®] X-Force insecticide may be required to control a population of pests.

MIXING

Fill spray tank to $\frac{1}{4}$ to $\frac{1}{2}$ full of water. Measure the amount of Altacor[®] X-Force insecticide required for the area to be sprayed. Add Altacor[®] X-Force insecticide directly to the spray tank with the agitation engaged. Mix thoroughly to disperse the insecticide. Once dispersed, the material must be kept in suspension at all times by continuous agitation. Use mechanical or hydraulic means, **DO NOT** use air agitation, premix or slurry.

If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. **DO NOT** allow spray mix to sit overnight, as resuspension may be difficult.

SURFACTANT/WETTING AGENT

Use a non-ionic surfactant/wetting agent at 15 g active/100 L, (e.g. Agral* 600 @ 25 mL/100 L). **DO NOT** use BS1000* or Activator*-90 as it may cause crop phytotoxicity.

DO NOT add a non-ionic surfactant/wetting agent if:

- mixing with another product which already contains a surfactant and/or the product label advises not to add a surfactant.
- mixing with a liquid fertiliser

APPLICATION

Minimising Spray Drift

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions.

The most effective way to reduce drift potential is to apply large droplets (volume mean diameter (VMD) >250 - 300 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT MINIMISE DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVOURABLE ENVIRONMENTAL CONDITIONS.** When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

Ground application

Use a sprayer fitted with high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size, **DOES NOT** improve canopy penetration and may increase drift potential. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.** Use a nozzle type that is designed for the intended application.

With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. For orchard/vineyard sprayers avoid directing spray above trees and always turn-off outward pointing nozzles at row ends and outer rows.

Dilute Spraying

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of runoff. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.
- Always apply sufficient water to cover the crop to the point of runoff, otherwise under dosing will occur and disease control may be inadequate.

Concentrate Spraying

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine an appropriate dilute spray volume (see Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way:

Example only

1. Dilute spray volume as determined above:
For example 1,500 L/ha
2. Your chosen concentrate spray volume:
For example 500 L/ha
3. The concentration factor in this example is :
3 times (i.e. 1,500 L divided by 500 L = 3)
4. If the dilute label rate is 4.5 g/100 L, then the concentrate rate becomes 3 x 4.5, that is, 13.5 g/100 L of concentrate spray.

- The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows.
- For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

COMPATIBILITY

Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of the desired tank mix and observe possible adverse changes (settling out, flocculation etc). Avoid complex tank mixtures of several products or very concentrated spray mixtures. Altacor[®] X-Force is compatible with Captan*, Delan*, Mancozeb, Omite*, Polyram* and Systhane*.

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules (Altacor[®] X-Force), wettable powders, water based suspension concentrates, water soluble concentrates, oil based suspension concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers.

SPRAY EQUIPMENT CLEANOUT

Prior to application, start with clean, well-maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove. Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. **DO NOT** clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

INSECTICIDE RESISTANCE WARNING

GROUP	28	INSECTICIDE
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For insecticide resistance management Altacor[®] X-Force insecticide is a Group 28 insecticide. Some naturally occurring insect biotypes resistant to Altacor[®] X-Force insecticide and other Group 28 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Altacor[®] X-Force insecticide and other Group 28 insecticides are used repeatedly. The effectiveness of Altacor[®] X-Force insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use FMC accepts no liability for any losses that may result from the failure of Altacor[®] X-Force insecticide to control resistant insects.

Altacor[®] X-Force insecticide may be subject to specific resistance management strategies.

To help prevent the development of resistance to Altacor[®] X-Force insecticide, use Altacor[®] X-Force in accordance with the current Insecticide Resistance Management (IRM) strategy for your region.

To help prevent the development of resistance to Altacor® X-Force observe the following instructions:

- Use Altacor® X-Force insecticide in accordance with the current Insecticide Resistance Management (IRM) strategy for your region.
- Apply Altacor® X-Force insecticide or other Group 28 insecticides using a “window” approach to avoid exposure of consecutive insect pest generations to the same mode of action. Multiple successive applications of Altacor® X-Force insecticide or other Group 28 insecticides are acceptable if they are used to treat a single insect generation.
- Following a “window” of Altacor® X-Force insecticide or other Group 28 insecticides, rotate to a “window” of applications of effective insecticides with a different mode of action.
- The total exposure period of all “Group 28-active windows” applied throughout the crop cycle should not exceed 50% of the crop cycle.
- Incorporate IPM techniques into the overall pest management program.
- Monitor insect populations for loss of field efficacy.

For further information contact your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local FMC Representative.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to aquatic invertebrates. Drift and run off from treated areas may be hazardous to aquatic organisms in neighbouring areas. **DO NOT** contaminate streams, rivers or waterways with the chemical or used containers.

PROTECTION OF LIVESTOCK

Based on Good Agricultural Practices (GAP), Altacor Hort should not be applied when bees are actively foraging.

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN.

Store in the closed, original container in a dry, well-ventilated area, as cool as possible out of direct sunlight.

90 or 180 g bag

Single rinse before disposal. Add rinsings to spray tank. **DO NOT** dispose of undiluted chemicals on site. Puncture and bury empty bags in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. Empty bags and product should not be burnt.

360 to 720 g cardboard box

DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty boxes in local authority landfill. If no landfill is available, bury the container below 500 mm in a disposal pit specifically marked and setup for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. Empty containers and product should NOT be burnt.

1 to 20 kg HDPE container

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank.

DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. Empty containers and product should NOT be burnt.

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SPECIALIST ADVICE IN EMERGENCY ONLY 1800
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DIRECTIONS FOR USE

RESTRAINTS:

DO NOT apply if rainfall is expected within 2 hours of application.

DO NOT apply with aircraft.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift.

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.

DO NOT apply by a vertical sprayer unless the following requirements are met:

- Spray is not directed above the target canopy.
- The outside of the sprayer is turned off when turning at the end of rows and when spraying the outer row on each side of the application site.
- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for vertical sprayers') are observed.

Buffer zones for vertical sprayers

Crop	Mandatory downwind buffer zones
	Natural aquatic areas
Grapes 20 metres	Grapes 20 metres
Almonds, Pome and Stone fruit 50 meters	Almonds, Pome and Stone fruit 50 meters

For use in all States where appropriate for the crop and/or insect pest.

CROPS	PEST	RATE/100 L	WHP	CRITICAL COMMENTS
ALL CROPS				
Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Refer to Application section of the label. Thorough fruit and nut coverage is essential. Use in accordance with CropLife Insecticide Resistance Management Strategy guidelines.				
Almonds	Carob moth (<i>Ectomyelois ceratoniae</i>)	Dilute spraying: 9 g + non ionic surfactant @ 15 gai/100 L Concentrate spraying: Refer to Mixing / Application section	14 days	Monitor moth flights through trapping. Applications can be aimed at reducing moth number by targeting mummies. Alternatively, applications should be made when 1 - 5% of the almond hull sutures are opening. If required, retreat at minimum interval of 7 days. Apply by airblast sprayer or equivalent and ensure thorough coverage of all leaf and nut surfaces. DO NOT apply more than 2 applications of Altacor® X-Force per season. DO NOT treat successive generations, alternate with a different mode of action insecticide.
Pome fruit including Apples Nashi Pears Pears	Codling moth (<i>Cydia pomonella</i>) Budworms (<i>Helicoverpa</i> spp.) Oriental fruit moth (<i>Grapholita molesta</i>)	Dilute spraying: 4.5 g + non ionic surfactant @ 15 gai/100 L Concentrate spraying: Refer to Mixing / Application section		DO NOT make more than three (3) applications per crop per season. Codling moth: A maximum of three (3) applications of Altacor® X-Force are to be applied at 14 – 21 day intervals commencing at petalfall (or before 110 Degree Days after Codling moth are detected in traps) until late December. Further treatments should be made with an alternate mode of action insecticide. Or a maximum of three (3) applications can be applied commencing from the end of December at 14 - 21 day intervals following treatments with an alternate mode of action product. Oriental fruit moth: When treating the first generation, apply the initial treatment before 110 Degree Days after Oriental fruit moths are detected in traps.

CROPS	PEST	RATE/100 L	WHP	CRITICAL COMMENTS
				The above program, when commenced at petal fall, will also control Budworms.
	Lightbrown apple moth (<i>Epiphyas postvittana</i>)			Lightbrown apple moth: A maximum of three (3) applications of Altacor® X-Force are to be applied at 14 - 21 day intervals commencing at petal fall or apply at 140 Degree Days after Lightbrown apple moths are detected in traps. Further treatments should be made with alternative mode of action insecticides.
Stone fruit including Apricot Cherries Nectarines Peaches Plums	Oriental fruit moth (<i>Grapholita molesta</i>)	Dilute spraying: 6 g + non ionic surfactant @ 15 gai/100 L Concentrate spraying: Refer to Mixing / Application section	14 days	DO NOT make more than two (2) applications per crop per season with a minimum 14 days between applications. When treating the first generation, apply the initial treatment before 110 Degree Days after Oriental fruit moths are detected in traps. Further treatments should be made with alternative mode of action insecticides
	Lightbrown apple moth (<i>Epiphyas postvittana</i>)	Dilute spraying: 4.5 g + non ionic surfactant @ 15 gai/100 L Concentrate spraying: Refer to Mixing / Application section		A maximum of two (2) applications of Altacor® X-Force are to be applied with a minimum spray interval of 14 days commencing at 140 Degree Days after Lightbrown apple moths are detected in traps. Further treatments should be made with alternative mode of action insecticides.
Grapes	Lightbrown apple moth (<i>Epiphyas postvittana</i>) Grapevine moth (<i>Phalaenoides glyciniae</i>)	Dilute spraying: 4.5 g + non ionic surfactant @ 15 gai/100 L Concentrate spraying: Refer to Mixing / Application section	8 weeks	DO NOT make more than two (2) applications per crop per season. Applications to be timed for egg hatch (140 Degree Days after a detected moth flight). DO NOT re-treat within fourteen (14) days. A final application may be applied up to bunch closure. DO NOT apply after bunch closure. Concentrate spray: DO NOT apply in volumes less than 250 L/ha. This low water volume is dependent on the suitability of concentrate spray application equipment. More reliable application may be gained through increased water volumes.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS:

HARVEST

POME, STONE FRUIT AND ALMOND: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

GRAPES: DO NOT HARVEST FOR 8 WEEKS AFTER APPLICATION

GRAZING – ALL TREATED CROPS

DO NOT GRAZE OR CUT FOR STOCK FOOD

EXPORT STATEMENT:

Import tolerances for produce treated with Altacor® X-Force insecticide may be pending in some countries. Consult with your exporter or FMC before applying Altacor® X-Force insecticide to export crops.