

# POISON

KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

## Ballistic® Elite

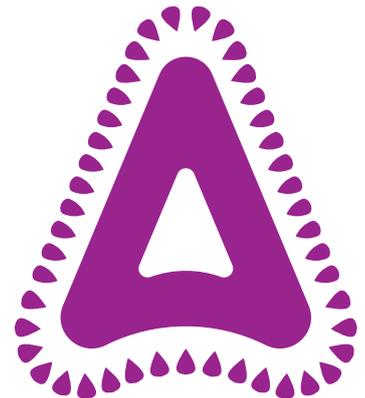
### Insecticide

ACTIVE CONSTITUENT: **27.5 g/L DELTAMETHRIN**

SOLVENT: 811 g/L HYDROCARBON LIQUID

GROUP **3A** INSECTICIDE

For the control of *Heliothis* (*Helicoverpa* spp.) and other specified pests on cotton and various other crops as specified in the Directions for Use table



ADAMA

Formulation type  
Emulsifiable  
Concentrate

EC

adama.com

CONTENTS: 20 L, 110 L, 200 L, 1000 L, 20,000 L

#### DIRECTIONS FOR USE

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS				
Berry Vegetables: Cape Goose Berries, Rosella	Native Budworm ( <i>Heliothis</i> , <i>Helicoverpa</i> spp.)	All States	50 mL/100 L	1 day	Apply as thorough spray. Use sufficient water to ensure adequate penetration and coverage. Repeat sprays at 7 - 14 day intervals, depending upon pest incidence.				
					Cereals	Native Budworm, Corn Earworm ( <i>Heliothis</i> )	500 mL/ha	7 days	Apply at first sign of infestation, before larvae are 5 mm, for best results.
									Southern and Common Armyworm
						Webworm ( <i>Hednota pedionoma</i> )	200 mL/ha	<b>Pre-seeding:</b> BALLISTIC® ELITE may be tank mixed with knockdown herbicides and applied prior to seeding. Apply once larvae have emerged, i.e. from last week in May onwards. Closely graze pasture prior to application. To ensure good penetration, use high water volume, i.e. 100 L/ha. DO NOT apply on dense pasture. <b>Post crop emergence:</b> Inspect crop regularly from seeding onwards, and spray at first sign of damage. Check with local Department of Agriculture adviser for further details.	
	Cutworms ( <i>Agrotis</i> spp.)	NSW only			Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.				
		WA only			Apply at first sign of infestation, before larvae are 10 mm long, for best results.				

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Chickpeas, Faba Beans, Lentils, Linseed, Canola (Oil Seed Rape), Safflower Vetch	Cutworms ( <i>Agrotis</i> spp.)	All States	200 mL/ha	7 days	Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedling. Spray in the late afternoon or evening.
Cole crops: Cabbage, Cauliflower, Brussels sprouts, Broccoli, etc	Cabbage White Butterfly, Cabbage Moth, Cabbage Centre Grub	Qld, NSW, NT only	High Volume: 50 mL/100L or Low Volume: 500 mL/ha	2 days	<b>High Volume:</b> Apply thorough spray to ensure even coverage, using at least 600 to 1000 L water/ha. <b>Low Volume:</b> Apply in sufficient water to obtain even and thorough coverage. Repeat sprays at 7 - 14 day intervals depending upon pest incidence. The addition of a wetting agent is recommended for both high and low volume spraying.
		Vic, Tas, SA, WA only	High Volume: 40 - 50 mL/100 L or Low Volume: 400 - 500 mL/ha		Apply as above. Use the lower rate under low infestation levels.
Cotton	Native Budworm ( <i>H. punctigera</i> ), Cotton Bollworm ( <i>H. armigera</i> )	Qld, NSW, NT, WA only	700 mL/ha	7 days	Use when insect reinfestation pressure is high (i.e. moderate to heavy egg laying is occurring and small to medium larvae are present).
			600 mL/ha		Use when low to moderate egg laying is occurring and only few small to very small larvae are present (see 'note 1' below).
			500 mL/ha		Use when egg laying is low and larvae are just about to hatch (see 'note 1' below).
	Pink Spotted Bollworm	Qld, WA only	500 - 600 mL/ha		Apply at first sign of activity before larvae enter boll. Repeat as necessary.
	Green Mirid	Qld, NSW, WA, NT only	180 mL/ha		Suppression of Green Mirids. Apply when commercial thresholds are exceeded.
Field Peas	Corn Earworm and Native Budworm ( <i>Heliothis</i> )	All States	250 - 500 mL/ha		Inspect crops regularly and particularly at flowering and early podding. Apply as soon as infestation occurs. Use lower rates only when infestation is low and majority of larvae are young (ie. less than 5 mm). Large larvae are often not readily controlled.
	Pea Weevil	NSW, WA, Tas, Qld only	400 - 500 mL/ha		From start of flowering onwards check crops every 2 - 3 days with sweep net. If any pea weevil are present spray before first pods form. Check again 3 days after spraying and respray if necessary. Apply the higher rate under high infestation pressure.
		Vic, SA only	300 - 500 mL/ha		
	Cutworms ( <i>Agrotis</i> spp.)	All States	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening. Thorough coverage is required for effective control.
Lentils	Lucerne Seed Web Moth ( <i>Etiella behrii</i> )		500 mL/ha		Control moths prior to egg lay on pods. If control has not been obtained prior to egg lay, control larvae whilst small before boring into pods and prior to the establishment of web lined shelters. Spray only when monitoring indicates the presence of <i>Etiella</i> . DO NOT apply deltamethrin to lentils bordered by other crops where pests are being controlled by predators or parasitoids.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Lupins	Native Budworm ( <i>H. punctigera</i> )	NSW, Vic, SA only	200 - 500 mL/ha	7 days	Apply lower rate on small (5 mm) larvae and higher rate on dense canopies and/or larger larvae.
		WA only			Apply as above. Small caterpillars DO NOT normally damage pods and numbers usually decline rapidly. Spraying is usually only necessary when caterpillars are about 20 mm in length. Apply thoroughly to ensure good penetration of lupin canopy.
		Qld, Tas, NT only	500 mL/ha		Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliothis are 5 mm long.
	Cutworms ( <i>Agrotis</i> spp.)	All States	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.
	Corn Earworm (Heliothis) and Looper		500 mL/ha		Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliothis or looper are 5 mm long.
Green Vegetable Bug			Apply as soon as adult green vegetable bugs are seen, before there is a build up of nymphs.		
Maize (corn)	Corn Earworm and Native Budworm (Heliothis)		Low Volume 500 mL/ha or High Volume 50 mL/100 L	5 days	Apply at tasselling and before silk emergence when larvae are small (less than 5 mm) and before they enter cob. Repeat sprays at 3 - 5 day intervals may be necessary, particularly for sweetcorn. <b>For High Volume:</b> apply as a thorough spray using 600 - 1000 L spray/ha, depending on plant size.
Sweetcorn					
Sorghum					
Sorghum	Sorghum midge	Vic, SA, WA only	500 mL/ha	7 days	Apply at first sign of pest, generally from head emergence onward. In tight head varieties, heliothis may be protected and not readily controlled. Repeat sprays as necessary.
		Qld, NSW, NT only	200 - 400 mL/ha		Apply at first sign of infestation from head emergence and during flowering. Use rates towards the lower end of the range when infestation is light (1 - 2 midge/head) for knock-down effect late in the flowering period of sorghum. Use rates towards the higher end of the range when infestation occurs early in the period and/or under heavier infestation levels.
Soybeans, Navy Beans, Mung Beans, and Other Seed and Pod Crops (eg. Linseed, Canola (Oilseed Rape), Safflower, Faba Beans, Vetch, Lentils, Chickpeas, Cereals)	Corn Earworm and Native Budworm (Heliothis), Looper	All States	500 mL/ha		Inspect crops regularly from early terminal development (4 leaf stage) onwards. Apply before Heliothis or Looper are 5 mm long.
	Green Vegetable Bug				Apply as soon as adult Green Vegetable Bugs are seen, before there is a build up of nymphs.
Sunflower	Corn Earworm and Native Budworm (Heliothis), Rutherglen Bug, Jassids				Apply at first sign of pest activity. Critical period is from bud stage/face opening onward. At later growth stages, pests may be partially protected by heads or bracts. Heliothis should be sprayed before they are 5 mm long for best results. Repeat sprays as necessary. If flowering has started and bees are active, application should be deferred until after flowering is complete but before the heads turn down. If treatment is unavoidable during flowering, spraying must take place in the very early morning or very late afternoon.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Tobacco	Corn Earworm and Native Budworm (Heliothis), Tobacco Looper, Tobacco Stem Borer	Qld, NSW, WA only	50 mL/100 L	7 days	Apply as thorough spray using 600 - 1000 L spray/ha depending on plant size. Repeat in 7 - 14 days or as required.
		Vic only	40 - 50 mL/100 L		Apply as above. Use lower rate under low infestation levels.
Tomatoes	Tomato Grub and Native Budworm (Heliothis)	Qld, NSW, NT only	High Volume: 50 mL/100 L or Low Volume: 500 mL/ha	3 days	Apply as thorough spray. Repeat sprays at 7 - 14 day intervals, depending upon pest incidence. <b>High Volume:</b> Use 600 - 1000 L spray/ha depending on plant size. <b>Low Volume:</b> Use sufficient water to ensure adequate penetration and coverage.
		Tas, WA only	High Volume: 40 - 50 mL/100 L or Low Volume: 400 - 500 mL/ha		Apply as above. Use the lower rate under low infestation levels.
		Vic, SA only	Programme Application: Low Volume: 300 - 500 mL/ha High Volume: 30 - 50 mL/100 L Established infestations Low Volume: 500 mL/ha High Volume: 50 mL/100 L		Apply at first sign of pest activity. Repeat sprays at 7 - 14 day intervals depending on pest incidence. Use the higher rate when large larvae are present, and when reinfestation (egg laying) is intense. Use also when insect reinfestation pressure is high. <b>High Volume:</b> Apply thorough spray to ensure even coverage, using at least 600 - 1000 L water/ha. <b>Low Volume:</b> Apply in sufficient water to obtain even and thorough coverage.
	Thrips	All States	300 mL/ha		Apply at first sign of infestation and repeat if necessary. Repeat applications may be necessary to control re-infestations, as residual control is limited.

#### Notes

- Larvae Size** – Larvae greater than 5 mm are often not controlled satisfactorily as they are harder to kill and they are often protected from spray by the plant.
- Resistance** – The effectiveness of this product may be reduced or nullified as a result of pests developing a tolerance or resistance to the product. If unacceptable control occurs, immediately contact your local company representative. This product should not be used where a user suspects the presence of significant numbers of a tolerant or resistant strain.

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

#### WITHHOLDING PERIODS (WHP)

##### BERRY VEGETABLES:

DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

##### COLE CROPS:

DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION.

##### TOMATOES:

DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.

##### SWEETCORN:

DO NOT HARVEST FOR 5 DAYS AFTER APPLICATION.

##### CANOLA (OILSEED RAPE), CEREALS, CHICKPEAS, COTTON, FABA BEANS, FIELD PEAS, LENTILS, LINSEED, LUPINS, MAIZE, MUNG BEANS,

##### NAVY BEANS, SAFFLOWER, SORGHUM, SOYBEANS, SUNFLOWER, TOBACCO, VETCH AND OTHER SEED AND POD CROPS:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

#### EXPORT OF TREATED PRODUCE

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with BALLISTIC® ELITE Insecticide. If you are growing produce for export, please check with Adama Australia for the latest information on MRLs and import tolerances BEFORE using BALLISTIC® ELITE Insecticide.

## GENERAL INSTRUCTIONS

### APPLICATION

BALLISTIC® ELITE is a contact spray. Thorough, even coverage is essential. Residual control of BALLISTIC® ELITE may be reduced if heavy rainfall is received within 48 hours of application.

BALLISTIC® ELITE can be applied using water as a carrier, and from aircraft can also be applied ULV when in combination with a compatible ULV insecticide and/or oil as a bulking agent.

### EQUIPMENT

**Ground Spray:** Standard low volume boom or high volume equipment may be used.

#### Aircraft:

**Water:** BALLISTIC® ELITE may be applied by aircraft using water as a carrier. Water volumes of 20 to 30 L/ha have given satisfactory results.

**ULV:** BALLISTIC® ELITE may also be used without dilution in mixture with some ULV products, as listed under Compatibility, or applied ULV in combination with D-C-Tron<sup>†</sup> Cotton Spray Oil. A minimum spray volume of 3.0 L/ha should be applied ULV, using either a compatible ULV insecticide mixture partner and/or D-C-Tron Cotton Spray Oil as the bulking agent. DO NOT add water – use direct from container.

For ULV application, BALLISTIC® ELITE must only be applied by aircraft fitted with accurately calibrated ULV equipment, e.g. Micronair<sup>†</sup> AU5000 atomisers. To minimise drift it is essential to produce suitable spray droplet diameters by controlling the rotational speed of the

atomisers. A rotational speed of approx. 2700 rpm is recommended to ensure that a desirable droplet diameter (volume median diameter) of 100 microns is delivered. This is best achieved by setting the blade angles at 75 degrees and not flying at high speeds. Plane speeds higher than 110 knots and/or blade angles set lower than 75 degrees will increase the cage rotational speed and effectively reduce the volume median diameter of the droplets. It is recommended to fit transducers to measure rotational speed. Thorough coverage is essential.

### COMPATIBILITY

**Water:** BALLISTIC® ELITE may be mixed with most piperonyl butoxide formulations and most formulations of fungicides and insecticides such as amitraz, chlorothalonil, dimethoate, mancozeb, metalaxyl, methamidophos, methomyl and pirimicarb, where these products are required for additional insect control or for control of diseases. BALLISTIC® ELITE may also be mixed with other products including Reward<sup>®</sup> Cotton Growth Regulant, Wuxal<sup>†</sup> Liquid Foliar Nutrient and most knockdown herbicides.

**ULV:** When sprayed as a ULV product, BALLISTIC® ELITE is compatible with amitraz ULV and piperonyl butoxide, where these products are required for additional insect control.

BALLISTIC® ELITE is also compatible with D-C-Tron<sup>†</sup> Cotton Spray Oil. For further information on ULV insecticide compatibilities contact Adama Australia.

CROP	PEST	MINIMUM TOTAL SPRAY VOLUME FOR ULV APPLICATION
Cereals	Native Budworm, Corn Earworm ( <i>Heliothis</i> )	2.5 L/ha
	Southern and Common Armyworm	2.0 L/ha
	Webworm ( <i>Hednota pedionoma</i> )	1.0 L/ha
	Cutworms ( <i>Agrotis</i> spp.)	
Chickpeas, Faba Beans, Lentils, Linseed, Canola (Oilseed Rape), Safflower, Vetch	Cutworms ( <i>Agrotis</i> spp.)	
Cotton	Native Budworm ( <i>H. punctigera</i> ), Cotton Bollworm ( <i>H. armigera</i> )	3.0 L/ha
	Pink Spotted Bollworm	2.5 L/ha
	Green Mirid	
Field Peas	Corn Earworm and Native Budworm ( <i>Heliothis</i> )	1.25 L/ha
	Pea Weevil (NSW, WA, Tas, Qld only)	2.0 L/ha
	Pea Weevil (Vic, SA only)	1.5 L/ha
	Cutworms ( <i>Agrotis</i> spp.)	1.0 L/ha
Lentils	Lucerne seed web moth ( <i>Etiella behrii</i> )	2.5 L/ha
Lupins	Native Budworm ( <i>H. punctigera</i> ) (NSW, Vic, SA, WA only)	1.0 L/ha
	Cutworms ( <i>Agrotis</i> spp.)	
	Native budworm ( <i>H. punctigera</i> ) (Qld, Tas, NT only)	2.5 L/ha
	Corn Earworm ( <i>Heliothis</i> ) and Looper	
	Green Vegetable Bug	
Maize	Corn Earworm and Native Budworm ( <i>Heliothis</i> )	
Sweetcorn		
Sorghum	Corn Earworm and Native Budworm ( <i>Heliothis</i> )	
	Sorghum Midge (Vic, SA, WA only)	
	Sorghum Midge (Qld, NSW, NT only)	1.0 L/ha
Soybeans, Navy Beans, Mung Beans, and Other Seed and Pod Crops (eg. Linseed, Canola (Oilseed Rape), Safflower, Faba Beans, Vetch, Lentils, Chickpeas)	Corn Earworm and Native Budworm ( <i>Heliothis</i> ), Looper	2.5 L/ha
	Green Vegetable Bug	
Sunflower	Corn Earworm, Native Budworm ( <i>Heliothis</i> ), Rutherglen Bug, Jassids	

**Please note:** Berry vegetables (Cape Gooseberries, Rosella), Cole crops (Cabbage, Cauliflower, Brussels Sprouts, Broccoli), Tobacco and Tomatoes should not be treated by ULV application.

## MIXING

**Water:** Fill the spray tank to about 3/4 full with clean water. Add the required quantity of BALLISTIC® ELITE to the spray tank with agitators in motion. Where other products are to be mixed, add these after BALLISTIC® ELITE is mixed in the tank. Top up the spray tank to the required volume with clean water, with agitators operating. When mixing BALLISTIC® ELITE with piperonyl butoxide, add the required quantity of BALLISTIC® ELITE to the spray tank, followed by the piperonyl butoxide, then, with agitators operating, add the required quantity of clean water to the spray tank.

**ULV:** When BALLISTIC® ELITE is to be applied as a ULV spray in combination with compatible ULV products (or oil), BALLISTIC® ELITE should be added after the ULV product (or oil), with agitators in motion. Ensure that there is no water, or products containing water, in this mixture, or in the spraying equipment.

## INSECTICIDE RESISTANCE WARNING

GROUP **3A** INSECTICIDE

For insecticide resistance management BALLISTIC® ELITE is a Group 3A insecticide. Some naturally occurring insect biotypes resistant to BALLISTIC® ELITE and other Group 3A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if BALLISTIC® ELITE or other Group 3A insecticides are used repeatedly. The effectiveness of BALLISTIC® ELITE on resistant individuals could be significantly reduced. Since the occurrence of resistant insects is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of BALLISTIC® ELITE to control resistant insects. BALLISTIC® ELITE may be subject to specific resistance management strategies. For further information contact your local supplier, Adama representative or local agricultural department agronomist.

## RE-ENTRY PERIOD

DO NOT allow entry into treated areas until the spray deposits have dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow-length PVC gloves. Clothing must be laundered after each day's use.

## PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

## PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT spray on any plants in flower while bees are foraging. Some repellent effect may be apparent for approximately 2 days.

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with this product or used containers.

## STORAGE AND DISPOSAL (20 L, 200 L)

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. 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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface 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 regulation. DO NOT burn empty containers or product.

**For refillable containers,** empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

**Envirodrum Micro Matic Valve (110 L):** Store the original sealed Envirodrum in a cool well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the Envirodrum to the point of purchase. The Envirodrum remains the property of Adama Australia.

## 1000 L/20,000 L

Store in the closed, original container in a cool, well-ventilated areas. DO NOT store for prolonged periods in direct sunlight. Storage must be secure so that contents cannot be tampered with. All locks and/or seals must be in order. If locks or seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs Adama Australia should be advised immediately. This minibulk/bulk container is reusable and remains the property of Adama Australia. DO NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty return to Adama Australia for cleaning, relabelling and refilling.

## SAFETY DIRECTIONS

Product is poisonous if swallowed. Facial skin contact may cause temporary facial numbness. Will damage eyes and will irritate the skin. Avoid contact with eyes and skin. Avoid inhaling vapour or spray mist. When preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves and face shield and contaminated clothing.

## FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, DO NOT induce vomiting. Give a glass of water.

## SDS

Additional information is listed in the safety data sheet (SDS). A safety data sheet for BALLISTIC® ELITE is available from adama.com or call Customer Service on 1800 423 262.

**CONDITIONS OF SALE:** The use of BALLISTIC® ELITE being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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