

# CAUTION

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

# Warlock<sup>®</sup> EC

## Insecticide

ACTIVE CONSTITUENT: **17 g/L EMAMECTIN**

present as EMAMECTIN BENZOATE

SOLVENTS: 602 g/L LIQUID HYDROCARBON  
100 g/L N-METHYL-2-PYRROLIDONE

GROUP

**6**

INSECTICIDE

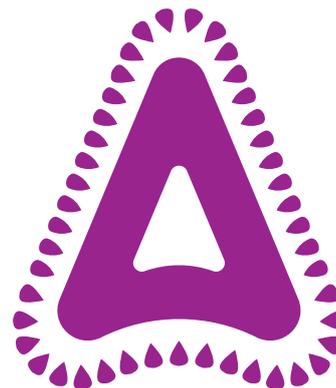
Crops: Canola, Cotton and Pulses

Controls or Suppresses: Bean Pod Borer, Diamondback Moth,  
Green Mirids, Heliothis, Loopers and Mites as per the Directions  
for Use

Formulation type

Emulsifiable  
Concentrate

**EC**



**ADAMA**

[adama.com](http://adama.com)

CONTENTS: 1 - 1000 L

### DIRECTIONS FOR USE

#### Restraints

DO NOT use on canola grown as a forage crop.

DO NOT use on dual-use canola prior to grazing.

DO NOT apply to crops under visible stress.

DO NOT apply if wind speed is less than 3km and more than 20km per hour or under conditions where temperature inversions may occur.

DO NOT spray any plants in flower while bees are actively foraging.

CROP	PEST	RATE	CRITICAL COMMENTS
<b>Canola</b> (for grain production)	Diamondback Moth ( <i>Plutella xylostella</i> )	150 to 300 mL/ha  Add a non- ionic surfactant at recommended label rate	Apply as soon as larval populations reach threshold numbers. Observe current industry threshold recommendations based on crop growth stage. Use rates towards the lower end of the range to control threshold level populations when crop growth stage or insect activity does not favour rapid population development. Use the higher rate to control threshold level populations when conditions favour rapid crop or pest population development. Sample crops twice a week after application to determine if a second application is required. Make no more than 2 applications per season. If further applications are necessary, rotate to an approved product from a different Mode of Action group. Highly toxic to bees. Refer to the Protection of Livestock statement for notification requirements. <b>Resistance Management</b> The use of WARLOCK® EC in canola is subject to an insecticide resistance management strategy for Diamondback Moth. Refer to the CropLife website for more information prior to use.
<b>Cotton</b> Qld, NSW, WA, NT only	Heliothis ( <i>Helicoverpa armigera</i> , <i>Helicoverpa punctigera</i> )	550 mL/ha or 700 mL/ha  Add a non- ionic surfactant at recommended label rate	<b>Heliothis</b> Timing is important. For best results apply at or just prior to the anticipated time of hatching of <i>Helicoverpa</i> eggs as indicated by egg levels or scouting. As earlier larval stages are easier to control, DO NOT target larvae larger than 5 mm (very small to small). Large larvae and larvae feeding within bolls and squares may not be controlled. Larvae must feed on treated areas in order to achieve effective control. Where high egg lays occur the addition of an ovicide is recommended. Use the lower rate on light infestations. <b>Green Mirids</b> Apply to developing Green Mirid populations that are predominantly nymphs. Maximum effect is not achieved until 5 to 7 days after application. Use the higher rate on heavier populations. <b>Mites</b> Applications of WARLOCK® EC as outlined above for Heliothis will reduce the rate of mite development in treated cotton. <b>Resistance Management</b> WARLOCK® EC should be used in accordance with the cotton Best Management Practices Manual. Make no more than 4 applications of WARLOCK® EC per season. Caution – If avermectin resistant mites are present, poor control may occur.
	Green Mirids ( <i>Creontiades dilutes</i> ) Suppression only	Add a non- ionic surfactant at recommended label rate	
	Mites Suppression only	550 mL/ha or 700 mL/ha  Add a non- ionic surfactant at recommended label rate	

CROP	PEST	RATE	CRITICAL COMMENTS
Summer and Winter Pulses	Bean Pod Borer ( <i>Maruca vitrata</i> ), Heliothis ( <i>Helicoverpa armigera</i> , <i>Helicoverpa punctigera</i> ), Loopers ( <i>Thysanoplusia</i> sp.), Diamondback Moth ( <i>Plutella xylostella</i> )	150 to 300 mL/ha  Add a non-ionic surfactant at recommended label rate	Timing is important. For best results, apply at or just prior to the anticipated time of hatching of Lepidoptera larvae as indicated by egg levels or scouting. As earlier larval stages are easier to control, DO NOT target larvae larger than 5 mm (very small to small). Use rates towards the lower end of the range to control threshold level populations when crop growth stage or insect activity does not favour rapid population development. Larvae feeding within pods may not be controlled. Larvae must feed on treated areas in order to achieve effective control. Where high egg lays occur, the addition of an ovicide is recommended. DO NOT make more than 2 applications per season, with a minimum interval of 7 days between applications. If further applications are necessary, rotate to an approved product from a different Mode of Action group. Highly toxic to bees. Refer to the Protection of Livestock statement for notification requirements. <b>Resistance Management</b> The use of WARLOCK® EC in pulses is subject to an insecticide resistance management strategy for <i>Helicoverpa</i> spp. Refer to the CropLife website for more information prior to use.

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

**WITHHOLDING PERIODS:**

- Canola:** DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 2 WEEKS AFTER APPLICATION  
**Cotton:** DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION  
DO NOT FEED COTTON TRASH FROM TREATED AREAS TO ANIMALS, INCLUDING POULTRY  
**Pulses:** DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION  
DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION

**EXPORT TRADE ADVICE**

Treated crop commodities destined for export *may require extra time being allowed* between application and harvest, as some export markets have either no Maximum Residue Limits (MRLs) or different MRLs to those of Australia. Details of overseas standards and any export interval can be obtained by contacting Adama Australia *before using this product*.

**GENERAL INSTRUCTIONS**

**Mixing**

Add the required amount of WARLOCK® EC to a partly filled spray tank, and then add the remainder of the water.

**Application**

WARLOCK® EC is not systemic. To be effective, WARLOCK® EC requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume.

**Canola:**

**Ground Application:** Apply in at least 100 L spray volume per hectare.

**Air Application:** Apply in at least 20 L spray volume per hectare.

**Cotton:**

**Ground Application:** Apply in at least 80 L spray volume per hectare.

**Air Application:** Apply in at least 20 L spray volume per hectare.

**Pulses:**

**Ground Application:** Apply in at least 80 to 100 L spray volume per hectare, depending on the crop canopy size. Use at least 80 L spray volume per hectare for crops with lower canopy size e.g. Lentils, and 100 L spray volume per hectare for crops with higher canopy size e.g. Chickpeas.

**Air Application:** Apply in at least 20 L spray volume per hectare.

**Compatibility**

As formulations of other manufacturer's products are beyond the control of Adama Australia, and the quality of water may vary with location, all mixtures should be tested prior to mixing commercial quantities.

**INSECTICIDE RESISTANCE WARNING**

For insecticide resistance management WARLOCK® EC



INSECTICIDE is a Group 6 insecticide. Some naturally occurring insect biotypes resistant to WARLOCK® EC and other Group 6 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if WARLOCK® EC or other Group 6 insecticides are used repeatedly. The effectiveness of WARLOCK® EC 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 WARLOCK® EC to control resistant insects.

WARLOCK® EC is subject to specific resistance management strategies as per the Directions for Use table sections on Resistance Management. WARLOCK® EC should not be applied more than the following number of times per season/crop/year:

*Canola and Pulses:* Two sprays per season.

*Cotton:* Four sprays per season.

#### RE-ENTRY PERIOD

DO NOT enter treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

#### PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish and other aquatic organisms. DO NOT contaminate streams, rivers or watercourses with the chemical or used containers. DO NOT apply under weather conditions or from spraying equipment which could be expected to cause spray to drift onto adjacent areas, particularly wetlands, water bodies or watercourses. A spray drift minimisation strategy should be employed at all times when aerially applying to, or near, sensitive areas. The strategy envisaged is exemplified by the cotton industry's Best Management Practice Manual.

#### PROTECTION OF HONEY BEES AND OTHER INSECT POLLINATORS

Dangerous to bees. Will kill bees foraging in the crop to be treated or in hives which are oversprayed or reached by spray drift. Residues may remain toxic to bees for several days after application. DO NOT spray any plants in flower while bees are foraging. Before spraying, notify beekeepers to move hives to a safe location with an untreated source of nectar, if there is potential for managed bees to be affected by the spray or spray drift.

#### STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

##### Non-Refillable Containers

Triple rinse containers before disposal. Add rinsings to the 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. Do not burn empty containers or product.

##### DrumMUSTER Containers

This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple rinse container for disposal. Dispose of rinsate by adding it to the spray tank. Do not dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any *drumMUSTER* collection or similar container management program site. The cap should not be replaced, but may be taken separately.

#### Micro Matic Valve Containers

Do not tamper with the valve or the security seal. Do not contaminate the container with water or any foreign matter. After each use of the product, please ensure that the coupler delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the container have been used, close all valves and return to the point of sale for refill or storage. The container remains the property of Adama Australia.

#### Refillable Containers

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

#### SAFETY DIRECTIONS

Will damage the eyes. Will irritate the skin. Avoid contact with eyes and skin. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow length PVC gloves and goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow length PVC gloves. If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves, goggles 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. If in eyes wash out immediately with water.

#### SDS

If additional hazard information is required refer to the Safety Data Sheet (SDS). A safety data sheet for WARLOCK® EC INSECTICIDE is available from adama.com or call Customer Service on 1800 423 262.

**CONDITIONS OF SALE:** The use of WARLOCK® EC INSECTICIDE 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 purposes for which it is used by the buyer, whether in accordance with the Directions for Use or not. Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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