	20/04/00 Page 1 of 13
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Ξ.	POISON KEEP OUT OF REACH OF CHILDREN
4	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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	DELTASHIELD 27.5 INSECTICIDE
is be	Active Constituent: 27.5 g/L DELTAMETHRIN
consistent with the Label	Solvent: 811 g/L HYDROCARBON LIQUID
is o	GROUP 3A INSECTICIDE
el is Text	
ies that this labo NRA Approved <sup>·</sup>	For the control of Heliothis ( <i>Helicoverpa</i> spp.) and other specified pests on Cotton, Tobacco, Tomatoes, Cole Crops, Sorghum, Sunflowers, Soybeans and other crops as per the DIRECTIONS FOR USE.
this pro	READ THE ATTACHED LABEL LEAFLET BEFORE USING THIS PRODUCT.
hat Ap	5/20/110/200/1000 Litres
nfopest verifies that this label NRA Approved Te	ChemAg Pty. Ltd. ACN 009 234 691 Suite 12, 11 Preston Street Como Western Australia 6152 Tel: (08) 9361 1799 Fax: (08) 9474 4676
pest	
Jo	

#### **Protection of Livestock**

Dangerous to bees. DO NOT spray on any plants in flower while bees are foraging. Some repellant 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 container.

# **Drift Warning**

Do not apply under meteorological conditions or from spraying equipment, which could be expected to cause spray drift onto adjacent crops, crop lands, pastures or livestock.

# **Storage and Disposal**

Store in the closed, original container in a dry, well ventilated area, as cool as possible out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Triple or (preferable) pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush, puncture or bury empty containers in a local authority landfill. If not available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways desirable vegetation and tree roots. Empty containers and product should not be burnt. If recycling, replace cap and return clean to recycler or designated collection point.

# 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 Center (Phone 131126). If swallowed and if more than 15 minutes from a hospital, induce vomiting, preferably using Ipecac Syrup APF

# MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet available from ChemAg Pty Ltd.

# **Conditions of Sale**

ChemAg Pty Ltd accepts responsibility of the consistent quality of this product; however since application of this product is beyond the control of ChemAg Pty Ltd and since all conditions of application cannot be seen, ChemAg Pty Ltd accepts no responsibility whatsoever for any injury, damage, loss or other results following the use of this product whether used in accordance with directions or not; subject to any overriding statutory provision and provided that such liability under those provisions shall be limited to the replacement of the goods as supplied or the rendering again of the services that are provided. The buyer accepts and uses this material subject to these conditions. NRA Approval No: 52368/0200

THIS PRODUCT IS NOT CLASSIFIED AS A DANGEROUS GOOD UNDER THE AUSTRALIAN CODE FRO THE TRANSPORT OF DANGEROUS GOODS BY ROAD AND RAIL IN A TRANSPORT EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE

ChemAg Pty Ltd ACN 009 234 691 Suite 12, 11 Preston Street Como Western Australia 6152 Phone: (08) 9367 1799

Batch Number:

Date of Manufacture:

Active Constituent: 27.5 g/L DELTAMETHRIN Solvent: 811 g/L HYDROCARBON LIQUID

GROUP 3A INSECTICIDE

DIRECTIONS FOR USE LEAFLET To be read in conjunction with label affixed to container.

ChemAg Pty. Ltd. ACN 009 234 691 Suite 12, 11 Preston Street Como Western Australia 6152 Tel: (08) 9367 1799 Fax: (08) 9474 4676

# DIRECTIONS FOR USE

CROP	PEST	STATE	RATE	WHP (Days)	CRITICAL COMMENTS
Berry vegetables, cape gooseberries, rosella	Native Budworm ( <i>Helicoverpa</i> spp.)	Qld only	50ml / 100L	1	Apply as thorough spray. Use sufficient water to ensure adequate penetration and coverage. Repeat sprays at 7 to 14 day intervals, depending upon pest incidence.
Cereals	Native Budworm, Corn earworm (Heliothis) Southern and common armyworm	All States	500ml / ha	7	Apply at first sign of infestation, before larvae are5mm for best resultsApply when larvae numbers exceed threshold.
	Webworm (Hednota pedionoma)	WA only	200ml/ha		Pre-seeding - Delta EC may be tank mixed with Knockdown herbicides prior to seeding. Apply once larvae have emerged. Ie. from last week in May onwards. Closely graze pasture and to ensure good penetration use high water volume ie. 100L/ha. Do not apply on dense pasture. Post crop emergence - inspect crop regularly from seeding, spray at first sign of damage, check with local Department of Agriculture advisor for further details.
	Cutworms ( <i>Agrotis</i> spp.)	NSW only WA only	200ml/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. Apply at first sign of infestation, before larvae are 10mm long for best results.
Chick peas, faba beans, lentils, linseed, canola (oilseed rape), safflower.	Cutworms ( <i>Agrotis</i> spp.)	NSW only	200ml/ha	7	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.

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Cole crops cabbage, cauliflower, brussels sprouts, broccoli, etc.	Cabbage white butterfly, cabbage moth, cabbage centre grub.	Qld, NSW, NT only	High Volume 50ml/100L or Low Volume 500ml/ha	2	<ul> <li>High Volume: Apply thorough spray to ensure even coverage, using at least 600 to 1000L water/ha.</li> <li>Low Volume: Apply in sufficient water to obtain even and thorough coverage. Repeat sprays at 7 to 14 day intervals depending upon pest incidence. Addition of wetting agent is recommended.</li> </ul>
		Vic, Tas, SA, WA only	High Volume 40 to 50ml/100L Or Low Volume 400 to 500 ml/ha		Apply as above. Use the lower rate under low infestation levels.
Cotton	Native budworm ( <i>H. punctigera</i> ) Cotton bollworm	Qld, NSW, NT & WA only	700ml/ha	7	Use when insect reinfestation pressure is high (ie. moderate to heavy egg laying occurring and small to medium larvae present).
	(H. armigera)		600ml/ha		Use when low to moderate egg laying occurring and only few small to very small larvae present. (see "note 1" below)
			500ml/ha		Use when low egg laying and larvae just about to hatch (see "note 1" below).
	Pink sporred bollworm	Qld only	500 to 600 ml/ha		Apply at first sign of activity before larvae enter boll. Repeat as necessary.
Field peas	Corn earworm and Native budworm (Heliothis)	NSW, Vic, SA, WA only.	250 to 500 ml/ha	7	Inspect crops regularly and particularly at flowering and early podding. Apply as soon as infestation occurs. Use lower rates only when infestation low and majority of larvae are young (ie. less than 5mm). Large larvae are often not readily controlled.
	Pea weevil	NSW only	400 to 500 ml/ha		From start of flowering onwards check crops with sweep net every 2 to 3 days. If any pea
		Vic, SA only	300 to 500 ml/ha		weevil are present spray before first pods form. Check again 3 days after spraying and re-spray if necessary. Apply the higher rate under high infestation pressure.
	Cutworms ( <i>Agrotis</i> spp.)	NSW only	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.

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Lupins	Native budworm ( <i>H. punctigera</i> ) Cutworms ( <i>Agrotis</i> spp.)	NSW, Vic, SA only WA only NSW only	200 ml/ha	7	Ensure good penetration of the Lupin canopy. For best results apply before larvae are 5mm long. Small caterpillars do not normally damage pods and numbers usually decline rapidly. Spraying is usually only necessary when caterpillars are about 20mm in length. Apply thoroughly to ensure good penetration of Lupin canopy. Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil and feeding on the seedlings. Spray in the late afternoon or evening.
Maize Sweetcorn	Corn earworm and Native budworm (Heliothis)	All States & NT	Low Volume 500 ml/ha or High Volume 50 ml/100L	7 5	Apply at tasselling and before silk emergence when larvae are small (less than 5mm) and before they enter cob. Repeat sprays at 3 to 5 day intervals may be necessary particularly for sweetcorn. For High Volume: apply as a thorough spray using 600 - 1000L spray/ha, depending on the plant size.
Sorghum	Corn earworm and Native budworm (Heliothis) Sorghum midge	All States & NT Vic, SA, WA only	500 ml/ha	7	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 to 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 to 2 midge/head) for knock down effect late in flowering period of Sorghum. Use rates towards the higher end of the range range when infestation occurs early in the period and/or under heavier infestation levels.

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Soybeans, Navy beans, Mung beans, and other seed &	Corn earworm and Native budworm (Heliothis), Looper	All States & NT	500 ml/ha	7	Inspect crops regularly from early terminal development (4 leaf stage) onwards. Apply before Heliothis or looper are 5mm long.
pod crops (eg. Linseed, Canola (oilseed rape), Safflower, Faba beans, Vetch, Lentils Chickpeas, Lupins, Cereals.	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only			Apply as soon as adult Green vegetable bugs are seen, before there is a build up of nymphs.

Sunflower	Corn earworm, native bud worm (Heliothis), Rutherglen bug jassids	All states	500 mL/ha	7	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 bracus. 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, applicable 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.
Tobacco	Tobacco budworm, native budworm (heliothis), tobacco looper,	Qld, NSW only	50 mL/100L	7	Apply as thorough spray using 600 to 1000L spray/ha depending on plant size. Repeat in 7 to 14 days or as required.
	tobacco stem borer	Vic only	40 to 50 mL/100L		Apply as above. Use lower rate under low infestation levels.

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Tomatoes	Tomato grub and native	Qld, NSW, NT	High volume	3	Apply as thorough spray. For high volume use 600 to
	budworm (Heliothis)	only	50mL/100L		1000 L spray/ha depending on plant size. For low
			or		volume use sufficient water to ensure adequate
			Low Volume		penetration and coverage. Repeat sprays at 7 to 14
			500mL/ha		day intervals, depending upon pest incidence.
		Tas, WA only	High volume 40 to 50		Apply as above. Use lower rate under low infestation
			mL/100L		levels.
			or		
			Low Volume		
			400 to 500mL/ha		
		Vic, SA only	Programme		Apply at first sign of pest activity. Repeat sprays at 7 to
		_	Application:		14 day intervals depending on pest incidence. Use the
			Low Volume		higher rate when large larvae are present and when
			300 to 500		reinfestation (egg-laying) is intense. Use also when
			mL/ha		insect reinfestation pressure is high.
			High Volume		High volume: Apply thorough spray to ensure even
			30 to 50 mL/100L		coverage, using at least 600 to 1000L water/ha.
			Established		Low Volume: Apply in sufficient water to obtain even
			infestations:		and thorough coverage.
			Low Volume		
			500mL/ha		
			High Volume		
			50mL/100L		
	Thrips	VIC, SA only	1000mL/ha		Apply at first sign of infestation and repeat if

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

## Withholding Period (WHP):

Berry vegetables - DO NOT APPLY LATER THAN 1 DAY BEFORE HARVEST.

Cole crops - DO NOT APPLY LATER THAN 2 DAYS BEFORE HARVEST.

Tomatoes - DO NOT APPLY LATER THAN 3 DAYS BEFORE HARVEST.

Sweetcorn - DO NOT APPLY LATER THAN 5 DAYS BEFORE HARVEST.

Canola (oilseed rape), cereals, chick peas, 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 APPLY LATER THAN 7 DAYS BEFORE HARVEST.** 

Notes

- 1. 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.
- 2. 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.

## **GENERAL INSTRUCTIONS**

#### Insecticide Resistance Warning

GROUP	3A	INSECTICIDE
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For insecticide resistance management, Deltashield ULV is a Group 3A Insecticide.

Some naturally occurring insect biotypes resistant to Deltamethrin ULV 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 Deltashield ULV or other Group 3A insecticid3es are used repeatedly. The effectiveness of Deltashield ULV on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, ChemAg Pty Ltd accepts no liability for any losses that may result from the failure of Deltashield ULV to control resistant insects.

Deltashield ULV may be subject to specific resistance management strategies. For further information contact your local supplier, ChemAg representative or local agricultural agronomist.

#### Application

Deltashield 27.5 Insecticide is a contact spray. Thorough, even coverage is essential.

#### **Export of Treated Produce**

Growers should note that suitable MRL's or import tolerances may not be established in all markets for produce treated with Deltashield 27.5 Insecticide. If you are growing produce for export, please check check with ChemAg Pty Ltd for the latest information on MRL's and import tolerances BEFORE using Deltashield 27.5 Insecticide.

## Equipment

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

**Aircraft:** Deltashield 27.5 Insecticide may be applied by aircraft using water as a carrier. Water volumes of 10 to 30L/ha have given satisfactory results. Deltashield 27.5 Insecticide may also be used without dilution in mixture with some ULV products, as listed in the compatibility table, or applied ULV in combination with D-C-Tron® Cotton Spray Oil.

### Compatibility

Deltashield 27.5 Insecticide may be mixed with most piperonyl butoxide formulations and most formulations and most formulations of fungicides and insecticides such as chlorothalonil, dimethoate, mancozeb, metalaxyl, methamidophos, methomyl, methyl parathion, monotrotophos, Ovasyn<sup>™</sup> Insecticide and pirimicarb, where these products are required for additional insect control or for control of diseases. Deltashield 27.5 Insecticide may also be mixed with Wuxal® Liquid Foliar Nutrient and most knockdown herbicides.

#### Mixing

<u>Water</u> – Fill the spray tank to about <sup>3</sup>/<sub>4</sub> full with clean water. Add the required quantity of Deltashield 27.5 Insecticide to the spray tank with agitators in motion. Where other products are to be mixed, add these after Deltashield 27.5 Insecticide is mixed in the tank. Top up the spray tank to the required volume with clean water, with agitators operating.

ULV – When Deltashield 27.5 Insecticide is to be applied as a ULV spray in combination with compatible ULV products, Deltashield 27.5 Insecticide should be added after the ULV product, with the agitators in motion. Ensure that there is no water, or products containing water, in this mixture, or in the spray equipment.

## **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 container.

## Drift Warning

DO NOT apply under meteorological conditions or from spraying equipment, which could be expected to cause, spray to drift onto nearby susceptible plants, adjacent crops, croplands or pastures.

## **Storage and Disposal**

Store in the closed, original container in a dry, well ventilated area, as cool as possible out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Triple or (preferable) pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush, puncture or bury empty containers in a local authority landfill. If not available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways desirable vegetation and tree roots. Empty containers and product should not be burnt. If recycling, replace cap and return clean to recycler or designated collection point.

#### 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 Center (Phone 131126). If swallowed and if more than 15 minutes from a hospital, induce vomiting, preferably using Ipecac Syrup APF

# MATERIAL SAFETY DATA SHEET

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# CONDITIONS OF SALE

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NRA Approval No: 52368/0200

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