

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

eChem Lambda 250 CS

INSECTICIDE

ACTIVE CONSTITUENT: 250 g/L LAMBDA-CYHALOTHRIN

GROUP 3A INSECTICIDE

For the Control of Certain Insect Pests in Cotton,
Barley, Wheat and Various Field Crops
as per the Directions for Use.

**IMPORTANT: READ THIS LEAFLET BEFORE
OPENING OR USING THIS PRODUCT**

APVMA Approval No: 90078/127314

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DIRECTIONS FOR USE

For ULV application: eChem Lambda 250 CS Insecticide can be bulked up with spraying oils for all uses except those indicated in the critical comments in the Directions for Use table.

CROP	PEST CONTROLLED	STATE	RATE/Ha	WHP	CRITICAL COMMENTS
Cotton	Native Budworm (<i>Helicoverpa punctigera</i>), Cotton Bollworm (<i>Helicoverpa armigera</i>)	Qld, NSW, NT, WA only	60 mL	21 days after harvest	Apply when egg laying is light, less than 25 eggs/100 terminals and no larvae are present.
			70 mL		Apply when egg laying is moderate, greater than 25 eggs/100 terminals and/or when less than 12 newly hatched larvae/100 terminals are present.
			85 mL		Apply when egg laying is heavy and continuous and/or when <i>H. punctigera</i> larvae are greater than 10 mm in length. For <i>H. armigera</i> , apply only to larvae less than 5mm in length.
	Pink-spotted Bollworm (<i>Pectinophora scutigera</i>)	Qld, NT only	70 mL		Controlled with the <i>Helicoverpa</i> spp. program when used at this rate. If the pink-spotted bollworm is the only pest present, apply when more than 10 adult moths are caught in pheromone traps on two consecutive nights.
	Green Mirid (<i>Creontiades dilutus</i>), Brown Mirid (<i>C. pacificus</i>), Apple Dimpling Bug (<i>Campylomma liebknechti</i>), Broken backed Bug (<i>Taylorilygus pallidulus</i>), Cottonseed Bug (<i>Oxycarenus luctuosus</i>), Pale Cotton Stainer (<i>Dysdercus sidae</i>), Leafhoppers (<i>Austroasca viridigrisea</i> and <i>Amrasca terraereginae</i>)	Qld, NSW, NT, WA only	60 mL		Apply at the recommended threshold levels as indicated by field checks.
Barley, Wheat	Pasture Webworm (<i>Hednota</i> spp.)	NSW, Vic, Tas, SA, WA only	12 mL	14 days after harvest/ grazing	Pre-seeding the product can be tank mixed with knock down herbicides. Post crop emergence inspect crop regularly from sowing. Spray at first sign of damage. Use a minimum of 50 L water/ha. Apply at first sign of infestation before larvae are 10 mm long.
	Pink or Brown Cutworm (<i>Agrotis munda</i>)	All States	12 or 18 mL		For best results apply at first sign of infestation before larvae are 10 mm long. If larvae are larger than 10 mm use the higher rate. Use a minimum of 50 L of water.
	Common Cutworm (<i>Agrotis infusa</i>)	NSW only			
	Blackhead Pasture Cockchafer (<i>Aphodius tasmaniae</i>)	NSW, Vic, Tas, SA, WA, only	20 or 40 mL	14 days after harvest/ grazing	Treat as soon as possible after the autumn rains stimulate egg hatching and activity of existing larvae. This can be ascertained by monitoring soil populations in known areas. For best results spray when the larvae have surfaced to feed after rain. Preferably use a boom spray delivering 70 to 100 L water/ha. Use the lower rate until early June and the higher rate after mid-late June. DO NOT USE ULV APPLICATION FOR THIS PEST.
	Redlegged Earth Mite (<i>Halotydeus destructor</i>)		9 mL †		If mites are present on an establishing crop, apply at first sign of crop emergence. Monitor crop regularly for re-infestation and re-spray if necessary.
Lucerne	Native Budworm (<i>Helicoverpa punctigera</i>)	All States	24 or 36 mL	14 days after harvest/ grazing	For best results apply at hatching or soon after. Use higher rate if the crop is dense or the larvae are larger than 10 mm.
	Lucerne Leaf Roller (<i>Merophyas divulsana</i>)	All States	24 or 36 mL		For best results apply at hatching or soon after. Use higher rate if the crop is dense or the larvae are larger than 10 mm. Apply the first spray when about 30% of the terminals are rolled.
	Pea Aphid (<i>Acyrtosiphon pisum</i>)		24 mL		Good coverage, particularly the stems, is essential. Use hollow cone nozzles.
	Blackhead Pasture Cockchafer (<i>Aphodius tasmaniae</i>)	NSW, Vic, Tas, SA, WA only	20 or 40 mL		Treat as soon as possible after the autumn rains stimulate egg hatching and activity of existing larvae. This can be ascertained by monitoring soil populations in known areas. For best results spray when the larvae have surfaced to feed after rain. Preferably use a boom spray delivering 70 to 100 L water/ha. Use the lower rate until early June and the higher rate after mid-late June. DO NOT USE ULV APPLICATION FOR THIS PEST.
	Redlegged Earth Mite (<i>Halotydeus destructor</i>)		9 mL †		If mites are present on an establishing crop, apply at first sign of crop emergence. Monitor crop regularly for re-infestation and re-spray if necessary. Control of Lucerne Flea will not be obtained with this application.
Pasture	Pasture Webworm (<i>Hednota</i> spp.)	NSW, Vic, Tas, SA, WA only	12 mL	14 days after harvest/ grazing	Apply once larvae are present using adequate water to ensure good penetration.
	Brown Pasture Looper (<i>Ciampa arietaria</i>)	All States			DO NOT USE ULV APPLICATION FOR THIS PEST
	Pink or Brown Cutworm (<i>Agrotis munda</i>)	All States	12 to 18 mL		For best results apply at first sign of infestation before larvae are 10 mm long. If larvae are larger than 10 mm, use the higher rate. Use a minimum of 50 L water.
	Common Cutworm (<i>Agrotis infusa</i>)	NSW only			
	Blackhead Pasture Cockchafer (<i>Aphodius tasmaniae</i>)	NSW, Vic, Tas, SA, WA only	20 or 40 mL		Treat as soon as possible after the autumn rains stimulate egg hatching and activity of existing larvae. This can be ascertained by monitoring soil populations in known areas. For best results spray when the larvae have surfaced to feed after rain. Preferably use a boom spray delivering 70 to 100 L water/ha. Use the lower rate until early June and the higher rate after mid-late June. DO NOT USE ULV APPLICATION FOR THIS PEST.
	Redlegged Earth Mite (<i>Halotydeus destructor</i>)		9 mL †	14 days after harvest/ grazing	If mites are present on an establishing crop, apply at first sign of crop emergence. Monitor crop regularly for re-infestation and re-spray if necessary. Control of Lucerne Flea will not be obtained with this application.
Sorghum	Sorghum Midge (<i>Contarinia sorghicola</i>)	Qld, NSW, NT only	18 or 36 mL	14 days after harvest/ grazing	Apply when midge numbers reach 1 to 2 per head. Use the higher rate for residual protection.
	Corn Earworm (<i>Helicoverpa armigera</i>)		60 or 70 mL		Apply when larval numbers reach 2 per head. Use the higher rate if pest pressure is severe. Best results are achieved on small larvae.
Sunflower	Rutherglen Bug and Grey Cluster Bug (<i>Nysius</i> spp.)	All States	36 mL	28 days after harvest	Apply when numbers reach 10 to 15 adults per plant at budding in dry land crops or 20 to 25 in irrigated crops. If <i>Helicoverpa armigera</i> are also present in northern NSW or Queensland, use a minimum of 60 mL product.
	Native Budworm (<i>Helicoverpa punctigera</i>), Corn Earworm (<i>Helicoverpa armigera</i>)	Qld, Nth NSW only Sth NSW, Vic only	60 or 70 mL 48 or 60 mL	28 days after harvest	Apply when an average of 2 to 3 larvae are present per head or when larvae are damaging plants. Use the higher rate if pest numbers are high and/or <i>H. punctigera</i> larvae are larger than 10 mm in length. In Northern NSW and Qld, DO NOT apply to resistant <i>H. armigera</i> larvae larger than 5 mm in length. GENERAL COMMENTS: If flowering has started, application should be deferred until after flowering but before the heads turn down. If treatment is unavoidable during flowering, and bees are actively foraging in the crop, there will be minimal effect in the colony if spraying occurs early morning or late afternoon.
Soybeans	Native Budworm (<i>Helicoverpa punctigera</i>), Corn Earworm (<i>Helicoverpa armigera</i>)	Qld, NSW, Vic, NT only	60 or 70 mL	21 days after harvest/ grazing	Apply when flower or pod feeding larvae reach a population of 2 per metre of row in soybeans. Use the higher rate if pest numbers are high or if larvae are larger than 10 mm. In northern NSW and Qld DO NOT apply to resistant <i>H. armigera</i> larvae larger than 5 mm in length.
Navy Beans Mung Beans	Native Budworm (<i>Helicoverpa punctigera</i>), Corn Earworm (<i>Helicoverpa armigera</i>)	Qld, NSW, NT only	60 or 70 mL	Harvest/ grazing 1 day if harvested green, 14 days if harvested dry	Apply when flower or pod feeding larvae reach a population of 1 to 2 per metre of row in navy beans and 1 per metre of row in mung beans. Use the higher rate if pest numbers are high or if larvae are larger than 10 mm. In northern NSW and Qld where corn earworm has established resistance to pyrethroids DO NOT apply to corn earworm larvae larger than 5 mm.
Canola	Cabbage Moth (<i>Plutella xylostella</i>), Cabbage White Butterfly (<i>Pieris rapae</i>)	All States	24 mL	7 days harvest/ grazing	Apply as soon as larvae reach threshold numbers. Check with local officer of the Department of Primary Industries for thresholds applicable to the particular growth stage of the crop.
	Rutherglen Bug and Grey Cluster Bug (<i>Nysius</i> spp.)		36 mL		Apply only near maturity when severe infestations are likely to down grade yields.
	Thrips (<i>Thrips tabaci</i>)	Qld, NSW, Vic, Tas, WA, NT only			
	Native Budworm (<i>Helicoverpa punctigera</i>)	NSW, Vic, Tas, SA, WA, only	24 or 36 mL	7 days after harvest/ grazing	For best results, apply at hatching or soon after. Use higher rate if the crop is dense or the larvae are larger than 10 mm.
	Redlegged Earth mites (<i>Halotydeus destructor</i>)	NSW, Vic, Tas, SA, WA, only	9 mL †	7 days after harvest/ grazing	If mites are present on establishing crop, apply at the first sign of crop emergence. Monitor the crop regularly for reinfestation and respray if necessary.

CROP	PEST CONTROLLED	STATE	RATE/Ha	WHP	CRITICAL COMMENTS
Forage brassica	Cabbage Cluster Caterpillar (<i>Crociodolomia pavonana</i>)	Qld, NSW, Vic, WA, NT only	24 or 36 mL Add Agral at 10 mL/100 L of spray volume	2 days after harvest/ grazing	Apply at first sign of infestation. For schedule spraying on a weekly basis, use the lower rate. For spraying as needed use the higher rate for longer persistence. Use a minimum of 500 L water/ha.
Faba Beans Chickpeas, Vetch	Native Budworm (<i>Helicoverpa punctigera</i>)	NSW, Vic, SA, WA only	24 or 36 mL	7 days after harvest/ grazing	For best results, apply at hatching or soon after. Use the higher rate if the crop is dense or the larvae are larger than 10 mm.
	Redlegged Earth Mite (<i>Halotydeus destructor</i>)	NSW, Vic, Tas, SA, WA, only	9 mL †		If mites are present on an established crop, apply at first sign of crop emergence. Monitor crop regularly for reinfestation and respray if necessary. Control of Lucerne Flea will not be obtained with application.
Field Peas	Native Budworm (<i>Helicoverpa punctigera</i>)	NSW, Vic, SA, WA only	24 or 36 mL	7 days after harvest/ grazing	For best results, apply at hatching or soon after. Use higher rate if the crop is dense or the larvae are larger than 10 mm.
	Pea Weevil (<i>Bruchus pisorum</i>)	NSW, SA only	24 mL		Follow State Department of Agriculture (South Australia only) guidelines for controlling Pea Weevil.
		Vic, WA only	36 mL		If these are unavailable, monitor the crops regularly once flowering commences and apply as soon as adult weevils are detected. Adults must be controlled before egg laying begins. Both native Budworm and Pea Weevil populations can be easily monitored using a sweep net in the top section of the crop. WA only: Commence monitoring the crop for Pea Weevil presence using a sweep net, prior to flowering. Spray when one weevil per one hundred sweeps is found for milling grade seed, or one weevil per twenty-five sweeps for feed grade seed. Continue monitoring after spraying and respray if necessary. Use either a border spray (most cases) or whole crop spray, depending on Pea Weevil penetration of the crop.
Redlegged Earth Mite (<i>Halotydeus destructor</i>)	NSW, Vic, Tas, SA, WA only	9 mL †	7 days after harvest/ grazing	If mites are present on an established crop, apply at the first sign of crop emergence. Monitor crop regularly for reinfestation and respray if necessary. Control of Lucerne Flea will not be obtained with this application.	
Lupins	Native Budworm (<i>Helicoverpa punctigera</i>)	NSW, Vic, SA, WA only	24 mL	14 days after harvest/ grazing	For best results, apply at hatching or soon after when larvae are small. WA only: Environmental factors may cause populations of small caterpillars to decline, reducing damage potential. Spraying should commence once caterpillars are 12 mm in length.
	Brown Pasture Looper (<i>Ciampa arietaria</i>)	NSW, Vic, Tas, SA, WA only	12 mL		Once crop has emerged, inspect regularly and apply at the first signs damage. Use a minimum of 50 L water/ha. DO NOT USE ULV APPLICATION FOR THIS PEST.
	Redlegged Earth Mite (<i>Halotydeus destructor</i>)	NSW, Vic, Tas, SA, WA only	9 mL †		If mites are present on an establishing crop, apply at the first sign of crop emergence. Monitor crop regularly for reinfestation and respray if necessary. Control of Lucerne Flea will not be obtained with application.

† Blue Oat Mites often co-occur with Redlegged Earth Mites and the 9 mL/ha rates of Lambda 250 CS may be less effective against Blue Oat Mites.

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

WITHOLDING PERIODS:

HARVESTING

Mung Beans (if harvested green), Navy Beans (if harvested green): DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

Field peas, Canola, Faba Beans, Chickpeas, Vetch: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

Lupins, Sorghum, Mung Beans (if harvested dry), Navy Beans (if harvested dry), Barley, Wheat, Pasture: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

Cotton, Soybeans: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.
Sunflower: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.

GRAZING

Navy Beans (if harvested green), Mung Beans (if harvested green): DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 1 DAY AFTER APPLICATION.

Forage Brassicas: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION.

Field peas, Canola, Faba Beans, Chickpeas, Vetch: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION

Lupins, Sorghum, Navy Beans (if harvested dry), Mung Beans (if harvested dry), Barley, Wheat, Pasture, Lucerne: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION.

Soybeans: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 21 DAYS AFTER APPLICATION.

GENERAL INSTRUCTIONS

MIXING

For ground or aircraft application with water

eChem Lambda 250 CS Insecticide mixes readily with hard or soft water. Add the required quantity of product to water whilst under agitation to ensure thorough mixing. Agitate while spraying. It is not advisable to allow the mixed solution to stand longer than 24 hours before use. In extremely alkaline water (pH 9) spray immediately after mixing.

For ULV (ultra low volume) application with oil

It is recommended that Lambda 250 CS be mixed with a mineral, spraying oil. See Compatibility section for a list of recommended mineral spraying oils. Add the required quantity of product to oil whilst under agitation to ensure thorough mixing. Agitate while spraying. It is not advisable to allow the mixed solution to stand longer than 24 hours before use.

APPLICATION

Good coverage is essential to ensure adequate control. The product may be applied by ground rig or aircraft. DO NOT apply if rain is expected within 6 hours. Acceptable 'threshold' values for eggs and larval numbers may vary according to the stage of crop development and the pest management program undertaken. Alternative higher thresholds may be acceptable under certain circumstances. Diluted with water: For ground rigs the volume of liquid applied should be 30 to 100 L/ha. Aerial application should be under conditions normally suitable for water-based insecticides. Apply in at least 10 to 20 L water/ha.

Mixed with oil: Apply the recommended rate of Lambda 250 CS bulked with oil to total volume of 3 to 5 L/ha for cotton, sorghum and sunflowers. The total volume for all other crops should be 1.5 L/ha.

TIMING

This product is a contact and residual insecticide. Best result will be obtained if Lambda 250 CS is applied as a protective treatment at regular intervals. However, if spraying frequency based on scouting, then for *Helicoverpa* spp. application at egg hatch will give optimum results.

CROP CHECKING

Frequent and thorough checking of whole plants, terminals, squares, flowers, bolls or fruiting bodies as required, should be made over a random sample of plants, representative of the whole crop area. Inspect crops after spraying to ensure a thorough kill has been obtained. However, note that a maximum kill may not be achieved until 48 hours after treatment. Then check at frequent intervals, not more than 2 days apart when insect pressure is heavy. Apply the recommend treatment as soon as a crop check indicates spraying is necessary.

COMPATIBILITY

This product, when applied, as a water-based spray is compatible with the following actives:
fluzafop-P, pirimiphos-methyl 900SF, procymidone, pirimicarb, paraquat / diquat, glyphosate-trimesium and paraquat.
This product when used in an ultra-low volume application is compatible with the following mineral spraying oils:
DC-Tron Cotton*, DC-Tron*, Ulvaprone*, Trycol*, Caltex Summer Spray Oil* and Omex*.

GROUP 3A INSECTICIDE

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management eChem Lambda 250 CS Insecticide is a Group 3A insecticide. Some naturally occurring insect biotypes resistant to Lambda 250 CS 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 Lambda 250 CS or other Group 3A insecticides are used repeatedly. The effectiveness of Lambda 250 CS on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, eChem (Australia) Pty Ltd accepts no liability for any losses that may result from the failure of Lambda 250 CS to control insects.

Lambda 250 CS may be subject to specific resistance management strategies. For further information contact your local supplier, eChem representative or local agricultural department agronomist. *Helicoverpa (Heliothis armigera)* resistance in Northern New South Wales and Queensland: To help contain pyrethroid resistance in *Helicoverpa armigera*, the Summer Crop Insecticide Strategy as developed by AIRAC, Queensland Department of Primary Industries and the New South Wales Department of Agriculture and Fisheries should be adhered to. Failure to observe the strategy may result in widespread resistance affecting the future viability of summer cropping.

PRECAUTIONS

Human flagging is not supported unless flaggers are protected by engineering control such as vehicles with cabs.

Re-entry Period

DO NOT allow entry into treated areas until the spray has dried. If prior entry is necessary wear cotton overalls and chemical resistant gloves.

PROTECTION OF LIVESTOCK

Toxic to bees. DO NOT spray when bees are actively foraging. Risk is reduced by spraying in the early morning or late evening.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish and aquatic invertebrates. DO NOT contaminate streams, rivers or waterways with Lambda 250 CS or used container. Tail waters that flow from treated areas should be prevented from entering river systems. In case of spillage on floor or paved surfaces, soak up with sand, earth or synthetic absorbent and dispose of waste according to Australian Standards 2507, Storage and Handling of Pesticides. A strategy to minimise spray drift should be employed at all times when aerially applying sprays near sensitive areas. Such a strategy is illustrated by the cotton industry's Best Management Practice Manual.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

Triple 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 for appropriate disposal 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 regulations. DO NOT burn empty containers or product.

Mini Bulk Returnable Container (110 L)

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

Refillable containers (200 L)

Store in the closed, original container in a cool well-ventilated area. Do not store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. When opening the container, preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and face shield. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves, face-shield and contaminated clothing.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for eChem Lambda 250 CS Insecticide is available from the supplier.

CONDITIONS OF SALE

eChem (Australia) Pty Ltd. accepts responsibility for the consistent quality of the product however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.

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For specialist advice in an emergency dial 1800 638 556 / 24 hours Australia wide.