

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

Sumi-Alpha® Flex

INSECTICIDE

ACTIVE CONSTITUENT: 50 g/L ESFENVALERATE
SOLVENT: 744 g/L LIQUID HYDROCARBONS

GROUP 3A INSECTICIDE

For the control of Certain Insect Pests on Field Crops, Pasture and Vegetable Crops as indicated in the Directions for Use table.

GENERAL INSTRUCTIONS

MIXING AND APPLICATION:

This product may be mixed with water or oil and applied by air or ground equipment. In common with other non-systemic insecticides, thorough coverage with the chemical is essential for maximum effectiveness.

Water application

Unless otherwise directed in the directions for use table, apply 50 to 200L/ha spray volume for ground application and a minimum of 20L/ha for aircraft application. Ensure thorough coverage. Spray application should be carried out in the cooler parts of the day or night to avoid droplet evaporation. Spray in cross winds. Do not spray in calms or when wind is light and variable in direction unless smoke indicators show spray is entering the crop uniformly.

DO NOT mix with hard water. It is advisable to add, BS1000* or equivalent non-ionic wetting agent at 30 mL per 100 L spray mixture just before spray tank is filled. Add the required amount of Sumi-alpha Flex to water in the spray tank and mix thoroughly. Sprays containing Sumi-alpha Flex should be used within 3 hours of preparation and they should be agitated continuously during this period.

Ultra Low Volume (ULV) Application

Apply in a minimum of 1.5 L spray volume/ha. Use only equipment that delivers a droplet size of approximately 80-100 microns. Add the required amount of Sumi-alpha Flex Insecticide (see directions for use table) to mineral spraying oil and mix thoroughly. Ensure that water is drained from the aircraft hopper and spray lines before using Sumi-alpha Flex Insecticide mixed with mineral oil. Spray application should be carried out in the cooler parts of the day or night to avoid droplet evaporation. Spray in cross winds. Do not spray in calms or when wind is light and variable in direction unless smoke indicators show spray is entering the crop uniformly.

INSECTICIDE RESISTANCE WARNING

GROUP 3A INSECTICIDE

For insecticide resistance management Sumi-alpha Flex Insecticide is a Group 3A insecticide.

Some naturally-occurring insect biotypes resistant to Sumi-alpha Flex Insecticide 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 Sumi-alpha Flex Insecticide or other Group 3A Insecticides are used repeatedly. The effectiveness of Sumi-alpha Flex Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, Sumitomo Chemical Australia Pty Ltd accepts no liability for any losses that may result from the failure of Sumi-alpha Flex Insecticide to control resistant insects.

Sumi-alpha Flex Insecticide may be subject to specific resistance strategies. For further information contact your local supplier, Sumitomo Chemical Australia Pty Ltd representative or local department of agriculture agronomist.

RESISTANCE MANAGEMENT:

Follow the guidelines for insecticide resistance management issued by relevant state agricultural authorities. In NSW and Qld, application of this product to *Helicoverpa armigera* larvae longer than 5 mm may not only be ineffective but it may increase the level of synthetic pyrethroid resistance.

This product should **NOT** be used to treat infestations that were not controlled by an earlier application of it or another synthetic pyrethroid. Infestations not controlled by this product should be treated with an insecticide from another chemical group.

COMPATIBILITY:

1) When this product is mixed with WATER the following compatibilities apply:

This product is compatible with Dithane* M45, Kelthane* EC, Kocide*, Parathion* 50EC, Parathion* M50, Predator* 300, Ridomil*, Wuxal* and PBO Synergist when mixed according to the directions on the PBO Synergist label.

DO NOT mix Sumi-alpha Flex Insecticide with wettable powders BEFORE addition to the spray tank.

2) When this product is mixed with OIL the following compatibilities apply:

This product should be mixed only with specific non-aqueous ULV formulations of other insecticides.

PROTECTION OF LIVESTOCK:

Dangerous to bees. **DO NOT** spray on any plants in flower while bees are foraging.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:

Dangerous to fish. **DO NOT** contaminate ponds, waterways and drains with product or used containers.

STORAGE AND DISPOSAL:

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. **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.

SAFETY DIRECTIONS:

May irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. **DO NOT** inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length Chemical Resistant gloves and face shield. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. 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 131 126; New Zealand 0800 764 766.

If swallowed, **DO NOT** induce vomiting. Give a glass of water.

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) which can be obtained from Sumitomo Chemical.

IMPORTANT NOTICE

These goods are to be used only for the purpose and as specified on the label, and are not suitable for any other purpose. To the fullest extent permitted by law, we do not accept or bear any liability on any basis for any loss, damage, cost or expense, arising in any way, directly or indirectly, in connection with the goods.

* Not trademarks of Sumitomo Chemical Australia Pty Ltd
® Registered trademark of Sumitomo Chemical Co. Japan

APVMA Approval No: 53047/105817

Harmful if swallowed.
May be fatal if swallowed and enters airways.

THIS PRODUCT IS NOT CONSIDERED TO BE A DANGEROUS GOOD UNDER THE AUSTRALIAN CODE FOR THE TRANSPORT OF DANGEROUS GOODS BY ROAD OR RAIL

**IN A TRANSPORT
EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE**

**SPECIALIST ADVICE
IN AN EMERGENCY ONLY
ALL HOURS - AUSTRALIA WIDE
1800 024 973**

DIRECTIONS FOR USE

Restrictions

DO NOT apply if rain is expected within 6 hours.

NOTE: This product is ineffective against synthetic pyrethroid resistant *Helicoverpa armigera* larvae longer than 5 mm. Refer to Resistance Management under General Instructions.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Brassica crops: Cabbages, Cauliflowers, Brussel sprouts, Broccoli, Kale, Kohlrabi	Cabbage moth (<i>Plutella xylostella</i>)	Qld, NSW, WA only	Low Volume: 250 mL/ha High Volume: 25 mL/100 L	Commence application when pests first appear and repeat every 7-10 days or as indicated by pest activity. Low Volume: Use rate indicated when volumes lower than those recommended for high volume are used. High Volume: The total spray volume per hectare will depend on plant size at time of application but as a general rule the total volume per hectare should progressively increase from 250 litres per hectare on young plants to 1,500 litres per hectare on mature crops.
	Cabbage white butterfly (<i>Pieris rapae</i>), <i>Helicoverpa punctigera</i> , <i>Helicoverpa armigera</i> , and Cabbage Centre grub (<i>Hellula hydralis</i>)		Low Volume: 380 mL/ha High Volume: 25 mL/100 L	
	Cabbage white butterfly (<i>Pieris rapae</i>), Cabbage moth (<i>Plutella xylostella</i>)	Vic, SA, Tas, only	Low pest activity: 190-250 mL/ha High pest activity: 250-380 mL/ha	<i>Helicoverpa armigera</i> in NSW and QLD: Apply as required according to pest incidence. Thorough and frequent crop checks are essential. Preferably apply to eggs. Apply to larvae only if they are less than 5 mm long.
	<i>Helicoverpa punctigera</i> , <i>Helicoverpa armigera</i> , and Cabbage Centre grub (<i>Hellula hydralis</i>)		380 mL/ha	Commence application when pests first appear and repeat every 7-10 days. The total spray volume per hectare will depend on plant size at time of application but as a general rule, the total volume per hectare should progressively increase from 250 litres per hectare on young plants to 1,500 litres per hectare on mature crops.
Broad beans Faba beans	Plague thrips (<i>Thrips imaginis</i>)	Sthn NSW, Vic, Tas, SA, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native Budworm (<i>Helicoverpa punctigera</i>)		130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
				Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Canola	Cabbage white butterfly (<i>Pieris rapae</i>), Cabbage Centre grub (<i>Hellula hydralis</i>)	Vic, Tas, SA, WA only	400 to 500 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. In conditions of high pest activity use 500 mL/ha. NOTE: Based on economic thresholds, the South Australian Department of Agriculture have advised that treatment for the control of Cabbage moth larvae in canola in SA should be based on the following: Monitor the density of Cabbage moth larvae in the crop by randomly selecting about 20 plants. Cut each plant at its base and shake it into a sweepnet. Count those Cabbage moth larvae that are longer than 3-4 mm. Spray when the average number of these large larvae is equal to or greater than -1 larva per plant during the vegetative to mid-flowering stage -2 larvae per plant during mid to late flowering stage, or -5 larvae per plant during the pod maturation stage.
	Cabbage moth (<i>Plutella xylostella</i>)		250 mL/ha	
	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA Only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	False Native budworm (<i>Helicoverpa punctifera</i>)		330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Brown pasture looper (<i>Ciampa arietaria</i>), Cutworm (<i>Agrotis</i> spp.)	WA only	70 mL/ha	
	Vegetable weevil (<i>Listroderes difficilis</i>)	WA, SA, Vic, Tas, Sthn NSW	400 – 500 mL/ha	Inspect emerging plants for signs of damage, particularly when the preceding crop was a legume pasture, or when there is capeweed in close proximity. Border sprays are effective for controlling migratory weevils. Apply when damage is first noted and repeat as necessary if infestation from external plant hosts continue. Direct the spray to obtain good coverage of the foliage. Use the high rate for corrective control of weevil populations.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
100 mL/ha			Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.	
Celery	Lucerne leaf roller (<i>Merophyas divulsana</i>)	WA only	50 mL/100 L	Spray to run-off. Commence application one week after planting and apply every 7 days until harvest.
Cereals	Cutworm (<i>Agrotis</i> spp.)		70 mL/ha	Apply according to pest incidence and repeat as required.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Chickpeas	Plague thrips (<i>Thrips imaginis</i>)	Qld, Sthn NSW, Vic, Tas, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
			Qld only	400 or 500 mL/ha
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as they emerge. Apply when infestation reaches an economically damaging level and repeat if necessary.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.
Chou Moellier, fodder rape	Cabbage white butterfly (<i>Pieris rapae</i>), Cabbage Centre grub (<i>Hellula hydralis</i>)	Vic, Tas, SA, WA only	400 to 500 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. In conditions of high pest activity, use 500 mL/ha.
	Cabbage moth (<i>Plutella xylostella</i>)		250 mL/ha	
	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	Brown pasture looper (<i>Ciampa arietaria</i>), Cutworm (<i>Agrotis</i> spp.)	WA only	70 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Cotton	<i>Helicoverpa punctigera</i> , <i>Helicoverpa armigera</i>	Qld, NSW only	500 to 700 mL/ha	The pest population should be carefully monitored to detect economic increase in eggs and/or larvae. Application intervals will vary depending on the frequency and size of new egg lays, weather and crop growth. Applications should be timed to coincide with egg hatching and/or before larvae are entrenched in protected feeding sites. Sumi-alpha Flex Insecticide can be applied at the low rate when larvae are small and pressure is low, but it is recommended that the full rate be applied at all other times. This product is ineffective against synthetic pyrethroid resistant <i>Helicoverpa armigera</i> larvae larger than 5mm. Refer to Resistance Management under General Instructions.
	Pink spotted bollworm (<i>Pectinophora scutigera</i>)	Central Qld only		Controlled by <i>Helicoverpa</i> programme.
			400 mL/ha	Apply at this rate when Pink spotted bollworm is only pest present and repeat if necessary.
Field peas	Cutworm (<i>Agrotis</i> spp.)	WA only	70 mL/ha	Apply when damage is first noticed in the seedling stage of the crop.
	Plague thrips (<i>Thrips imaginis</i>)	Sthn NSW,	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)	Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	Pea Weevil (<i>Bruchus pisorum</i>)		330 mL/ha	Sumi-Alpha Flex provides protection against Pea weevil by reducing the number of adult weevils. Due to their mobile nature and tendency to infest from outside the crop, Sumi-Alpha Flex may not completely eradicate Pea weevil in sprayed areas. Field peas should be monitored for Pea weevil adults regularly from the time of first flowering until the crop starts to dry. Spraying should commence once the economic threshold is reached (2 to 3 weevils per 25 sweeps) and should be timed to control adults before they lay eggs on pea pods. Repeat application may be necessary if infestation persists. Pay particular attention to crop edges and apply either a border spray or whole crop spray, depending on Pea weevil penetration of the crop.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary.
		100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.	

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Garden peas	Plague thrips (<i>Thrips imaginis</i>)	Sthn NSW, Vic, Tas, SA, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)		130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
		<i>Helicoverpa armigera</i>	Qld only	400 or 500 mL/ha
				500 mL/ha
Grapevines	Garden weevil (<i>Phlyctinus collosus</i>)	WA, SA, NSW, Vic and Tas	30 mL/100L	Do not apply last application later than crop growth stage E-L 31 (berries pea size). Monitor weevil emergence and apply after peak weevil emergence in late spring but before damage. If practical, apply at night when adult weevils are feeding as this will give more effective control. A second application 2 - 4 weeks later may be required. DO NOT apply more than two applications per season. Use of this product may cause outbreak of secondary pests. Dilute Spray in a minimum of 500 L/ha to run-off for thorough coverage. This volume should be increased as vine foliage becomes bigger. Later sprays need thorough wetting for good penetration
Green beans	Plague Thrips (<i>Thrips imaginis</i>)	Sthn NSW, Vic, Tas, SA, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)		130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
Lentils	Plague Thrips (<i>Thrips imaginis</i>)	Sthn NSW, Vic, Tas, SA, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)		130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	False Native budworm (<i>Helicoverpa punctifera</i>)		330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary
	Bluegreen aphid (<i>Acyrtosiphon kondoi</i>)		100-200 mL/ha plus BS 1000 at 0.1% v/v	Monitor the crop regularly for the presence of aphids and apply when the pest reaches economically damaging levels. Repeat if necessary after 10-14 days.
	Cowpea aphid (<i>Aphis craccivora</i>)		200-300 mL/ha plus BS1000 at 0.1% v/v	Use the higher rate against established populations or when faster knockdown is required

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Lentils (continued)	Large Green jassid (<i>Batracomorphus augustatus</i>)	Sthn NSW, Vic, Tas, SA, WA only	300 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary
	Lucerne seed web moth (<i>Etiella behrii</i>)		330 mL/ha	Monitor fields regularly and time the spray to control moths before they can lay eggs on pods. If larvae are already present, control them whilst small and before they become shielded from the chemical spray by web lined shelters. Failure to control moths or small larvae may result in damage to the pods.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)		50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary.
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.
Linseed	Native budworm (<i>Helicoverpa Punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
			400 or 500 mL/ha	Spray at or after flowering when the infestation reaches damaging levels. Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Use the higher rate when large larvae are present.
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply only to larvae less than 5 mm long. Spray at or after flowering when the infestation reaches damaging levels. Crop checking should be aimed to detect larvae as they emerge.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.
Lucerne	Plague Thrips (<i>Thrips imaginis</i>)	Sthn NSW, Vic, Tas, SA,WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Lucerne (continued)	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA,WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL /ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
		Qld only	400 or 500 mL/ha	Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Apply when infestation reaches an economically damaging level and repeat if necessary. Use the higher rate when large larvae are present.
	Bluegreen aphid (<i>Acyrtosiphon kondoi</i>)	Sthn NSW, Vic, Tas, SA,WA	100 mL/ha	Apply when the pest reaches economically damaging levels and repeat if required.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.
Lupins	Brown pasture looper (<i>Ciampa arietaria</i>)	WA only	35 mL/ha	Apply according to pest incidence and repeat as required.
	Cutworm (<i>Agrotis</i> spp.)		70 mL/ha	
	Plague thrips (<i>Thrips imaginis</i>)	Sthn NSW,	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)	Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
				LUPINS IN 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.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary.
100 mL/ha			Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.	

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Maize	Native budworm (<i>Helicoverpa punctigera</i>), Corn earworm (<i>Helicoverpa armigera</i>)	Vic, Tas, SA, WA only	300 to 500 mL/ha	Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Application: Apply when infestation reaches an economically damaging level and repeat if necessary. Use the higher rate when large larvae are present. Aircraft: Apply in a minimum of 20L of water per hectare as a spray of 100 to 150 microns VMD. Ground Rig: Apply in 500L water per hectare.
	Corn earworm (<i>Helicoverpa armigera</i>)	Qld, NSW only	500 mL/ha	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as they emerge. Refer to application details above.
Mung beans	<i>Helicoverpa punctigera</i>	Qld only	400 or 500 mL/ha	Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Apply when infestation reaches an economically damaging level and repeat if necessary. Use the higher rate when large larvae are present.
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as they emerge. Apply when infestation reaches an economically damaging level and repeat if necessary.
Navy beans	<i>Helicoverpa punctigera</i>	Qld, NSW only	400 or 500 mL/ha	Apply when there are 1 or more larvae per metre of row. Apply 400 mL/ha rate when larvae are less than 2 cm long. Apply 500 mL/h rate when larvae are longer than 2 cm.
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply when there are 1 or more larvae per metre of row. Apply only to larvae that are less than 5 mm long.
	Soybean looper (<i>Diachrysia orichalcea</i>)	Qld only	400 or 500 mL/ha	Apply at pod filling stage. Apply 400 mL/ha rate when larvae are small and/or numbers are low. Apply 500 mL/ha rate when larvae are large and/or numbers are high.
Pasture	Brown pasture looper (<i>Ciampa arietaria</i>)	WA only	35 mL/ha	Apply according to pest incidence and repeat as required.
	Cutworm (<i>Agrotis</i> spp.)		70 mL/ha	
	Webworm (<i>Hednota</i> spp.)	Tas, SA, WA only	70 mL/ha	Apply at the first signs of economic damage. Repeat as required.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
	100 mL/ha		Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.	
Pigeon peas	Plague Thrips (<i>Thrips imaginis</i>)	NSW, Qld, Vic Tas, WA only	130 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Native budworm (<i>Helicoverpa punctigera</i>)	NSW, Vic, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL /ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Pigeon peas (continued)	Native budworm (<i>Helicoverpa punctigera</i>)	Qld only	400 or 500 mL/ha	Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Apply when infestation reaches an economically damaging level and repeat if necessary. Use the higher rate when large larvae are present.
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as they emerge. Apply when infestation reaches an economically damaging level and repeat if necessary.
Safflower	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary.
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.
Sorghum	<i>Helicoverpa punctigera</i> <i>Helicoverpa armigera</i>	WA only	350, 400 or 450 mL/ha	Crop checking should commence on head emergence from the boot and continue at weekly intervals until maturity. By Aircraft: Apply in a minimum of 20L of water per hectare as a spray of 100 to 150 microns VMD. DO NOT use on tight headed sorghum varieties. Apply when 2 arvae per head are present and actively feeding. Use 350 mL/ha when larvae are less than 1 cm in length. Use 400 mL/ha rate when larvae between 1 and 2 cm in length are present. Use 450 mL/ha rate when larvae longer than 2 cm are present.
	<i>Helicoverpa armigera</i>	Qld, NSW only	450 mL/ha	DO NOT use on tight headed sorghum varieties. Apply when 2 larvae per head are present and actively feeding. Apply only to larvae less than 5 mm long.
	Sorghum midge (<i>Contarinia sorghicola</i>)		100, 200 or 300 mL/ha	Adult Sorghum midge live for about 1 day, thus infestations on following days are mainly due to a new emergence within the crop and/or wind blowing the pest from other host crops or weeds. The level of infestation can therefore change considerably from day to day. Daily checks should be made at the time of day when conditions most favour midge activity. Apply when there is an average of 1 or more adult midge per head or when numbers equal or exceed the treatment threshold established by local authorities. Repeat applications on this basis. The intervals between applications depend upon the rate previously applied, and the infestation pressure after application. Under constant infestation pressure, higher rates will result in a longer interval than lower rates. With a given dose, higher infestation pressure will result in a shorter interval than a lower infestation pressure. Use the 100 mL/ha rate when there is an average of up to 4 adult midge per head. Use the 200 mL/ha rate when there is an average of 4-8 adult midge per head. Use the 300 mL/ha rate when there is an average of more than 8 adult midge per head.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Soybeans	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA, only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
		Qld, Nthn NSW only	400 or 500 mL/ha	Apply when there are 2 or more larvae per metre of row. Apply the 400 mL/ha rate when larvae are less than 2 cm long. Apply the 500 mL/ha rate when larvae are longer than 2 cm.
	<i>Helicoverpa armigera</i>		500 mL/ha	Apply when there are 2 or more larvae per metre of row. Apply only to larvae that are less than 5 mm long.
	Soybean looper (<i>Diachrysia orichalcea</i>)	Qld only	400 or 500 mL/ha	Apply at pod-filling stage if necessary. Apply 400 mL/ha rate when larvae are small and/or numbers are low. Apply 500 mL/ha rate when larvae are longer and/or numbers are high.
Sunflower	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA, only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
		Qld, Nthn NSW only	400 or 500 mL/ha	Crop checking should be aimed to detect larvae as they emerge. Small larvae are easier to kill than large larvae. Apply when infestation reaches an economically damaging level and repeat if necessary. Use the higher rate when large larvae are present. Apply before the heads turn downwards. Ensure good coverage of sunflower heads.
	<i>Helicoverpa armigera</i>	Qld, NSW only	500 mL/ha	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as they emerge. Apply when infestation reaches an economically damaging level and repeat if necessary. Apply before the heads turn downwards. Ensure good coverage of sunflower heads.
Sweet corn	Native budworm (<i>Helicoverpa punctigera</i>)	Vic, Tas, SA, WA only	300 or 500 mL/ha	Apply at the first signs of egg laying or after tasselling and repeat at 2-7 day intervals or as indicated by pest activity. Use the higher rate when large larvae are present. Application from air: 20 L spray mixture per hectare. Application by ground: 500 L spray mixture per hectare.
	Corn earworm (<i>Helicoverpa armigera</i>)	Vic, SA, WA only		
		Qld, NSW, Tas only	500 mL/ha	Apply only to larvae less than 5 mm long. Apply at the first signs of egg laying or after tasselling and repeat at 2-7 day intervals or as indicated by pest activity. Application from air: 20 L spray mixture per hectare. Application by ground: 500 L spray mixture per hectare.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Tomatoes (bush and trellis)	Native budworm (<i>Helicoverpa punctigera</i>) Cluster caterpillar	All States (not Tas)	Established Infestations Low Volume: 190, 300 or 400 mL/ha	Established Infestations: Use 190 mL/ha or 25 mL/100 L when larvae are less than 1 cm long. Use 300 mL/ha or 40 mL/100 L when larvae between 1 and 2 cm long are present. Use 400 mL/ha or 55 mL/100 L when larvae longer than 2 cm are present.
	Tomato grub (<i>Helicoverpa armigera</i>)	Vic, Tas, SA, WA only	High Volume: 25, 40 or 55 mL/100 L	Low Volume: By Ground Rig: Apply 100 litres of spray mixture per hectare or more without producing run-off. Apply as a fine spray with hydraulic nozzles or fan-assisted rotary atomizers. If hydraulic nozzles are used, cone nozzles are preferred. By Aircraft: Apply in a minimum of 10 L of water per hectare as a spray of 100 to 150 microns VMD. High Volume: Apply as a medium to fine spray. Apply 250 L/ha of spray mixture up to flowering. Then increase the volume gradually, as the plants grow, up to 1000 L/ha at plant maturity.
		Qld, NSW only	Low Volume: 400 mL/ha High Volume: 55 mL/100 L	Apply only to larvae less than 5 mm long. Crop checking should be aimed to detect larvae as soon as they emerge. Apply from plant emergence / transplanting according to pest activity. Apply using the methods described for Native budworm above.
	Plague thrips (<i>Thrips imaginis</i>)	All States	Low Volume: 130 mL/ha High Volume: 12 mL/100 L	Apply from flowering as required. Apply using the methods described for Native budworm above.
Wheat, oats, barley	Anthelid caterpillar (<i>Anthela</i> spp.)	NSW, Vic, SA, WA only	150 mL/ha 300 mL/ha	Apply when larvae are less than 1 cm long. Apply when larvae are longer than 1 cm.
	Native budworm (<i>Helicoverpa punctigera</i>)	Sthn NSW, Vic, Tas, SA, WA only	130, 200 or 330 mL/ha	Apply when infestation reaches an economically damaging level and repeat if necessary. Use the 130 mL/ha rate when larvae are less than 1 cm in length. Use the 200 mL/ha rate when larvae between 1 and 2 cm in length are present. Use the 330 mL/ha rate when larvae longer than 2 cm are present.
	Suppression only: Southern Armyworm (<i>Persectania ewingii</i>) Common Armyworm (<i>Mythimna convecta</i>)	All states	330 mL/ha	Monitor the crop regularly for the presence of caterpillars and/or frass and spray when the recommended threshold of 2 large caterpillars/m ² is reached. Apply as a foliar spray directed at the seed heads and stems in no less than 70 litres of water per hectare. Since armyworms are nocturnal feeders, application late in the afternoon or at dusk will give the best result. Poor control may occur on crops that have lodged. Because of their behaviour and migratory nature, a single application may not completely eradicate armyworm infestations and repeat applications may be required.
	Webworm (<i>Hednota</i> spp.)	Vic, Tas, SA, WA only	70 mL/ha	Apply pre-sowing or post-sowing. If applying post-sowing apply at first signs of economic damage. Most damage occurs within 3 weeks after emergence. During this period the crop should be frequently inspected. By Aircraft: Apply in a minimum of 10 L of water per hectare as a spray of 100 to 150 microns VMD. By Ground Rig: Apply in 20 to 200L water per hectare.
Winter cereals (wheat, barley, oats, triticale)	Aphids (<i>Rhopalosiphum</i> spp.) (Barley Yellow Dwarf virus vectors)	NSW, ACT, Vic, Tas, SA, WA only	100-300 mL/ha	To control aphids, sprays should be applied 3 and 7 weeks post emergent to reduce aphid colonisation and the spread of Barley Yellow Dwarf Virus. This program will also reduce the effect of aphid feeding damage. Use the higher rate in high pest pressure situations.

CROP	INSECT PESTS	STATE	RATE	CRITICAL COMMENTS
Winter cereals (wheat, barley, oats, triticale) (continued)	Redlegged earth mite (<i>Halotydeus destructor</i>), Blue Oat mite (<i>Penthaleus major</i> , <i>P. falcatus</i> & <i>P. tectus</i>)	All states	50 - 70 mL/ha	Apply to emerging crops at the appearance of damaging mite populations and before damage occurs. DO NOT apply pre-emergent. Apply by ground rig in a total water volume of 50-200 litres per hectare to ensure thorough coverage. Use the higher rate to control high initial infestations, if the pasture canopy is dense or when longer residual control is required. Monitor regularly and respray if necessary
			100 mL/ha	Pre-emergence (bare earth application): Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor red legged earth mite numbers and retreat if necessary. DO NOT apply as a ULV application.

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

WITHHOLDING PERIODS

HARVEST:

Grapes: NOT REQUIRED WHEN USED AS DIRECTED

Celery: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION

Broccoli, Brussel Sprouts, Cabbages, Cauliflowers,

Chou Moellier, Fodder Rape, Kale, Kohlrabi, Tomatoes:

DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION.

Green Beans DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.

Barley, Cotton, Maize, Oats, Sorghum, Sweetcorn, Tobacco, Triticale, Wheat:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

Broad Beans, Faba beans, Canola, Chickpeas, Field Peas, Garden Peas, Lentils, Linseed, Lupins, Mung Beans, Navy Beans, Pigeon Peas, Safflower, Soybeans, Sunflower:

DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

GRAZING:

Chou Moellier, Fodder Rape:

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

Barley, Broad Beans, Faba Beans, Canola, Chickpeas, Field Peas, Garden Peas, Green Beans, Lentils, Linseed, Lucerne, Lupins, Maize, Mung Beans, Navy Beans, Oats, Pasture, Pigeons Peas, Safflower, Sorghum, Soybeans, Sunflower, Triticale, Wheat:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.

EXPORT TRADE ADVICE – LIVESTOCK:

Consumption by livestock of any materials previously treated with this product, may produce residues in the animal that might not be acceptable in some export markets. Before you use this product you are advised to contact Sumitomo Chemical and/or the relevant livestock industry body about any potential trade issues and their management. You should also be prepared to inform other livestock producers, who intend using the material as stockfeed, of its chemical exposure history.