



Product Name: TITAN CHLORPYRIFOS 500 TERMITICIDE AND INSECTICIDE
APVMA Approval No: 50387/121071

Label Name:	TITAN CHLORPYRIFOS 500 TERMITICIDE AND INSECTICIDE
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Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	500 g/L CHLORPYRIFOS SOLVENT: 474 g/L HYDROCARBON LIQUID
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Mode of Action:	GROUP 1B INSECTICIDE
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Statement of Claims:	For the control of certain insect pests of fruit, vegetables, field crops and pasture and other situations and for the post-construction management of subterranean termites in accord with AS 3660.2 and other insect pests as per directions for use table THIS PRODUCT IS TOO HAZARDOUS FOR USE BY HOUSEHOLDERS. DO NOT USE THIS PRODUCT IN OR AROUND THE HOME
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Net Contents:	1000L 110L 1L 200L 20L 5L
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Restrains:	Restrains: MANAGEMENT OF SUBTERRANEAN TERMITES (All States, except Tasmania) DO NOT apply to soils if excessively wet, immediately after heavy rain or if heavy rains are expected within 48 hours to avoid run-off of chemical. DO NOT use at less than indicated label rates. DO NOT use in cavity walls, except for direct treatment of nest. DO NOT use on alkaline soils in SA (use on neutral or acidic soils only) or on dolomite based sub-slab bedding material.
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	<p>DO NOT use Horizontal barriers around homes, in residential areas, public spaces or in publicly accessible commercial areas</p> <p>GENERAL PEST CONTROL Restraint: DO NOT spray polycarbonate surfaces/roof sheeting or aged vinyl wall cladding as solvent may cause etching. DO NOT use in residential areas, public spaces or in publicly accessible commercial areas</p>
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	<p>WITHHOLDING PERIOD DO NOT GRAZE OR CUT CEREALS, PASTURES OR FORAGE CROPS FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION. COTTON: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION. DO NOT HARVEST THE FOLLOWING CROPS UNTIL THE NUMBER OF DAYS STATED BELOW HAS ELAPSED, AFTER SPRAYING:</p> <p>Mango 21 days Asparagus, Bananas, Citrus, Grapevines, Kiwifruit, Pome Fruit, Stone Fruit, Celery 14 days Cereal Grain Crops 10 days Avocado, Sugar Cane 7 days Cole Crops, Cucurbits 5 days Tomatoes 3 days Sorghum Grain Crops 2 days</p>
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Trade Advice:	
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General Instructions:	<p>GENERAL INSTRUCTIONS – For use as a Termiticide MIXING Half fill the spray tank with water (or creosote where applicable) and add the required amount of TITAN CHLORPYRIFOS 500, then add the remaining water (or creosote) with an agitator running. If using a knapsack sprayer gently shake before using. Only mix sufficient chemical for each specific application.</p> <p>CLEANING SPRAY EQUIPMENT After using TITAN CHLORPYRIFOS 500, empty the spray equipment completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, and drain. To wash the system, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles (for knapsack sprayers spray to waste through the nozzle). Drain and repeat the washing procedure twice. Dispose of rinsate/rinse water in accordance with STORAGE AND DISPOSAL instructions below.</p> <p>GENERAL INSTRUCTIONS: FOR USE AS AN INSECTICIDE Thorough coverage is essential. For application by aircraft apply in 10-50L of water/ha. MIXING Slowly add the required amount of product to the water in the spray tank under agitation. Dilute Spraying</p>
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- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

Concentrate Spraying

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine an appropriate dilute spray volume (see Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way:

EXAMPLE ONLY

1. Dilute spray volume as determined above: For example 1500L/ha
 2. Your chosen concentrate spray volume: For example 500L/ha
 3. The concentration factor in this example is: 3 X (i.e. $1500L \div 500L = 3$)
 4. If the dilute label rate is 10mL/100L, then the concentrate rate becomes 3 x 10, that is 30mL/100L of concentrate spray.
- The chosen spray volume, amount of product per 100L of water, and the sprayer set up and operation may need to be changed as the crop grows.

For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

SOIL APPLICATION

In-Furrow: Apply as a band spray to the open furrow at planting. Spray the entire furrow tilth using a nozzle located directly behind the seed tube. Ensure all spray is directed into the furrow contacting bottom, sides and all soil drawn in to the furrow at closure. Use a minimum of 20L of water/ha. Use the higher rate under extreme population numbers.

BAIT APPLICATION

Bran bait: Mix 10mL/kg of bran using sufficient water to give a moist crumb structure. Allow to stand for 2-3 hours before application. Gloves should be worn when preparing and applying the bait.

Cracked wheat or cracked sorghum bait: Mix the required volume of TITAN CHLORPYRIFOS 500 and sunflower oil together. Then, add to the wheat or sorghum, mixing thoroughly. Gloves should be worn when preparing and applying the bait.

COMPATIBILITY

TITAN CHLORPYRIFOS 500 Termiticide and Insecticide is compatible with the following:

Herbicides

Atrazine, bromoxynil, chlorsulfuron, diclofop-methyl, diuron, flamprop-methyl, fluometuron, glyphosate, paraquat, paraquat + diquat, pendimethalin, trifluralin.

Insecticides and Miticides

Acephate, azinphos-methyl, carbaryl, cypermethrin, deltamethrin, demeton-S-methyl, diazinon, dichlorvos, dicofol, dimethoate, endosulfan, ethion, fenvalerate, maldison, methidathion, methomyl, monocrotophos, oils, oxythioquinox, parathion, phosalone, phosmet, tetradifon, trichlorfon.

Fungicides

Benomyl, chlorothalonil, thiram, triadimefon, zineb, ziram.

Fertilisers

Diammonium phosphate, limestone, miloreanite, monoammonium sulphate, potash, sulphur coated urea, triple superphosphate, urea.

INCOMPATIBILITY

TITAN CHLORPYRIFOS 500 Termiticide and Insecticide is NOT compatible with the following:

	<p>Herbicides 2,4-D, Dicamba, MCPA, Tordon* 75-D, Tordon*242.</p> <p>Fungicides Fixed coppers, liquid and organic coppers, wettable sulphur.</p> <p>Fertilisers Iron sulphate, manganese sulphate, zinc oxysulphate.</p>
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Resistance Warning:	<p>INSECTICIDE RESISTANCE WARNING</p> <p>For insecticide resistance management TITAN Chlorpyrifos 500 Termiticide & Insecticide is a Group 1B insecticide. Some naturally occurring insect biotypes resistant to TITAN Chlorpyrifos 500 Termiticide & Insecticide and other Group 1B insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if TITAN Chlorpyrifos 500 Termiticide & Insecticide or other Group 1B insecticides are used repeatedly. The effectiveness of TITAN Chlorpyrifos 500 Termiticide & Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, TITAN AG Pty Ltd accepts no liability for any losses that may result from the failure of TITAN Chlorpyrifos 500 Termiticide & Insecticide to control resistant insects. TITAN Chlorpyrifos 500 Termiticide & Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier or TITAN AG representative.</p>
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Precautions:	<p>PRECAUTIONS</p> <p>DO NOT apply inside buildings except as a crack and crevice treatment. DO NOT apply to surface areas such as interior floors or walls.</p> <p>DO NOT permit re-occupancy of any premises until treated areas are completely dried (normally 3-4 hours) and adequately ventilated</p> <p>THIS PRODUCT IS TOO HAZARDOUS FOR USE BY HOUSEHOLDERS. DO NOT USE THIS PRODUCT IN OR AROUND THE HOME</p> <p>RE-ENTRY TO TREATED AREAS</p> <p>Field crops, tree crops and vines: DO NOT allow entry into treated crops until spray deposits have dried. If prior entry is required, limit duration of entry and wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.</p> <p>Cotton chippers: DO NOT allow entry into treated crops until spray deposits have dried. After this time, wear shoes or boots, socks, long trousers, long sleeved shirt, gloves and hat.</p>
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Protections:	<p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</p> <p>HIGHLY TOXIC TO BIRDS AND REPTILES. VERY HIGHLY TOXIC TO FISH AND AQUATIC INVERTEBRATES. DO NOT re-apply to the same crop within 7 days (unless specifically recommended in the Directions for Use). Spray drift may occur under adverse meteorological conditions or from certain spray equipment. DO NOT allow spray to drift onto sensitive areas including, but not limited to, natural streams, rivers or waterways and human dwellings. A spray drift management strategy such as those in the "Best Management Practices Manual for Cotton Growers" or the "Pilots and Operators Manual" should be applied. Options for minimising drift to sensitive areas include not spraying within a certain distance of sensitive areas when the wind is blowing towards them (see Table for guidance) or ensuring that drifting spray will be intercepted by a catching surface such as a row of shelter trees, an unsprayed row of orchard trees, or hail netting.</p> <p>Situation Rate (L/ha) Recommended Buffer Distance (m)</p> <p>Orchard</p>
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	<p>(dormant trees, citrus, large trees) <4 30 4-8 40 >8 50 Cotton (aerial application) – 300 Other crops (aerial application) – 100</p> <p>DO NOT apply if heavy rains or storms that are likely to cause surface run-off are forecast in the immediate area within two days of application. DO NOT apply when irrigating, or to waterlogged soil, or while water remains on the surface or in furrows, unless tail water is captured on farm. DO NOT allow contaminated run-off water from treated paddocks to enter adjacent areas or water bodies. Run-off contaminated by irrigation events (tail water) and a 25mm rainstorm should be captured on farm for two days after application. DO NOT contaminate streams, rivers or waterways with chemical or used container.</p> <p>PROTECTION OF LIVESTOCK DO NOT feed grass clippings to poultry or other animals. Dangerous to bees. DO NOT spray any plants in flower while bees are foraging.</p>
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Storage and Disposal:	<p>SMALL SPILL MANAGEMENT Wear appropriate clothing and protective equipment whilst cleaning up small spills (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, cat litter or clay granules to the spill. Sweep up contaminated material and contain in a refuse vessel for disposal. If spilled inside a building, wash contaminated surfaces to deactivate the chlorpyrifos with a dilute solution of bleach (sodium hypochlorite), prepared according to the bleach label instructions. Dispose of the contaminated material in accordance with STORAGE AND DISPOSAL instructions below.</p> <p>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-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.</p> <p>If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.</p> <p>Refillable containers Empty contents fully into application equipment. Close all valves and return to [point of supply/designated collection point/other specific collection details] for refill or storage.</p>
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Safety Directions:	<p>SAFETY DIRECTIONS Product is poisonous if absorbed by skin contact, inhaled or swallowed. Repeated exposure may cause allergic disorders. Repeated minor exposure may have a cumulative poisoning effect. Will irritate the eyes and skin. Avoid contact with eyes and skin. DO NOT inhale vapour or spray mist. When opening the container, preparing the spray and using the prepared spray, wear chemical resistant clothing buttoned to the neck and wrist and a washable hat, elbowlength PVC gloves, goggles, chemical resistant footwear and a half facepiece respirator with combined dust and gas cartridge. If clothing becomes contaminated with product, or wet with spray, remove clothing immediately. If product on the skin, immediately wash the area with soap and water. If product is in the eyes, wash it out immediately with water. After use and before eating, drinking, or smoking, wash hands,</p>
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arms and face thoroughly with soap and water. After each day's use wash gloves, goggles, respirator (and if rubber wash with detergent and warm water) and contaminated clothing.

First Aid Instructions:

FIRST AID

If swallowed, splashed on skin or in eyes, or inhaled, contact a Poisons Information Centre (Phone Australia 13 11 26, New Zealand 0800 764 766) or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. If swallowed, activated charcoal may be advised. Give atropine if instructed.

If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

First Aid Warnings:

**DIRECTIONS FOR USE AS A TERMITICIDE:
MANAGEMENT OF SUBTERRANEAN TERMITES** (All States, except Tasmania)

RATES OF APPLICATION

IMPORTANT: TITAN CHLORPYRIFOS 500 Termiticide and Insecticide should be used as part of an overall termite management program as detailed in Australian Standard Series AS 3660. A great deal of care is required to understand construction details of the building and to apply the product in a manner which ensures a complete chemical soil barrier. Where necessary, the barrier may need to be re-applied under the building. Application equipment

must be fitted with a flow meter and pressure regulator on the application device. The purpose of a chemical soil barrier is to impede and discourage concealed termite entry into a structure. Barriers may still be bridged by termites, but their entry can then be more easily detected during routine inspections. If a barrier is not complete or breached, then concealed termite entry may occur. It is often not possible to form a complete barrier around existing structures in which case other termite management options and/or more frequent inspections will also need to be considered.

SITUATION	RATE	CRITICAL COMMENTS
Installing a chemical soil barrier around and under buildings	Horizontal Barriers: 100mL/m ² Vertical Barriers: 2L/m ³	Horizontal Barriers: Use 100mL TITAN CHLORPYRIFOS 500 per 5L water and apply the mixture (emulsion) at a rate of 5L/m ² . Not to be used around homes, in residential areas, or in public spaces or in publicly accessible commercial areas. Vertical Barriers: Use 2L of TITAN CHLORPYRIFOS 500 per 100L of water and apply the mixture at a rate of 100L/m ³ . See APPLICATION VOLUME section in GENERAL INSTRUCTIONS for further information. 200mL/10L is equivalent to a 1% active ingredient emulsion. See Service requirement in GENERAL INSTRUCTIONS for expected barrier life.
Installing a chemical soil barrier around and under buildings north of the Tropic of Capricorn or where <i>Mastotermes darwiniensis</i> is a concern.	Horizontal Barriers: 200mL/m ² Vertical Barriers: 4L/m ³	This is an optional high rate for use north of the Tropic of Capricorn, or where <i>M darwiniensis</i> is a concern. Horizontal Barriers: Not to be used around homes, in residential areas, or in public spaces or in publicly accessible commercial areas. Use 200mL of TITAN CHLORPYRIFOS 500 per 5L of water and apply the mixture (emulsion) at a rate of 5L/m ² . Vertical Barriers: Use 4L of TITAN CHLORPYRIFOS 500 per 100L of water and apply the mixture at a rate of 100L/m ³ . See APPLICATION VOLUME section in GENERAL INSTRUCTIONS for further information. 4L/100L is equivalent to a 2% active ingredient emulsion. See Service requirement in GENERAL INSTRUCTIONS for expected barrier life.
Installing a chemical soil barrier around new and existing poles, e.g. transmission and building poles, fence posts and palings.	200mL/10L of water or creosote	Trench (preferred) or rod and puddle-treat backfill, ensuring a complete and continuous treated soil barrier is provided around the pole or post, to a minimum depth of 300mm and minimum width of 150mm. Use 100L of emulsion per m ² of soil. In addition, infested poles may be drilled near ground level and the cavity flooded with the emulsion. This allows seepage to form a treated soil barrier. Note: A 50mm gap between fence palings and soil will reduce termite attack and fungal decay. Only soil in contact with palings should be treated. • Replenishment is recommended within 2 years north of the Tropic of Capricorn and 5 years in other areas. • If the barrier is disturbed, or rain falls immediately after application, retreat to restore continuity and completeness of the barrier. Refer to Australian Standard Series AS 3660.
Treatment of termite nest or colony	100mL/10L of water	Once the nest or colony has been located it should be broken open and flooded with emulsion. This includes nests located in trees. When treating trees, addition of a wetting agent is suggested. Refer to Australian Standard Series AS 3660.

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

APPLICATION INSTRUCTIONS

APPLICATION EQUIPMENT

Hand Spraying

For hand spraying use a rose head shrouded nozzle operated at 170 kPa, with a flow meter and pressure regulator fitted to the hand-piece.

Treatment Beneath Concrete Slabs or Sealed Areas

Where it is not possible or practical to remove the slab to allow direct application to the soil, use a sub-slab injector fitted with multi-directional tip (eg. a B&G or similar system) with a 5 degree upward angle (eg. 3 way or 4 way) operated at 170 kPa. Ensure a strong seal with the top of the drill hole to avoid leakage. For the best distribution, the injector needs to be held vertically, at right angles to the slab, and rotated during the application through 90 degrees (if using a 4 way dispersion tip), or through 120 degrees (for a 3 way dispersion tip).

Injection into Soil

Where it is not possible or practicable to trench the soil; use a soil rod with a 3 or 4 way multi-directional tip (B&G, or similar) operated at 170 kPa. The 4 way tip needs to be rotated during the application through 90 degrees and the 3 way tip through 120 degrees.

APPLICATION VOLUME

To compensate for impervious soils such as heavy clay where application of 5L/m² would cause run-off, it may be necessary to apply a volume of emulsion less than 5L/m². When reducing the total volume of emulsion used, increase the concentration accordingly to match the label rate by mixing the required amount of TITAN CHLORPYRIFOS 500 per m² in a lesser volume of water. **DO NOT** use emulsion volumes less than 2L for every square metre to be treated.

Note: Use of emulsion volumes other than the recommended 5L/m² is only permitted when installing chemical barriers in exposed soil. It is not permitted when injecting through the slab or into sealed areas.

Existing Structures

(a) Strategic Drilling Through Slab or Sealed Areas

For treatment of slabs when termites are entering the building through the slab, where reticulation systems do not exist, slab drilling and injection will be required. In most cases, unless there is a known severe termite hazard, grid drilling of the slab is not required. Any such need is to be determined by a licensed Pest Manager. Treatment needs to be made around the inside of all exterior walls to complete a termite barrier, along both sides of interior wall partitions, around plumbing/electrical or piping entry points and along major cracks or expansion joints. When treating along major cracks or expansion joints it is recommended that holes are drilled alternately on either side of the crack at the recommended drill hole spacings.

For a sand base or sandy soil, apply through a row of holes drilled no more than 300mm apart and 100-200mm out from the wall, crack or pipe. For a clay base, apply through a row of holes drilled 150mm apart and 100mm from the wall, crack or pipe. Apply 10L of emulsion per linear metre and ensure the holes are securely plugged after treatment.

(b) External Barriers

An external barrier should be installed around the perimeter of the building and should circumference all pipes and service facilities. External barriers should be created by using either a vertical or horizontal barrier, as determined by the building construction type and adjoining ground level. **An external barrier is an essential part of the treatment when relying on a chemical soil barrier to provide the full termite management system as per AS 3660.**

An external horizontal barrier is only required when prevention of concealed vertical access by termites is necessary at the perimeter (eg, when ground level is equal to the top of a slab, where the slab is also a barrier to concealed termite movement into the building). A vertical barrier is required when prevention of concealed horizontal access is necessary (eg, where ground level is higher than building material vulnerable to concealed horizontal entry by termites).

(i) Horizontal Barrier: Do not use horizontal barriers around homes or in residential areas, or in public spaces and publicly accessible commercial areas. Use a rose head shower nozzle operated at 170 kPa to apply the required rate of 1.5L of the correctly diluted TITAN CHLORPYRIFOS 500 per lineal metre (150mm wide) to soil loosened to a depth of approximately 80mm (see **APPLICATION VOLUME** section).

(ii) Vertical Barrier: The vertical barrier should be at least 150mm wide and should reach down to 50mm below the top of the footings. To achieve this, trench to the top of the footings, and where this is not possible, a combination of trenching (preferably at least 300mm deep) and rodding into the base of the trench may be necessary. Apply TITAN CHLORPYRIFOS 500 emulsion at 100L per cubic metre of backfill soil, this equates to 1.5L of emulsion/linear metre of a trench 150mm wide and 100mm deep. Where the required vertical barrier is deeper than 100mm, ensure the same rate of application for the extra volume of soil. Use a rose head shower nozzle operated at 170 kPa to flood the base of the open trench and also to treat the backfill soil as it is replaced into the trench to ensure even distribution. Where rodding is necessary, rod before the trench is treated using the spacings in the following table.

Rod Spacings:

HEAVY CLAY SANDS	CLAY LOAMS	SANDS
150mm	200mm	300mm

Insert the rod to the foundation foot as close as possible to the house wall ensuring the chemical is applied during insertion and withdrawal. (See **APPLICATION EQUIPMENT** Section, **Injection into Soil.**)

(c) Suspended Floors

Install horizontal and vertical barriers as specified in Australian Standard Series AS 3660 to adjoin all substructure walls, stumps, piers, pipes and wastes using the techniques described for **external barriers around concrete slabs.** (See **Existing Structures** section.)

**DIRECTIONS FOR USE – AS AN INSECTICIDE
FRUIT AND VEGETABLES**

CROPS	INSECT	STATE	RATE		WITHHOLDING Period	CRITICAL COMMENTS
			VOL/HA	VOL/100 L WATER		
Bananas	Banana Scab Moth	Qld only	Aerial: 1 or 2L in a minimum of 10L water	200mL. Apply a minimum of 500L water/ha	14 days	Apply from the first appearance of flower bell and repeat as populations indicate until fingers are exposed. Use high rate with onset of wet weather and/or heavy insect pressure. Note: Burning of young fruit may occur under poor drying conditions
	Banana Weevil Borer	Qld, NSW, ACT only	Not applicable	1 or 1.8 L		After removal of trash, apply 500-700mL of spray depending on butt size, to the lower 30cm of the butt and to the surrounding soil within a radius of 30cm, ensuring thorough coverage of butt and suckers. Sub-tropical areas: Use high rate for annual control of borers. Tropical areas: Use high rate in September-November for initial spray and a follow-up with low rate in February-April should insect presence warrant a second application.
	Caterpillars	NSW, ACT only		200 mL		Apply from the first appearance of flower bell and repeat as populations indicate until fingers are exposed. Use as ground application only, do not apply by air
Carrots	Light Brown Apple Moth		500 or 700 mL	Not applicable	Not applicable	Apply when moths are first detected. Repeat at the higher rate if there is a re-occurrence of infestation.
Cassava	Cutworm	Qld only	700 mL			Apply to seedlings and soil at base of seedlings, when cutworm activity is observed.
Cole crops including cabbage, cauliflower, brussels sprouts, broccoli	Cabbage moth, Cabbage white butterfly, Cabbage aphid, Cluster caterpillar, Cabbage cluster caterpillar	NSW, ACT, VIC, TAS, SA, WA ONLY	1.5 or 2L	150 or 200mL	5 days	Spray at 10 to 14 day intervals. Use high rate under heavy pest pressure. Large plants: Use 1000L of spray/ha. To improve spray coverage add non-ionic wetting agents as recommended.
	Corn earworm Native budworm	Qld only	1.5 L	150 mL		Apply when pests first appear. Large plants: Use 1000L of spray/ha.
	Corn earworm	NSW, ACT, VIC, SA, WA ONLY	1.5 or 2L	150 or 200mL		Apply at 10 to 14 day intervals. Use high rate under heavy pest pressure. Large plants: Use 1000L of spray/ha
	Native budworm	NSW, ACT, Vic, TAS, SA, WA only				Apply at 10 day intervals commencing when pests first appear. Apply at 7 day intervals under heavy pest pressure. Large plants: Use 1000L/ha
	Wingless Grasshopper	NSW, ACT, Vic, TAS,	500 mL	50 mL		Spray areas of crop infested with grasshoppers. Also apply as a

		SA only				barrier across the line of advance, when grasshoppers are invading the crop.
	Red-legged earth mite, Blue oat mite	NSW, ACT ONLY	140 or 300mL	Not applicable		Use higher rate for severe infestations. Headlands and vegetation surrounding the crop may also need to be sprayed
Cabbage, Cauliflower	African Black beetle	NSW, ACT only	2 L (Boom spray)	300 mL (drench)	5 days	Boom spray: Apply in 500-1000L of water/ha at or soon after planting as a 10-15cm band spray. Drench: Apply 100mL of diluted spray to base of each plant. Treat as soon as the first signs of infestation are observed. Note: If attack is prolonged, follow up boom spray or drench treatment may be necessary.
Cucurbits	White flies		Not applicable	50 mL		Apply when pest is first detected. If required repeat applications every 10-14 days
Ginger	Cutworm	Qld only	700-900 mL	Not applicable	Not applicable	Apply when pest population is evident from damage to the primary shoot at or below ground, or to the first leaf during growth.
Kiwifruit	Common armyworm, Southern armyworm, Light brown apple moth	NSW, ACT, VIC, WA, SA, TAS, QLD ONLY	1 L	50 mL	14 days	Apply at green tip at least 10 days after dormant lime sulphur application and pre-blossom. Do not apply post-blossom.
Pineapples	Pineapple mealy bug, ants	Qld only	Not applicable	50 or 100 mL	Not applicable	Apply when pests are first seen and repeat at 90 day intervals or as necessary. Use a minimum of 3000L of spray/ha. Use higher rate under heavy pest pressure
	White grubs		5 L	Not applicable		Apply as a pre-plant spray to a freshly cultivated soil surface. Incorporate immediately by rotary hoeing to a depth of 10-20 cm
Potatoes	African black beetle	NSW, ACT, WA ONLY	3 or 6L			Apply the spray to the soil immediately prior to planting, ensuring thorough immediate incorporation to a depth of 15cm. Use higher rate under heavy pest pressure.
			900 mL			Apply as a second spray as bands on either side of plants at final hilling-up. Ensure good incorporation of the spray immediately into the soil in the hill.
	Whitefringed weevil	NSW, ACT, VIC, WA ONLY	6L			Apply pre-plant and incorporate into the soil immediately after application.
	Wireworm	WA, NSW, ACT only	1 L			Apply at hilling-up or 7 weeks after planting as a follow-up to preplant incorporation
	Wireworm	VIC only	6 L			Apply as a band spray to the soil surface incorporating immediately. Use before planting in areas where wireworms are a known problem
Silver Beet	Redlegged earth mite, Blue oat mite	NSW, ACT ONLY	140 or 300mL	Not applicable	Not applicable	Use higher rate for severe infestations. Headlands and vegetation surrounding the crop may also need to be treated.
Strawberries	Field crickets, Mole crickets	QLD ONLY	100mL/10kg bran bait/ha			Apply in recently ratooned strawberry patches or newly planted runners when damage or pest populations indicate. Broadcast, preferably in the late afternoon, to base of plants and inter-row space. See General Instructions on preparation of bran baits
Tomatoes	Wingless Grasshopper	NSW, ACT, VIC, SA, TAS ONLY	500mL	50mL		Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
	Wireworm False Wireworm	QLD ONLY	5L/ha sprayed	Not applicable		Apply as a band at least 10cm wide into the open furrow at planting. Spray the entire furrow width using a nozzle directly behind the planting tine. Use a minimum spray volume of 20L/ha. See General Instructions on soil application.
	African Black Beetle	NSW, ACT ONLY	2L (Boom Spray)	300mL (Drench)		Boom spray: Apply in 500-1000L of water/ha at or soon after planting as a 10-15cm band spray. Drench: Apply 100mL of diluted spray to base of each plant. Treat as soon as first sign of infestation is noticed. Note: If attack is prolonged, follow-up boom spray or drench treatment may be necessary.
	Tomato grubs	QLD, NSW, ACT, VIC, WA ONLY	1.5 or 2L	150 or 200mL	3 days	Spray on 7 to 10 day schedule commencing at flowering. Use high rate under heavy pest pressure
	Native Budworm	TAS only				
	Green Vegetable Bug	TAS, SA, WA only				Spray at first sign of bug activity. Use higher rate under heavy pest pressure.
	Green Peach Aphid	QLD, VIC, TAS, SA, WA ONLY	1 L	100 mL		Spray when aphids are seen. Large plants: Use 1000L/ha.
Vegetables including asparagus, beans, beetroot, broccoli, brussels	Wingless Grasshopper	NSW, ACT, VIC, TAS only	500 mL	50 mL	Tomatoes – 3 days Cole crops – 5 days Asparagus, celery – 14 days	Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
	Cutworm	ALL STATES	700 mL	70 mL		Apply immediately infestation is observed. Increase concentration to compensate if application is below 1000L/ha. Spray should cover soil out to at least 20cm on both sides of row

sprouts, cabbage, cauliflower, capsicum, carrot, celery, eggplant, onion, peas, potato, radish, rhubarb, shallot, sweet potato, tomato, turnip						crop.
	Field crickets, Mole crickets	QLD ONLY	100mL/10kg bran bait/ha	Not applicable		Apply as pest populations indicate. See General Instructions on preparation of bran baits
	Vegetable weevil	NSW, ACT ONLY	800mL			Apply immediately infestation is observed. Apply as a band over the young plants and adjacent soil along the row. One treatment should be sufficient if plants are sprayed at the seedling stage or soon afterwards
Apples, Pears	San Jose scale	QLD, NSW, ACT, SA, WA ONLY	Not applicable	100 mL (2% miscible winter oil may be added to the dormant spray)	14 days	Dormant period: Apply as late as possible ensuring thorough coverage of all branches. Seasonal period: Apply to coincide with crawler activity in mid-late November and later as necessary. Ensure thorough coverage of all branches, foliage and fruit.
	Woolly aphid					Apply when infestation build-up is first noticed ensuring thorough coverage.
	Wingless Grasshopper	NSW, ACT ONLY	500 mL	50 mL		Apply to areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop
Avocado	Avocado leafroller	QLD ONLY	1 or 2L	50 or 100mL	7 days	Use this rate in tank mix with 1L/ha (500mL/100L of water) of dichlorvos (500g/L). For the low volume spray equipment use L/ha rate. Apply at first sign of pest activity before larvae move to fruit. Use higher rate when populations are high
	Ivy leafroller	NSW, ACT ONLY				Apply at first sign of pest activity before larvae move to fruit. Use higher rate when populations are high. For low volume spray equipment use L/ha rate
	Latania scale, Hairy caterpillars, Light brown apple moth, Red shouldered leaf beetle		Apply when populations indicate treatment is required. Spotspray affected trees only. Repeat as necessary. Use higher rate when populations are high.			
Citrus	California red Scale	NSW, ACT, VIC, WA, SA, TAS only	Not applicable	100mL alone or 50mL + 1L miscible summer spraying oil	14 days	Apply during November-March period. Two sprays may be required under conditions of heavy scale infestation. Apply with high volume sprayer to point of run-off. Note: Do not use on citrus in areas where integrated control programmes are in operation
		Qld only		ONLY 100mL alone or 100mL + 1L miscible summer spraying oil		
Citrus, Pome Fruits	Wingless grasshopper	VIC, TAS, SA only	500 mL	50 mL		Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
Grapevines	Light brown apple moth	ALL States	500 mL	50 mL		Apply initial spray just after berry set (early October). Later schedule sprays should be made as required
	Grapevine moth Grapevine Scale	Qld, NSW, ACT, TAS, SA, WA only	Not applicable	100mL alone or 50mL + 1L miscible winter oil		Apply as a dormant spray, post-pruning (July).
Kiwifruit – trellised	Common armyworm, Southern armyworm, Light brown apple moth	NSW, ACT, VIC, WA, SA, TAS, QLD ONLY	1 L	50 mL		Apply at green tip at least 10 days after dormant lime sulphur application and pre-blossom. Do not apply post-blossom
Mango	Common mango scale	QLD ONLY	Not applicable	100mL	21 days	Apply to coincide with crawler activity. Ensure thorough coverage of all branches, foliage and fruit
Stonefruit	European earwig	NSW, ACT ONLY	2 L	100 mL	14 days	Spray application: Apply in a minimum of 2000L/ha in spring. If lower volume used, increase concentration to apply 2L of product/ha
			200mL + 250mL sunflower oil/ 5kg cracked wheat or cracked			Bait application: Apply 5kg of bait/ha in spring by fertiliser spreader. See General Instructions on preparation of cracked wheat or cracked sorghum bait

			sorghum bait			
	San Jose Scale	QLD, WA, NSW, ACT ONLY	Not applicable	100mL (2% miscible winter oil may be added to the dormant spray)		<p>Dormant period: Apply as late as possible ensuring thorough coverage of all branches.</p> <p>Seasonal period: Apply to coincide with crawler activity in mid-late November and later if necessary.</p> <p>Ensure thorough coverage of all branches, foliage and fruit.</p> <p>Note: Some fruit marking may occur if high volume spraying is carried out under hot, dry conditions</p>
Tomatoes – trellised	Wingless grasshopper	NSW, ACT, VIC, TAS, SA ONLY	500mL	50mL	3 days	Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop
	Wireworm, False wireworm	QLD ONLY	5L/ha sprayed	Not applicable	Not applicable	Apply as a band at least 10cm wide into the open furrow at planting. Spray the entire furrow width using a nozzle directly behind the planting tine. Use a minimum spray volume of 20L/ha. See General Instructions on soil application.
	African black Beetle	NSW, ACT only	2 L (Boom spray)	300 mL (drench)		<p>Boom spray: Apply in 500-1000L of water/ha at or soon after planting as a 10-15cm band spray.</p> <p>Drench: Apply 100mL of diluted spray to base of each plant. Treat as soon as first sign of infestation is noticed. Note: If attack is prolonged, follow-up boom spray or drench treatment may be necessary</p>
	Tomato grubs	NSW, ACT, QLD, VIC, WA ONLY	1.5 or 2 L	150 or 200 mL	3 days	Spray on 7 to 10 day schedule commencing at flowering. Use high rate under heavy pest pressure
	Native budworm	TAS ONLY				
	Green vegetable bug	TAS, SA, WA ONLY				Spray at first sign of bug activity. Use higher rate under heavy pest pressure
	Green peach aphid	QLD, VIC, TAS, SA, WA ONLY	1L	100mL		Spray when aphids are seen. Large plants: Use 1000L/ha.

FIELD CROPS AND PASTURE

CROPS	INSECT	STATE	VOL/HA	WITHHOLDING PERIODS	CRITICAL COMMENTS
Canola (rapeseed)	Wireworm, False wireworm	QLD ONLY	1 or 1.5L/ha	Not applicable	Apply as a broadcast application. Use higher rate with extreme population numbers. See General Instructions on soil application
Cereals, Pasture, forage crops	Southern armyworm, Common armyworm	ALL STATES	700 or 900mL	Cereals - 10 days Grazing - 2 days	Spray over total crop area when infestation is widespread. When pests are moving as an "army", treat a broad strip over and in advance of the infestation. Late stage instar: Use higher rate when larvae 3cm in length. Apply follow-up as required.
Cereals	Pasture webworm	NSW, ACT, VIC, TAS, SA ONLY	700 mL		Spray at first sign of damage. Apply with ground-rig boom or mister or by air.
		WA only	300 mL		<p>Pre-plant: Apply with the label rate of an approved tillage herbicide to foliage prior to any cultivation.</p> <p>Post-emergence: Apply at first sign of damage. Apply with ground-rig boom or mister or by air.</p>
Cereals, Pasture, young plants of oil seeds	Cutworm	QLD, NSW, ACT, TAS, WA ONLY	900mL in a minimum of 100L water		Apply immediately infestation is observed. Apply follow-up treatments as required.
		VIC ONLY	700mL in a minimum of 100L water		
Cereals, pasture, oil seeds	Cutworm (<i>Agrotis munda</i> and <i>A. infusa</i>)	SA ONLY	100L water		
Cereals,	Cereal curculio	SA, WA ONLY	120mL/ 100kg seed	Not applicable	Apply as a seed dressing just prior to sowing through an accurately calibrated applicator. Note: A sowing rate of 95kg/ha (min.) is necessary to ensure economic responses are achieved.
Cereals, pasture, forage crops	Spur-throated locust	Qld, NSW, ACT, VIC, WA ONLY	1.25 or 1.5 L	Cereals 10 days Grazing – 2 days	Spray areas of crop or pasture infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. Late stage hoppers and adults: Use higher rate.
	Australian Plague Locust	VIC only	560 mL 350 mL		Adults: Spray areas of crop or pasture infested with locusts. Hoppers: Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying until all hoppers have been contacted
		SA only Qld, NSW, ACT, VIC,	560 mL 350 mL		Adults: Spray areas of crop or pasture infested with locusts. Hoppers: Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying

		WA ONLY			until all hoppers have been contacted
	Migratory locust	Qld only			Spray areas of crop, trees and roosting sites infested with locusts
	Blue oat mite	All states	140 mL		Spray when pests appear in large numbers, 3-6 weeks after autumn rains.
	Red legged earth mite	NSW, ACT, VIC, WA, TAS, SA ONLY			Re-spray as necessary. Avoid spraying when pests are sheltering. Spray when at least 2.5cm cover of pasture or crop is present. DO NOT spray if rain is imminent
	Lucerne Flea	NSW, ACT ONLY	70 mL		
Cereals, pasture, oilseeds	Wingless grasshopper	NSW, ACT, VIC, TAS, SA ONLY	500mL		Spray area of crop or pasture infested with grasshoppers. Apply also as a barrier across the line of advance, when grasshoppers are invading the crop
Field Peas, broad beans, chickpeas, lupins, lucerne, lucerne pastures and clover seed crops, rapeseed, linseed, safflower, wheat, oats, barley, rye, triticale. Improved annual pastures, establishing perennial pastures.	Blue oat mite, Redlegged earth mite	NSW, ACT ONLY	140-300 mL		Apply as a ground spray immediately prior to seedling emergence using sufficient water to give good coverage. If mite activity is severe, also spray headlands and surrounding vegetation prior to seedling emergence.
Cotton (young plants)	Cutworm	Qld, NSW, ACT only	900mL in a minimum of 100L water	4 weeks (harvest) 4 weeks (grazing)	Apply immediately infestation is observed. Apply follow-up treatments as required.
Cotton	Southern armyworm, Common armyworm		700 mL or 900 mL		Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat broad strip over and in advance of the infestation. Late stage instar: Use higher rate when larvae 3cm in length. Apply follow-up treatments as required.
	Pink spotted bollworm moth	Qld only	1 L		Apply when 10-15 moths are trapped on two consecutive nights. This prevents infestation of bolls by larvae.
	Spur-throated locusts	Qld, NSW, ACT only	1.25 or 1.5 L		Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts Late stage instar: Use higher rate.
	Wingless Grasshopper		500 mL		Spray areas of crop infested with grasshoppers. Apply also as a barrier across the line of advance when grasshoppers are invading the crop.
	Cotton aphid		300 or 400 mL		Apply when pests first appear. Re-spray as indicated by field inspection. Use higher rate for higher populations.
	Cotton flea beetle, Red shouldered leaf Beetle		900 mL or 1.5 L		Apply when pests are present. Use higher rate under heavy pest pressure.
	Springtails		300 mL		Spray when large numbers of pests occur and damage is evident. Re-spray as necessary.
	Migratory locust	Qld only	350 mL		Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts
	Wireworm, False wireworm	Qld, NSW, ACT only	In-furrow: 5 to 15mL/100m row or 500mL to 1.5L/ha for row spacing of 1 metre		Use higher rate with extreme population numbers. See General Instructions on soil application.
Lucerne (young plants)	Cutworm	QLD, NSW, ACT, TAS, WA ONLY	900mL in a minimum of 100L water	Grazing – 2 days	Apply immediately infestation is observed. Apply follow-up treatments as required.
	Cutworm (<i>Agrotis munda</i> and <i>A. infusa</i>)	Vic only SA only	700mL in a minimum of 100L water		
Lucerne	Webspinner caterpillar	Qld, NSW, ACT only	700 mL		Spray when pests appear
	Lucerne leaf roller		300 or 400 mL		Apply when pests first appear. Late stage instar: Use higher rate when larvae 1.5cm in length are present and/or under heavy pest pressure.
Lucerne and medics in pasture and forage crops	Spotted alfalfa aphid, Bluegreen aphid	NSW, ACT only	200 or 300 mL		Spray when aphids first appear. Use the higher rate when large numbers of aphids are invading the crop
		QLD, VIC, TAS,			Seeding lucerne, medics: Apply when 1-2 aphids/plant are observed.

		SA, WA ONLY			Established lucerne, medics: Apply when 20-40 aphids/stem are observed.
	Pea aphid	QLD, NSW, ACT, VIC, TAS, SA ONLY			
	Sitona weevil	NSW, ACT, VIC, TAS, SA ONLY	350 mL		Apply October to December, or in autumn when adults occur in damaging numbers
Maize	African Black Beetle	NSW, ACT only	20mL/100m of row or 2L/ha for row spacing of 1 metre	Not applicable	Apply at sowing as a 15-20cm band spray. For best results spray nozzles should be in front of press wheels on planter. Press wheels assist in establishment
Maize, soybeans, sunflower	False wireworm, Cockroaches, Field crickets	Qld only	100mL + 125mL sunflower oil/ 2.5kg cracked wheat or cracked sorghum bait/ha		Apply at planting of crop. See General Instructions on preparation of cracked wheat or sorghum bait.
Maize, Sunflower	Wireworm, False wireworm	Qld, NSW, ACT only	In-furrow: 5 to 15mL/100m row or 500mL to 1.5L/ha for row spacing of 1 metre		Use higher rate with extreme population numbers. See General Instructions on soil application
Pasture	Lawn armyworm		700 mL	Grazing-2 days	Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. Apply follow-up treatments as required.
	Sod webworm	Qld only			Spray as early as possible once pests appear. Apply with ground-rig boom or mister. Re-spray as necessary
	Blackheaded pasture cockchafer	NSW, ACT, VIC, TAS, SA, WA ONLY	900 mL		Treat when larvae are actively foraging as indicated by numerous piles of fresh soil, or casts on the surface. This usually occurs after showers of rain following short dry spells. Apply by ground-rig boom.
Pasture, forage crops	Underground Grass grub	NSW, ACT, VIC, SA, WA ONLY			Apply when caterpillars are actively feeding. Spray before noticeable damage has occurred. Graze pasture prior to spraying to ensure penetration of spray into the pasture sward.
	Brown Pasture Looper	NSW, ACT, VIC, TAS, SA, WA ONLY	700 mL		Spray at first sign of pasture infestation
	Pasture webworm				Spray at first sign of damage. Apply with ground-rig boom or mister or by air.
Rice	Bloodworm	NSW, ACT ONLY	60 to 150 mL	10 days	Use higher rate when water more than 15cm or amount of decaying plant material is high
	Brown planthopper	QLD only	1.5 L		Apply when pest numbers reach 1-2 per tiller and repeat as necessary.
Sorghum Note: (DO NOT use on Sugar Drip or Alpha sorghum. Check new varieties before applying to entire crop.)	Southern armyworm, Common armyworm	QLD, NSW, ACT ONLY	700 or 900mL	2 days	Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. Late stage instar: Use higher rate when larvae 3cm in length. Apply follow-up treatments as required.
	Cutworm		900mL in a minimum of 100L water		Apply immediately infestation is observed. Apply follow-up treatments as required
	Spur-throated locust		1.25 or 1.5L		Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. Late stage instar: Use higher rate.
	Australian Plague Locust		350 mL		Adults: Spray areas of crop infested with locusts. Hoppers: Spray a swath in advance of marching band and the dense marching front. Continue spraying until all hoppers have been contacted.
	Migratory locust	Qld only			Spray all areas of crop, trees and roosting sites infested with locusts
	Sorghum Midge		500 mL		Check regularly (preferably in the morning) and apply when 1-2 midge per head are present from first emergence of boot to pollen shedding. With repeated attack spray at intervals of 5 days or less.
	Wireworm, False wireworm	Qld, NSW, ACT ONLY		In-furrow: 5 to 15mL/100 m row or 500mL to 1.5L/ha for row spacing of 1 metre	Not applicable

	Corn aphid		500 mL	2 days	Apply when damaging populations of aphids occur.
	False wireworm, Cockroaches, Field crickets	QLD ONLY	100mL + 125mL sunflower oil/ 2.5kg cracked wheat or cracked sorghum bait/ha	Grazing - 2 days	Apply at planting of crop. See General Instructions on preparation of cracked wheat or cracked sorghum bait.
Sugarcane	Southern Armyworm Common Armyworm		700 or 900 mL	7 days Grazing - 2 days	Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. Late stage instar: Use higher rate when larvae 3cm in length. Apply follow-up treatments as required.
	Spur-throated locust		1.25 or 1.5 L	7 days Grazing - 2 days	Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. Late stage hoppers and adults: Use higher rate.
	Australian plague locust, Migratory locust	Qld only	350 mL		Adults: Spray areas of crop infested with locusts. Hoppers: Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying until all hoppers have been contacted. Spray areas of crop, trees and roosting sites infested with locusts.
	Symphylids		2 L		Apply as a low pressure (less than 35 kPa) or gravity feed spray onto the plant sett and adjacent to soil, at the point of exit from the rear of the planting machine, immediately prior to soil cover being brought in over the sett.
	Sugarcane wireworm	Qld, NSW, ACT ONLY	1.5 L		Apply at planting or ratooning. Apply as a low pressure (less than 35 kPa) or gravity feed spray onto the plant sett and adjacent soil through a nozzle placed above the planter boards. Repeat treatment within 12 weeks of planting if black beetles re-occur
	African black beetle, Black beetle	NSW, ACT ONLY			
Tobacco	Wireworm, False wireworm, Cutworm	VIC ONLY	3.0L	Not applicable	Apply as a pre-plant spray to cultivated soil surface. Incorporate immediately by rotary hoeing to a depth of 10cm.

GENERAL PEST CONTROL

RESTRAINTS

DO NOT spray polycarbonate surfaces/roof sheeting or aged vinyl wall cladding as solvent may cause etching.

Do not use around homes or in residential areas, or in public spaces and publicly accessible commercial areas.

SITUATION	PEST	RATE	CRITICAL COMMENTS
Commercial and industrial areas not accessible to the public.	Cockroaches (residual control and/or heavy infestations)	95mL/10L of water	Apply as a coarse, low pressure spray to the point of run-off, to cracks, crevices, harbourages, eaves, downpipes and other places where pests may occur. For optimum control of webbing spiders, use a 2-part treatment. After applying as a coarse, low pressure spray to harbourages where the spiders may occur, apply a light spray over surfaces of the building
	Spiders		
	Silverfish	50 mL/10L of water	
	Cockroaches (light infestations)		
	Ants including Argentine ants	95mL/10L of water. Use at least 1L spray/ 10m: infested area	Locate ant nests and treat appropriately. Spray ant tracks or where ant activity is noticed. Apply to paths in continuous 300mm bands. Apply to base of buildings, walls, fences, rock-works, trunks of shrubs and trees, and other hard surfaces to a height of 300mm. Note: All occurrences of Argentine Ants are to be reported to WA Department of Agriculture
	Fleas (outdoor use only)	90mL/10L of water	Apply as a fine droplet spray. Outdoors only. Treat areas where animals frequent. Remove animals during treatment and until spray deposit is dry. Do not treat pets with this product. Pets should be treated with a product registered for application to animals.
Hides/skins	Hide beetles	200mL/100L of water. Use at least 30mL of spray/skin	Apply spray to flesh side of skins or hides sufficient to moisten them. Ensure coverage of ears and lugs. To minimise the chance of later infestations, storage area should be sprayed regularly. Repeat application every 3 months. Access through bales should be maintained for application of product.

Light vegetation not around homes or in residential areas, or in public spaces and publicly accessible commercial areas.	Mosquito larvae	30mL/ha	Dilute with water and apply as a spray to areas infested with mosquitoes.
Medium vegetation not around homes or in residential areas, or in public spaces and publicly accessible commercial areas.		60mL/ha	
Heavy vegetation not around homes or in residential areas, or in public spaces and publicly accessible commercial areas.		105mL/ha	
Light to medium Vegetation not around homes or in residential areas, or in public spaces and publicly accessible commercial areas.	Mosquito adults	60mL/ha	
Medium to heavy Vegetation not around homes or in residential areas, or in public spaces and publicly accessible commercial areas.		105mL/ha	
Polluted water impoundments	Mosquitoes (larvae and adults)	2mL/10,000L water or 20mL/100m ³ of water	

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