RLP
APPROVED

Product Name: IMTRADE CHLORPYRIFOS 500 INSECTICIDE
APVMA Approval No: 51190/120804

Label Name:	IMTRADE CHLORPYRIFOS 500 INSECTICIDE

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

Constituent Statements:	500 g/L CHLORPYRIFOS 486 g/L HYDROCARBON LIQUID

Mode of Action:	GROUP 1B INSECTICIDE

Statement of Claims:	For the control of a wide range of insect pests on fruit, vegetables, oilseeds, cotton, cereals, pasture, the post-construction management of subterranean termites in accord with Australian Standard AS 3660.2 and other domestic insect pests as specified in the Directions for Use table. IMPORTANT: RESTRICTED CHEMICAL PRODUCT ONLY TO BE SUPPLIED TO, OR USED BY, AN AUTHORISED PERSON. THIS PRODUCT IS TOO HAZARDOUS FOR USE BY HOUSEHOLDERS. DO NOT USE THIS PRODUCT IN OR AROUND THE HOME.

Net Contents:	5L-1000L

Restraints:	RESTRAINTS - 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 S.A. (use on neutral or acidic soils only) or on dolomite based sub-slab bedding material.

	ENSURE that dolomite sub slab bedding material is permeable to termiticide application (DEPENDING ON CURRENT LABEL). RATES OF APPLICATION IMPORTANT: Imtrade Chlorpyrifos 500 Insecticide should be used as part of an overall termite management program as detailed in Australian Standard Series AS3660. 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. RESTRAINTS - COMMERCIAL PEST CONTROL ONLY DO NOT spray polycarbonate surfaces/ roof sheeting or aged vinyl wall cladding as solvent may cause etching.

Directions for Use:	This section contains file attachment.

Other Limitations:	

Withholding Periods:	BEANS, BEETROOT, CARROTS, CAPSICUM, CASSAVA, EGG PLANT, GINGER, HOPS, ONIONS, PEAS, PINEAPPLES, POTATOES, RADISH, RHUBARB, SHALLOTS, STRAWBERRIES, SWEET POTATOES, TOBACCO AND TURNIP: NOT REQUIRED WHEN USED AS DIRECTED. GRAIN SORGHUM, LUCERNE: DO NOT APPLY LATER THAN 2 DAYS BEFORE HARVEST. DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION. TOMATOES: DO NOT APPLY LATER THAN 3 DAYS BEFORE HARVEST. COLE CROPS: DO NOT APPLY LATER THAN 5 DAYS BEFORE HARVEST. SUGAR CANE: DO NOT APPLY LATER THAN 7 DAYS BEFORE HARVEST. CEREALS (EXCEPT GRAIN SORGHUM), LEGUMES, FORAGE CROPS, MAIZE, PASTURE, RICE: DO NOT APPLY LATER THAN 10 DAYS BEFORE HARVEST. DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION. ASPARAGUS, BANANAS, CELERY, CITRUS, GRAPEVINES, POME FRUIT: DO NOT APPLY LATER THAN 14 DAYS BEFORE HARVEST. COTTON: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION. ALL OTHER ANIMAL FEEDS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION.

Trade Advice:	

General Instructions:	This section contains file attachment.

Resistance Warning:	For insecticide resistance management Imtrade Chlorpyrifos 500 Insecticide is a Group 1B Insecticide. Some naturally occurring insect biotypes resistant to Imtrade Chlorpyrifos 500 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 Imtrade Chlorpyrifos 500 Insecticide or other Group 1B insecticides are used repeatedly. The effectiveness of Imtrade Chlorpyrifos 500 Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Imtrade Australia Pty Ltd accepts no liability for any losses that may result from the failure of Imtrade Chlorpyrifos 500 Insecticide to control resistant insects. Imtrade Chlorpyrifos 500 Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Imtrade Australia Pty Ltd representative or local agricultural department agronomist.

Precautions:	RE-ENTRY TO TREATED AREAS: 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. Greenhouses: DO NOT allow entry into greenhouses until spray deposits have dried and treated areas are adequately ventilated. 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 and half-face respirator. Clothing must be laundered after each day's use. Not for home, garden, residential or publicly accessible spaces. Cotton Chippers: DO NOT allow entry to treated areas until spray deposits have dried. After this time, wear shoes or boots, socks, long trousers, long sleeved shirt, gloves and hat. PRECAUTIONS - Commercial Pest Control DO NOT apply inside buildings except as a crack and crevice treatment. DO NOT apply to surface areas such as interior floors or walls. RE-ENTRY TO TREATED AREAS - Post construction termite control and general pest control DO NOT permit re-occupation of any premises until treated areas are completely dry (normally 3-4 hours) and adequately ventilated.

Protections:	FOR AGRICULTURAL PROTECTION OF LIVESTOCK Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT VERY HIGHLY TOXIC TO FISH AND AQUATIC INVERTEBRATES. VERY HIGHLY TOXIC TO BIRDS AND REPTILES. DO NOT re-apply to the same crop within 7days (unless specifically recommended in the directions for use). DO NOT apply when irrigating, or to waterlogged soil, or while water remains on the surface or in furrows, unless tailwater is captured on farm. 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 allow contaminated run-off water from treated paddocks to enter adjacent areas or water bodies. Run-off contaminated by irrigation events (tailwater) and a 25-mm rainstorm should be captured on farm for two days after application. Spray Drift Warning

	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. Ensure spray drift does not contaminate adjacent crops. 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. See also Spray Drift Minimisation in GENERAL INSTRUCTIONS. FOR COMMERCIAL PEST CONTROL PROTECTION OF PETS AND LIVESTOCK Before spraying, remove animals and pets from buildings and other areas to be treated. Cover or remove any open food or water containers. Cover or remove fish tanks before spraying. DO NOT allow animals and pets to contact treated areas for at least 24 hours. Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT VERY HIGHLY TOXIC TO FISH AND AQUATIC INVERTEBRATES. Rinse waters and run-off from treated areas MUST NOT enter drains or waterways. For under-slab treatments the moisture membrane MUST be installed immediately after treatment. DO NOT apply to waterlogged soils. DO NOT apply if heavy rains are expected to occur within 48 hours of application. VERY HIGHLY TOXIC TO BIRDS. DO NOT treat fill unless it has been placed back in the trench to form the chemical soil barrier. DO NOT spray directly on to the foliage of plants as damage to some species is possible. 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.

Storage and Disposal:	The method of disposal of the container depends on the container type. Read the Storage and Disposal instructions on the label that is attached to the container. Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. All other non-refillable containers Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemical on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm 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 and product. DO NOT re-use empty container for any other purpose. Envirodrum - Micro Matic Valve (110L) Store the original sealed Envirodrum in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any other foreign matter.

	After each use of the product please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase. Refillable Containers (1000L only) Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

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 spray and using the prepared spray, wear chemical resistant clothing buttoned to the neck and wrist and washable hat, elbow-length chemical resistant gloves, goggles and chemical resistant footwear and half facepiece respirator with combined dust and gas cartridge/canister. If clothing becomes contaminated with product or wet with spray remove clothing immediately. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. 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, goggles respirator (if rubber, wash with detergent and warm water) and contaminated clothing.

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

First Aid Warnings:	

AGRICULTURAL DIRECTIONS FOR USE

DIRECTIONS FOR USE: FRUIT & VEGETABLES

Crop	Insect	State	Rate Vol/ha	Rate Vol/100L	Withholding Period	Critical Comments
Apples Pears	San Jose Scale	NSW, SA, WA QLD only	-	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 limbs and branches. **Seasonal period:** Apply to coincide with crawler activity in mid-late November and later as necessary. Ensure thorough coverage of limbs, branches foliage and fruit.
	Woolly Aphid					Apply when infestation build-up is first noticed ensuring thorough coverage
	Mealy Bugs	SA, WA only				Apply initially at petal fall and then 10-14 days later. Apply a follow-up application if necessary, 2-3 weeks prior to harvest. Thorough coverage of all limbs and branches are essential.
Bananas	Banana Scab Moth (*Nacoleia octasema*)	QLD only	1 - 2L	200 mL	14 days	Apply from the first appearance of flowers and repeat as populations indicate until fingers are exposed. Use high rate with onset of wet weather and/or heavy insect pressure.
	Banana Weevil Borer	QLD, NSW, WA only	-	1 - 1.8L		After removal of trash, apply 500-700 mL of spray (depending on bun 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 Sep-Nov for initial spray and follow up with low rate in Feb-April should insect numbers warrant a 2nd application.
Cassava	Cutworm (*Agrotis* spp.)	QLD only	700 mL	-	Nil	Apply to seedlings and soil at the base of seedlings when cutworm activity is observed
Citrus	California Red Scale (*Aonidella aurantii*)	QLD, Vic, NSW, SA, WA only	-	100 mL or 50 mL plus 1L miscible summer spraying oil	14 days	Apply during Nov-March period. Two sprays may be required under conditions of heavy scale infestation. Apply with high volume sprayers to point of run-off. **NOTE: DO NOT** use on citrus in areas where integrated control programs are in operation.
	Wingless Grasshopper		500 mL	50 mL		Spray areas of crop-infested with grasshoppers. Apply also as a barrier across the line of advance, when grasshoppers are invading the crop.

DIRECTIONS FOR USE: FRUIT & VEGETABLES (Continued)

Crop	Insect	State	Rate Vol/ha	Rate Vol/100L	Withholding Period	Critical Comments
Cole crops including Cabbage, Cauliflower, Brussel Sprouts, Broccoli	Cabbage Moth, Cabbage White Butterfly, Cabbage Aphid, Cluster Caterpillar, Cabbage Cluster Caterpillar	NSW, Vic, WA Tas, SA only	1.5 - 2L	150 – 200 mL	5 days	Spray at 10-14 day intervals. Use high rate under heavy pressure. **Large Plants:** Use 1000L/ha. To improve spray coverage, add non-ionic wetting agents as recommended.
	Corn Earworm, Native Budworm (*Helicoverpa* spp.)	QLD only	1.5L	150 mL		Apply as pests indicate commencing when pests first appear. **Large Plants**: Use 1000L/ha.
	Corn Earworm	NSW, Vic, SA, WA only	1.5 - 2L	150 – 200 mL		Apply at 10-14 day intervals. Use high rate under heavy pest pressure. **Large Plants**: Use 1000L/ha.
	Native Budworm (*Helicoverpa punctigera*)	NSW, VIC, SA, Tas, WA only	1.5-2L	150 – 200 mL		Apply at 10-day intervals commencing when pests first appear. Apply at 7-day intervals under heavy pest pressure. **Large Plants**: Use 1000L/ha.
Grape Vines	Lightbrown Apple Moth	All States	500 mL	50 mL	14 days	Apply initial spray just after berry set (early October). Later schedule sprays should be made as required.
	Grapevine Moth (*Phalaenoides glycinae*)	QLD, Tas, SA, NSW, WA only				
	Grapevine Scale (*Parthenolecanium persicae*)	QLD, Tas, SA, NSW, WA only	-	100mL or 50mL plus 1L miscible winter oil		Apply as a dormant spray, post pruning (July).
Ginger	Cutworm *(Agrotis* spp*.)*	QLD only	700 - 900 mL	-	NIL	Apply when pest population is evident from damage to the primary shoot at or below ground, or to the first leaf during growth.
Pineapples	Pineapple Mealy-bug, Ants	QLD only		50-100 mL use a minimum of 3000L water/ha	NIL	Apply when pests are first seen and repeat at 90-day intervals or as necessary. Use Higher rate under heavy pest pressure. Use a minimum of 3000L/ha.
Potatoes	African Black Beetle	NSW only	3.6L and 900 mL	-	NIL	Apply the spray to the soil immediately prior to planting, ensuring thorough incorporation at a depth of 15cm. Use high rate under heavy pest pressure. Apply as a second spray at tuber initiation.
Strawberries	Field Crickets (*Teleogryllus commodus*), Mole Crickets *(Gryllotalpa* spp*.)*	QLD only	100 mL/kg bran bait	-	NIL	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. Refer to Mixing Instructions on preparation of bran bait.

DIRECTIONS FOR USE: FRUIT & VEGETABLES (Continued)

Crop	Insect	State	Rate Vol/ha	Rate Vol/100L	Withholding Period	Critical Comments
Tomatoes	Tomato Grub (*Helicoverpa armigera*)	QLD, Vic, WA, NSW only	1.5 - 2L	150 – 200 mL	3 days	Spray on 7-10 day schedule commencing at flowering. Use high rate under heavy pest pressure.
	Native Budworm (*Helicoverpa punctigera*)	Tas only				
	Green Vegetable Bug	Tas, SA, WA only	1.5L	150 mL	3 days	Spray at first sign of bug activity.
	Green Peach Aphid	QLD, Vic, Tas, SA, WA only	1L	100 mL	3 days	Spray when aphids are seen. **Large Plants**: Use 1000L/ha.
	False Wireworm (*Gonocephalum spp*)	QLD only	5L	-	3 days	Apply as a band spray at least 10cm wide into the open furrow at planting. Spray the entire furrow width using a nozzle directly behind the planting tyne. Use a minimum spray volume of 20L/ha. See General Instructions Soil Application.
Young plants of Vegetables Asparagus, Beans, Beetroot, Broccoli, Brussels Sprouts, Cabbages, Cauliflower, Capsicums, Carrots, Celery, Eggplants, Onions, Peas, Potatoes, Radishes, Rhubarb, Shallots, Sweet Potatoes, Tomatoes and Turnips.	Wingless Grasshopper	NSW, Vic, Tas, SA only	500 mL	50 mL	Refer to WHPs for each crop	Spray areas of crops infested with grasshoppers. Apply also as a barrier across the line of advance when grasshoppers are invading the crop.
	Cutworm *(Agrotis* spp.*)*	All States	700 mL	70 mL	Refer to WHPs for each crop	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 crop. Re-treat as necessary.
	Field Crickets (*Teleogryllus commodus*), Mole Crickets (*Gryllotalpa* spp)	QLD only	100 mL/10kg Bran bait			Apply as pest populations indicate. Refer to Mixing Instructions on preparation of bran bait.

DIRECTIONS FOR USE: FIELD CROPS & PASTURE

Crop	Insect	State	Rate Vol/ha	Withholding Period	Critical Comments
Cereals, Pastures, Forage Crops	Southern Armyworm (*Persectania ewingii*), Common Armyworm (*Mythimna convecta*)	All States	700 – 900 mL	Grazing-(other than cotton) 2 days Harvest 10 Days *Cotton – 4 weeks (harvest and grazing)	Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat as a broad strip over and in advance of the infestation. **Late Stage instar**: Using higher rate when larvae 3cm in length. Apply follow-up treatment as required.
Cereals	Pasture Webworm (*Hednota spp*)	NSW, Vic, Tas, WA only	700 mL		Spray at first sign of damage. Apply from the ground with boom or mister or apply by air.
Cereals, Pasture, Young Plants of Oil Seeds* (except cotton)	Cutworm *(Agrotis* spp.*)*	QLD, Tas, NSW, WA only	900 mL in a min of 100L water		Apply immediately infestation is observed. Apply follow-up treatment as required.
		Vic only	700 mL in a min of 100L water		Apply immediately infestation is observed. Apply follow-up treatment as required.
Cereals, pasture, Oil Seeds* (except cotton)	Cutworm *(Agrotis munda* and *A. infusa*)	SA only	700 mL in a min of 100L water		Apply immediately infestation is observed. Apply follow up treatment as required.
Cereals	Cereal curculio	SA, WA only	120 mL/100kg seed		**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, Vic, NSW WA only	1.25L - 1.5L		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	QLD, NSW, WA and Vic only	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. **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	560 mL		
	Migratory Locust	QLD only	350 mL		Spray areas of crop, trees and roosting sites infested with locusts.
	Blue Oat Mite	All States	70 to 140 mL		Spray when pests appear in large numbers, 3-6 weeks after autumn rains. 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, Vic, Tas, SA, WA only	70 mL		
	Redlegged earthmite		140 mL		
Cereals, Pasture, Oil Seeds*	Wingless Grasshopper	NSW, Vic, Tas, SA only	500 mL		Spray areas of crop or pasture infested with grasshoppers. Apply also as a barrier across the line of advance when grasshoppers are invading the crop.

DIRECTIONS FOR USE: FIELD CROPS & PASTURE (Continued)

Crop	Insect	State	Rate Vol/ha	Withholding Period	Critical Comments
Cotton (young plants)	Cutworm *(Agrotis* spp.*)*	QLD, NSW only	900 mL in a minimum of 100L water	Cotton – 4 weeks (harvest and grazing)	Apply immediately infestation is observed. Apply follow-up treatments as required.
Cotton	Southern Armyworm *(Persectania ewingii)*, Common Armyworm *(Mythimna convecta)*		700 – 900 mL		Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over 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 - 1.5L		Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts.
	Wingless Grasshopper		500 mL		**Late Stage Hoppers or Adults:** Use higher rate. Spray areas of crop infested with grasshoppers. Apply as a barrier across the line of advance when grasshoppers are invading the crop.
	Cotton Aphid		300 – 400 mL		Apply when pests first appear. Re-spray as indicated by field inspection.
	Cotton Flea Beetle, Red Shouldered Leaf Beetle		900 mL - 1.5L		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.
Hops	Southern Armyworm *(Persectania ewingii)*, Common Armyworm *(Mythimna convecta)* Light brown Apple Moth	Tas only	160 mL per 100L water	NIL	Apply as pests indicate, commencing when they first appear.
Lucerne (young plants)	Cutworm *(Agrotis* spp.*)*	QLD, Tas, NSW, WA only	900 mL in a min of 100L water	Harvest 10 days Grazing 2 days	Apply immediately infestation is observed. Apply follow-up treatments as required.
		Vic only	700 mL in a min of 100L water		
	Cutworm *(Agrotis munda* and *A. infusa*)	SA only			
Lucerne	Webspinner caterpillar *(Loxostege* spp.*)*	NSW, QLD only	700 mL		Spray when pests appear.
	Lucerne Leaf Roller (*Merophyas divulsana*)		300 – 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 & Forage Crops	Spotted Alfalfa Aphid, Bluegreen Aphid	NSW, QLD, Tas, SA, WA only	200 – 300 mL		Spray when aphids first appear. Use the high rate when large numbers of aphids are invading the crop. **Seedling lucerne**, **medics**: Apply 1-2 aphids/plant are observed.
	Pea Aphid	QLD, Vic, NSW, Tas, SA only			**Established lucerne, medics**: Apply when 20-40 aphids/stem are observed.
	Sitona Weevil	QLD, Vic, Tas, NSW, SA, WA only	350 mL		Apply October to December, or in Autumn when adults occur in damaging numbers.

DIRECTIONS FOR USE: FIELD CROPS & PASTURE (Continued)

Crop	Insect	State	Rate Vol/ha	Withholding Period	Critical Comments
Maize, Soybeans, Sunflower	False Wireworm, Cockroaches, Field Crickets	QLD only	100 mL plus 125 mL sunflower oil per 2.5kg cracked wheat or cracked sorghum bait	NIL	Apply at planting of crop. Refer to mixing instructions on preparation of cracked wheat or cracked sorghum bait.
Pasture	Lawn Armyworm *(Spodoptera mauritia)*	QLD only	700 mL	Harvest 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. Apply follow-up treatments as required.
	Sod Webworm *(Herpetogramma licarsisalis)*	QLD only	700 mL		Spray as early as possible once pests appear. Apply from the ground with boom or mister. Re-spray as necessary.
	Blackhead Pasture Cockchafer	NSW, Vic, SA, WA only	900 mL		Spray only when rain is imminent.
Pasture, Forage Crops	Underground Grass Grub *(Oncopera fasciculata)*	NSW, Vic, SA, WA only	900 mL		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 *(Ciampa arieteraia)*	NSW, Vic, Tas, SA, WA only	700 mL		Spray at first sign of pasture infestation.
	Pasture Webworm *(Hednota* spp.*)*	NSW, Vic, Tas, SA, WA only	700 mL		Spray at first sign of damage. Apply from the ground with boom or mister or apply by air.
Rice	Bloodworm	NSW only	60 or 150 mL	Harvest 10 days	Use higher rate when water more then 15cm or amount of decaying plant material is high.
	Brown Planthopper	QLD only	1.5L		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 *(Persectania ewingii),* Common Armyworm *(Mythimna convecta)*	NSW, QLD only	700 – 900 mL	Harvest 2 days Grazing 2 days	Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat in 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 *(Agrotis* spp.*)*	NSW, QLD only	900 mL in min of 100L water		Apply immediately infestation is observed. Apply follow up treatment as required.
	Spur-throated Locust	NSW, QLD only	1.25 - 1.5L		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	NSW, 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.
	Migratory Locust	QLD only	350 mL		Spray areas of crop, trees and roosting sites infested with locusts.
	Sorghum Midge	NSW, QLD only	500 mL		Check regularly (preferably in morning) and apply when 1-2 midge per head are present from the first emergence of boot to pollen shedding. With repeated attack spray at intervals of 5 days or less. **NOTE: DO NOT** use this product on Sugar Drip or Alpha sorghum. Check new varieties before applying to entire crop.

DIRECTIONS FOR USE: FIELD CROPS & PASTURE (Continued)

Crop	Insect	State	Rate Vol/ha	Withholding Period	Critical Comments
Sorghum (Cont'd) **Note: DO NOT** use on Sugar Drip or Alpha Sorghum. Check new varieties before applying to entire crop	Corn Aphid (*Rhopalsiphum maidis*)	NSW, QLD only	500 mL	Harvest 2 days Grazing 2 days	Apply when damaging populations of aphids occur.
	False Wireworm, Cockroaches, Field crickets	QLD only	100 mL plus 125 mL sunflower oil per 2.5kg cracked wheat or cracked sorghum bait		Apply at planting of crop.
Sugarcane	Southern Armyworm (*Persectaina ewingii*), Common Armyworm (*Mythimna convecta*)	QLD only	700 – 900 mL	Harvest 7 days Grazing 2 days	Spray over the total 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 treatment.
	Spur-throated Locust	QLD only	1.25 - 1.5L		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	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.
	Migratory Locust	QLD only	350 mL		Spray areas of crop, trees and roosting sites infested with locusts.
	Sugarcane Wireworm	QLD only	1.5L		Apply as a low pressure (less than 35kPa) or gravity feed spray into the plant sett and adjacent soil, at the point of exit from the rear of the planting machine, immediately prior to soil cover being brought in over the sett.
Tobacco	Wireworm, False Wireworm, Cutworm	Vic only	3L	NIL	Apply as pre-plant to cultivated soil surface. Incorporate immediately by rotary hoeing to a depth of 10cm.

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DIRECTIONS FOR USE- MANAGEMENT OF SUBTERRANEAN TERMITES (All States, except Tasmania)

POST-CONSTRUCTION USAGE RATES

SITUATION	RATE	CRITICAL COMMENTS
Installing a chemical soil barrier around and under buildings.	Horizontal Barriers: 100 mL/m^2 Vertical Barriers: 2L/m^3	**Horizontal Barriers (not for residential, home garden, public spaces):** Use 100 mL of Imtrade Chlorpyrifos 500 Insecticide per 5L of water and apply the mixture (emulsion) at a rate of 5L/m^2. **Vertical Barriers:** Use 2L of Imtrade Chlorpyrifos 500 Insecticide 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. 2L/100L is equivalent to a 1% active ingredient emulsion. See Service requirement in GENERAL INSTRUCTIONS for expected barrier life.
Installing a Horizontal chemical soil barrier (not for residential, home garden, public spaces) around and under buildings north of the Tropic of Capricorn or where *Mastotermes darwiniensis* is a concern.	Horizontal Barriers: 200 mL/m^2 Vertical Barriers: 4L/m^3	This is an optional high rate for use north of the Tropic of Capricorn, or where *M. darwiniensis* is a concern. **Horizontal Barriers(not for residential, home garden, public spaces):** Use 200 mL of Imtrade Chlorpyrifos 500 Insecticide per 5L of water and apply the mixture (emulsion) at a rate of 5L/m^2. **Vertical Barriers:** Use 4L of Imtrade Chlorpyrifos 500 Insecticide 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.	200 mL/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^3 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 AS3660.
Treatment of termite nest or colony.	100 mL/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 the wetting agent is suggested. Refer to Australian Standard series AS3660.

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DIRECTIONS FOR USE- COMMERCIAL PEST CONTROL ONLY

SITUATION	PEST	RATE	CRITICAL COMMENTS
Commercial (must not be publicly accessible)and industrial areas	Cockroaches (residual control and/or heavy infestations)	95mL / 10L	Apply as a coarse, low pressure spray to the point of runoff, to cracks, crevices, harbourages, eaves, downpipes and other places where the 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	95 mL/10L of water. Use at least 1L spray/10m^2 infested area	Locate ant nests and treat appropriately and spray ant tracks or where ant activity is noticed. Apply to paths in continuous 30cm bands. Apply to base of buildings, walls, fences, rockwork, trunks of shrubs and trees, and other hard surfaces to a height of 300mm.
	Argentine Ants		
	Fleas	90 mL/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 only.
Hides/Skins	Hide Beetles	200 mL/100L of water. Use at least 30 mL of spray/skin	Apply to flesh side of skins or hides sufficient to moisten them. Ensure coverage of ears and lugs. To minimize 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 insecticide.
Light Vegetation (must not be publicly accessible)	Mosquito - larvae	30 mL/ha	Dilute with water and apply as a spray to areas infested with mosquitoes.
Medium Vegetation (must not be publicly accessible)		60 mL/ha	
Heavy Vegetation (must not be publicly accessible)		105 mL/ha	
Light to Medium Vegetation (must not be publicly accessible)	Mosquito - adults	60 mL/ha	
Medium to Heavy Vegetation (must not be publicly accessible)		105 mL/ha	
Polluted water impoundments	Mosquito – larvae and adult	2 mL/10,000L of water or 20 mL/100m^3 of water	

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

THIS PRODUCT IS TOO HAZARDOUS FOR USE BY HOUSEHOLDERS.
HOUSEHOLDERS MUST NOT USE THIS PRODUCT IN OR AROUND THE HOME.

Before opening, carefully read Directions for Use, Precautionary Statements, Safety Directions and First Aid Instructions. Thorough coverage is essential. For application by aircraft apply in 10-15L water per hectare. Care should be taken when applying this product to any newly released sorghum hybrid or variety. Treat a small area first and observe for 3-4 days.

Mixing
Slowly add the required amount of this product to water in spray tank under agitation. The special formulation of this product ensures rapid mixing.

Soil Application (*in furrow*)
Apply as a band spray to the open furrow before planting. Spray the entire furrow width using a nozzle located directly behind the seed tube. Ensure all spray is directed into the furrow contacting bottom, sides and all soil drawn into the furrow at closure. Use a minimum of 20L of water/ha. Use the higher rate under extreme pest pressure.

Preparation of Bran Bait: Mix 10 mL of this product per kg of bran using sufficient water to give a moist crumb structure. Allow to stand for 2-3 hours before application. Elbow-length PVC gloves should be worn when preparing and applying bait. REFER TO SAFETY DIRECTIONS PRIOR TO PREPARATION.

Preparation of Cracked Wheat or Cracked Sorghum Bait: Mix the required volume of this product and sunflower oil together. Then add to the wheat or Sorghum, mixing thoroughly. Elbow-length PVC gloves should be worn when preparing the bait. REFER TO SAFETY DIRECTIONS PRIOR TO PREPARATION.

Spray Drift Minimisation
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, unsprayed row of orchard trees or hail netting.

Situation	Recommended buffer distance (m)
Orchard (dormant trees, citrus, large trees	30
Cotton	300
Other crops	100

CLEANING SPRAY EQUIPMENT
After using Imtrade Chlorpyrifos 500 Insecticide, 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 knapsacks spray the waste through the nozzle). Drain and repeat the washing procedure twice. Dispose of rinsate / rinse water in accordance with **STORAGE AND DISPOSAL** instructions.

COMPATIBILITY
Imtrade Chlorpyrifos 500 EC Insecticide is compatible with a range of insecticides, miticides, herbicides, fungicides and fertilisers. As formulations of other manufacturer's products are beyond the control of Imtrade Australia Pty Ltd, all mixtures should be tested prior to mixing commercial quantities.

APPLICATION INSTRUCTIONS – TERMITE MANAGEMENT

1. APPLICATION EQUIPMENT

Hand Spraying

For hand spraying use a rose head shrouded nozzle operated at 170kPa and 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 (a B&G, or similar system) with a 5° upward angle (e.g. 3 way or 4 way) and operated at 170kPa. 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° if using a 4 way dispersion tip, or through 120° 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 170kPa. The 4 way tip needs to be rotated during the application through 90° and the 3 way tip through 120°.

2. APPLICATION VOLUME

To compensate for impervious soils such as clays where application of 5L/m^2 would cause run-off, it may be necessary to apply a volume of emulsion less than 5L/m^2. When reducing the total volume of emulsion used, increase the concentration accordingly to match the label rate by mixing the required amount of Imtrade Chlorpyrifos 500 Insecticide per m^2 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/m^2 is only permitted when installing 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 and where reticulation systems do not exist, slab drilling and injection are 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 one side of 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 Barrier

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 AS3660.

An external horizontal barrier is only required when prevention of concealed vertical access by termites is necessary at the perimeter (e.g. 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 (e.g. where ground level is higher than building material vulnerable to concealed horizontal entry by termites).

1) Horizontal Barrier (not in home garden, residential or publicly accessible areas): Use a rose head shower nozzle operated at 170kPa to apply the required rate of 1.5L of the correctly diluted Imtrade Chlorpyrifos 500 Insecticide per lineal metre (150mm wide) to soil loosened to a depth of at least 80mm (see **APPLICATION VOLUME** section).

2) 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 Imtrade Chlorpyrifos 500 Insecticide emulsion at 100L per cubic meter of backfill soil, this equates to 5L of emulsion/linear meter of a trench 150mm wide and 300mm deep. Where the required vertical barrier is deeper than 300mm, ensure the same rate of application for the extra volume of soil. Use a rose head shower nozzle operated at 170kPa to flood the base of the open trench and also to treat the back fill 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	Clay Loam's	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 AS3660 to abut all substructure walls, stumps, piers, pipes and wastes using the appropriate techniques described for **external barriers around concrete slabs** (See **Existing Structures** section).

GENERAL INSTRUCTIONS – Termite Management

Termite Management

To minimize the risk of termite infestation, the subfloor area of buildings should be kept free of stored or waste timber and all other building materials that attract termites. Appropriate actions should also be taken to eliminate any undue dampness caused by leaking water or sewerage pipes, or inadequate drainage. Subterranean termites need a constant source of moisture to survive. Provision of adequate ventilation in the subfloor area also helps eliminate undue dampness. Pest managers using this product for termite management should advise the home owner that disturbing the treated soil barrier with subsequent construction of additions or alterations, paths, steps, landscaping, etc, may render the termite management system in place ineffective unless further management options are considered.

Colonies Not in Contact with the Ground

Occasionally subterranean termites establish a colony in a building without having contact with the soil because they have access to a continuous supply of moisture such as a faulty plumbing fixture or a leaking roof. Such colonies are not affected by chemical soil barriers and should be treated as recommended for established colonies, as per Australian Standard Series AS3660. Imtrade Chlorpyrifos 500 Insecticide may be applied directly to the termite colony in such situations.

SERVICE REQUIREMENT

Regular competent inspection by a LICENSED PEST MANAGER are recommended as part of an overall termite management program to determine the prevailing termite pressure and environmental conditions and consequent requirement for further termite management options. Inspections should be performed at least on an annual basis, but more frequent inspections are strongly recommended.

At the 1% application rate, Imtrade Chlorpyrifos 500 Insecticide can provide an effective chemical soil barrier in subfloor regions for 4 years or more north of the Tropic of Capricorn, and 10 years or more south of the Tropic of Capricorn.

At the 1% application rate, Imtrade Chlorpyrifos 500 Insecticide can provide an effective chemical barrier in exposed situations for 2 years north of the Tropic of Capricorn, and up to 5 years or more south of the Tropic of Capricorn.

At the 2% application rate north of the Tropic of Capricorn, Imtrade Chlorpyrifos 500 Insecticide can provide an effective chemical soil barrier in subfloor regions for 6 years or more and in exposed situations for up to 3 years or more.

The actual period of efficacy will depend on factors such as termite hazard, climate, soil conditions and soil disturbance and gardening/landscaping practices.

GENERAL INSTRUCTIONS – Commercial Pest Control

MIXING

Half fill the spray tank with clean, fresh water (or creosote where applicable) and add the measured amount of Imtrade Chlorpyrifos 500 Insecticide then add the remaining water (or creosote) with the agitator running. Add wetter near the end of filling with the hose below the surface to prevent excess foaming. When using a knapsack, gently shake before using. Only mix sufficient chemical for specific application.

CLEANING SPRAY EQUIPMENT

After using Imtrade Chlorpyrifos 500 Insecticide, empty the spray equipment completely and drain the whole system. Thoroughly wash inside the tank using a pressurehose, and drain. To wash the system, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles (for knapsack sprayer 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.