FARMALINX

Bifentin 100 SC

TERMITICIDE AND INSECTICIDE

Directions for Use
Restraints
DO NOT use this product at less than indicated label rates.
DO NOT apply to soils if excessively wet or immediately prior to or after heavy rain to avoid run-off of the chemical.
DO NOT apply to mud, sand, mangrove or aquatic habitat.
DO NOT apply as an Ultra Low Volume (ULV) or via thermal fogging treatment.
DO NOT use in situations where predatory mites are established and providing effective mite control.
DO NOT apply if rainfall is expected before spray deposits dry on leaf surfaces.
DO NOT use in cavity walls (except via certified cavity infill reticulation systems or direct treatment of nest).

Situation	Pest	Rate	Critical Comments
Internal & external areas & surrounds of domestic, commercial, public & industrial buildings and structures	Spiders	25-50 mL/10 L	Use the higher rate in situations where pest pressure is high, when rapid knockdown and/or maximum residual protection is desired. Pay particular attention to protected dark areas such as cracks and crevices, under floors, eaves, and other known hiding or resting places. For overall band surface spray, apply as a coarse, low pressure surface spray to areas where spiders hide, frequent and rest. Spray to the point of run-off using around 5 L of spray mixture per 100 m^2 and ensuring thorough coverage of the treated surfaces. For crack and crevice treatment use an appropriate solid stream nozzle. For maximum spider control use a two part treatment. 1. Crack and crevice. 2. Overall band spray of surfaces.
	Papernest Wasps	50 mL/10 L	Apply prepared solution to the point of runoff directly to the papernest ensuring thorough and even coverage. When all adult wasps have been knocked-down the nest may be safely removed from the structure.
Internal & external areas & surrounds of domestic, commercial, public & industrial buildings and structures - suitable for residual surface treatments	Ants (excluding Red Imported Fire Ants), Cockroaches, Mosquitoes, Fleas, Flies, Ticks (excluding the paralysis tick *Ixodes holocyclus*) (Adults & Nymphs)	50-100 mL/10 L	Use the higher rate in situations where pest pressure is high, when rapid knockdown and /or maximum residual protection is desired. The lower rate may be used for follow-up treatments. For indoor use, pay particular attention to protected dark areas such as cracks & crevices, behind or under sinks, stoves and refrigerators, furniture, pipes, cornices, skirting boards and other known hiding or resting places. DO NOT use a surface spray. **On non-porous surfaces** apply as a coarse spray at the rate of 1L solution per 20 m^2. When treating non-porous surfaces do not exceed the point of run-off. **On porous surfaces** use through power equipment, spray at the rate of 1 L of solution per 20 m^2. When treating porous surfaces do not exceed the point of run-off. **Ants:** To control ants apply to trails and nests. Repeat as necessary. Fleas and ticks: To control fleas and ticks, apply prepared solution to outside surfaces of buildings and surrounds including but not limited to foundations, verandas, window frames, eaves, patios, garages, pet housing, soil, turf, trunks or woody ornamentals or other areas where pests congregate or have been seen. **Flies and Mosquitoes:** To control flies and mosquitoes apply prepared solution to surfaces where insects rest or harbour. Repeat as necessary. **Perimeter treatments:** Apply the prepared solution to a band of soil or vegetation two to three meters wide around and adjacent to the structure. Also treat the foundation of the structure to a height of approximately one metre. Use a spray volume of 5 to 10 L per 100 m^2. Higher volumes of water may be needed if organic matter is present or foliage is dense.
Turf (eg lawns, commercial turf farms, parks, recreational areas, bowling greens, sports fields)	Lawn armyworm (*Spodoptera mauritia*), Sod webworm (*Herpetogramma licarsisalis*)	1.2 L/ha (12 mL/100 m^2)	Mix Bifentin 100 SC in water and apply evenly over the area to be treated using spray application equipment. Use a minimum water volume of at least 200L/ha (2L/100m^2). To ensure optimum control, irrigate the treated area with up to 4mm of water soon after application. Inspect treated areas for continuing activity. Reapply as required. Where a rate range is indicated use lower rates under lower insect pressure and higher rates under higher insect pressure. Apply after mowing to minimise loss of insecticide in clippings.
	Argentine stem weevil adults (*Listronatus bonariensis*)	1.2 – 2.4L/ha (12-24 mL /100 m^2)	
	African black beetle adults (*Heteronychus arator*)	2.4-3.6 L/ha (24-36 mL/100 m^2)	
	Billbug adults (*Sphenophorus brunnipennis*)	1.2-2.4 L/ha (12 - 24 mL/ 100 m^2)	
	Black ant, coastal brown ant, funnel ant, meat ant, sugar ant, stinging ant only	1.2-4.4 L/ha (12-44 mL/100 m^2)	Mix in water and apply evenly over the area to be treated using spray application equipment. Apply to areas where ants are active. Where possible spray directly into the nests. Use the low rate for maintenance treatments or to control light infestations and the high rate for heavy infestations and maximum residual control. The elimination of funnel ants from a particular site will generally require more than one application. Initial applications should be broadcast over affected areas. As the initial number of active colonies is reduced, application should shift to targeting active mounds. Apply spray directly to the mounds and in the area immediately surrounding active mounds (300 mm radius). To aid in even coverage a minimum spray volume of 200 L/ha (2 L/100 m^2) is recommended.
Domestic, Public, Commercial & Industrial areas	Subterranean Termites	Refer to Table A	Refer to Table B.

TABLE A: Use rates for control of SUBTERRANEAN TERMITES

Situations	All areas SOUTH of the Tropic of Capricorn (except Tas.)		All areas NORTH of the Tropic of Capricorn	
	Rate	Expected Protection Period *	Rate	Expected Protection Period *
Pre-Construction Barriers Under slabs and under suspended floors with less than 400 mm crawl space	1 L/100 L	At least 10 years	1.5 L/100 L	5 years
			1 L/100 L **	4 years
	500 mL/100L	10 years	750 mL/100 L **	3 years
			500 mL/100L **	2 years
Perimeter Barriers For new and existing buildings	1 L/100L	At least 10 years	1.5 L/100L	5 years
	500 mL/100L	10 years	1 L/100L	4 years
	250 mL/100L	3 years	750 mL/100L	3 years
			500 mL/100L	2 years
Post-Construction Barriers Under slabs and under suspended floors with less than 400 mm crawl space	1 L/100L	At least 10 years	1.5 L/100L	5 years
			1 L/100L	4 years
	500 mL/100L	10 years	750 mL/100L	3 years
			500 mL/100L	2 years
Reticulation systems Perimeter and/or service penetration treatment only	1 L/100L	At least 10 years	1.5 L/100L	5 years
	500 mL/100L	10 years	1 L/100L	4 years
	250 mL/100L	3 years	750 mL/100L	3 years
			500 mL/100L	2 years
Reticulation Systems Cavity infill & footing barriers	500 mL/100L	5 years	1 L/100L	2 years
Protection of Poles & Fence Posts	500 mL/100L	10 years	1.5 L/100L	5 years
			1 L/100L	4 years
			750 mL/100L	3 years
Nest Eradication	500 mL/100L	Not applicable	500 mL/100L	Not applicable

***Several factors contribute to the estimated length of protection provided for each termite treatment. The actual protection period will depend on the termite hazard, climate, soil conditions and rate of termiticide used. The need for retreatment is to be determined as a result of at least an annual inspection, or more frequently in high risk areas, by a qualified licensed Pest Control Operator.**

**** This rate must be used in conjunction with a certified reticulation system that is capable of distributing the termiticide and insecticide solution according to the product label and the Australian Standard AS 3660 Series.**

TABLE B: CRITICAL COMMENTS for use against SUBTERRANEAN TERMITES

Situations	Critical Comments
Pre-Construction Barriers Under Slabs for protection of new buildings +, ++	• Apply with suitable application equipment to form a complete and continuous chemical barrier (both vertical and horizontal) under the slab. The formation of the barrier may require a combination of conventional open wand application and soil trenching and/or rodding applications. Recommended rod spacing should be between 150 and 300 mm, as per soil type. For additional information refer to "CRITICAL APPLICATION DETAILS" on this label and the Australian Standard AS 3660 Series. • An external perimeter barrier (both horizontal and vertical) is an essential part of termite protection and must be installed at the completion of the building. Refer to "Perimeter Barriers" below, for further details. • Chemical barriers that have been disturbed by construction, excavation and/or landscaping activities will need to be reapplied to restore continuity of the barrier.
Pre-Construction Barriers Under suspended floors +, ++	• For areas under suspended floors with restricted access (typically less than 400 mm clearance), the entire sub-floor area should be treated as a continuous horizontal barrier, which completely abuts an internal vertical barrier(if necessary) around any substructure wall. Ideally, this operation should be done during construction of the building while access is more readily available. • For areas beneath suspended floors which have adequate access (eg. more than 400 mm clearance), install perimeter barriers around each individual pier, stump, service penetration and substructure wall. • An external perimeter barrier (both horizontal and vertical) is an essential part of termite protection and must be installed at the completion of the building. Refer to "Perimeter Barriers" in this leaflet, for further details.
Perimeter Barriers for new and existing buildings ++	• Perimeter barriers (both horizontal and vertical, external and where required, internal or sub-floor) are an essential part of termite protection and must be installed at the completion of the building. Perimeter barriers should be installed around slabs, piers, substructure walls and external penetration points. • Apply with suitable application equipment to form a continuous chemical barrier (both vertical and horizontal) around the structure and to a depth reaching to 80 mm below the top of the footings, where appropriate. The formation of the barrier may require a combination of several application techniques, including soil trenching and/or rodding and open wand applications. • Chemical barriers that have been disturbed by construction, excavation and/or landscaping activities will need to be reapplied to restore continuity of the barrier.
Post-Construction Barrier Treatments for the protection of existing buildings ++	• Apply with suitable application equipment to form a continuous chemical barrier (both horizontal and vertical) around and under the buildings and structures as in accordance with AS3660 with particular emphasis on any known infestation areas. To form the chemical barrier a number of application techniques may be needed including soil rodding; trenching; open wand and sub-slab injections. • Chemical barriers beneath concrete will require concrete drilling. Recommended drill hole spacings is between 150 mm and 300 mm. To enhance chemical distribution, use a lateral dispersion tip on the injector and deliver up to 10 L of solution per linear metre. Drill holes should be no more than 150 mm from foundation walls or expansion joints to ensure complete formation of a chemical barrier. • For areas under suspended floors with restricted access (typically with less than 400 mm clearance), the entire sub-floor area should be treated as a continuous horizontal barrier which completely abuts an internal vertical barrier (if necessary) around any substructure wall. Otherwise, install perimeter barriers around each individual pier, stump, penetration point and structure wall. • Chemical barriers that have been disturbed by construction, excavation and/or landscaping activities will need to be reapplied to restore continuity of the barrier.
Reticulation Systems Perimeter and/or - service penetration treatment only ‘	• Farmalinx Bifentin 100 SC must be used through a certified reticulation system to form and replenish perimeter barriers around buildings and service penetrations. The system must be installed according to the manufacturer’s specifications and be capable of distributing the termiticide solution according to the product label and the Australian Standard AS3660 Series. • Perimeter barriers consist of a horizontal barrier abutting a vertical barrier, which must reach to the top of the footing. Delivery pipes must be placed in such a position to ensure that the requirements for both-horizontal and vertical barriers as specified in the Australian Standard AS 3660 Series are met; Special attention must also be afforded to the positioning of the delivery pipes to ensure that the resultant termiticide barriers are continuous and complete. • Apply the prepared termiticide solution by pumping through the system according to the manufacturer’s specifications. Use a minimum delivery volume of 100 L of solution per m^3 of soil. This equates to a delivery volume of 5 L of solution per linear metre for a vertical barrier 300 mm x 150 mm in dimension. • **Pre-Construction — For use in conjunction with full soil treatment horizontal barriers only:** Apply the diluted solution through the perimeter reticulation system as specified above. Follow instructions for Pre-Construction horizontal barrier formation.
Reticulation Systems Cavity infill & footing barriers	• Farmalinx Bifentin 100 SC must be used through a certified reticulation system to form and replenish cavity infill and footing barriers. The system must be installed according to the manufacturer’s specifications and be capable of distributing the termiticide solution according to the product label and the Australian Standard AS3660 Series. • Delivery pipes must be placed in such a position to ensure that the requirements for both horizontal and vertical barriers as specified in the Australian Standard AS3660 Series are met. Special attention must also be afforded to the positioning of the delivery pipes to ensure that the resultant termiticidal barriers are continuous and complete. • Apply the prepared termiticide solution by pumping through the system according to the manufacturer’s specifications with a delivery volume of 2 L of solution per linear meter of delivery pipe. • **Note: Where this system is to be installed at the pre-construction stage, a full under slab pre-construction barrier, applied by either open wand application or suitably certified reticulation system, is also recommended.** • The recommended rate of application is 2 L of solution per linear metre which equates to 2 L of solution per 0.0068 m^3 or approximately 7 L of sand. Should the volume of fill in the wall cavity deviate from 7 L (0.17 m x 0.04 m x 1 m = 0.0068 m^3) per linear metre of wall cavity, then the amount of Bifentin 100 SC solution applied per linear metre of wall cavity should be adjusted accordingly. As a guide, the target bifenthrin loading of treated sand/soil in a cavity infill situation is 110 mg/kg South of the Tropic of Capricorn and 220 mg/kg North of the Tropic of Capricorn. • To facilitate more even distribution of the Bifentin 100 SC solution in the wall cavity, ensure that the fill is evenly compacted at the time of installation. To further enhance distribution, saturation of the sand/soil in the infill is recommended at the time of treatment.
Protection of Service Poles and Fence Posts	• Create a continuous termiticide barrier 450 mm deep and 150 mm wide around the pole or post by soil injection or rodding. For new poles and posts, treat backfill and the bottom of the hole. Use 100 L of solution per m^3 of soil. • Regular inspections should be undertaken to determine when and if retreatment is necessary. If disturbance of the barrier has occurred, retreatment of the area affected will be required. • Posts and poles may also be drilled and injected with spray solution. • Note: For existing poles and posts, it is impractical to treat the full depth and underneath of such poles and posts and therefore the possibility of future termite attack from below the treated area cannot be ruled out. • For establishing trees create a continuous barrier totally encompassing the root ball of the establishing tree. Application may be made prior to planting by applying solution to pre-dug hole or after planting via soil rodding. Roots projecting out of the treated zone may be susceptible to termite attack and may provide entry into the tree without termites contacting treated soil. • Bifentin 100 SC is a non-systemic insecticide. DO NOT treat mature trees as it is impossible to provide a complete and continuous barrier under and around all tree roots.
Eradication of Termite Nest	• Locate nest and flood with insecticide solution. Trees, poles, posts and stumps containing nests may require drilling prior to treatment with termiticide solution. The purpose of drilling is to ensure the termiticide solution is distributed throughout the entire nest. Drill holes in live trees should be sealed with an appropriate caulking compound after injection.
Notes to Critical Comments	
+ An external Perimeter barrier (both horizonal and vertical) is an essential part of termite protection and must be installed at the completion of the building. Refer to “Perimeter Barriers” in this leaflet for further details. ++ Chemical barriers that have been disturbed by construction, excavation and /or landscaping activities will need to be reapplied to restore continuity of the barrier. **Note: The termiticide barrier provided by this product has a finite life. This together with the recommendation to undertake annual inspections must be stated on the durable notice required by the BCA, B1.3(j)(ii).**	

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

DIRECTION FOR USE - TIMBER AND TIMBER BASED PRODUCTS
Restraints :
DO NOT use treated timber or boards in situations other than those deemed hazard class 1 or 2.

SITUATION	PEST	STATE	RATE	CRITICAL COMMENTS
Softwood Particle and strand based boards in Hazard Class H2	All termites(including *Mastotermes darwiniensis* & *Coptotermes acinaciformis*) Timber beetles	All States	0.56 mL/kg	1. Add sufficient Bifentin 100 SC into the glue to achieve a retention of 0.0047% mass/mass bifenthrin in the finished product. Alternatively particles or strands can be treated prior to manufacture. 2. Where Bifentin 100 SC is to be added to the glue mix, the pH of the fixed mix must not exceed 9.5
Treatment of 2.5 mm softwood veneer plywood and LVL in Hazard Class H2	All termites EXCLUDING *Mastodermes darwiniensis*	All areas South of the Tropic of Capricorn	248 mL/m^3 in the glue line	1. Calculate the glue usage by m^3 of LVL or plywood. 2. Add Bifentin 100 SC as required to ensure a loading of 0.004% mass/mass bifenthrin in the veneers. 3. Following the manufacture of the plywood panel, loading of bifenthrin in the inner plies, including glue lines, should be a minimum of 0.0021 % ai mass/mass.
Treatment of 2.5 mm softwood veneer plywood and LVL in Hazard Class H2	All termites	All States	500 mL/m^3 in the glue line and faces treated to 0.003%ai mass/ mass	1. Calculate the glue usage by m^3 of LVL or plywood. 2. Dilute Bifentin 100 SC as required to ensure a loading of 0.008% mass/mass bifenthrin in the veneers. 3. Following the manufacture of the plywood panel, loading of bifenthrin in the inner plies, including glue lines, should be a minimum of 0.0042 % ai mass/mass. 4. In addition, faces need to be treated to retentions of 20 g/m^3 or 0.003% mass/mass bifenthrin.
Treatment of 3.2 mm softwood veneer plywood and LVL in Hazard Class H2	All termites EXCLUDING *Mastodermes darwiniensis*	All areas South of the Tropic of Capricorn	248 mL/m^3 in the glue line	1. Calculate the glue usage by m^3 of LVL or plywood. 2. Dilute Bifentin 100 SC as required to ensure a loading of 0.004% mass/mass bifenthrin in the veneers. 3. Following the manufacture of the plywood panel, loading of bifenthrin in the inner plies, including glue lines, should be a minimum of 0.0021 % ai mass/mass.

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CONTINUED OVERLEAF

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

DIRECTION FOR USE- ORCHARDS AND ORNAMENTALS
Restraints:
DO NOT use in situations or orchards where predatory mites are established and providing effective mite control.
DO NOT apply by aircraft.
DO NOT apply if rainfall is expected before spray deposits dry on leaf surfaces.

CROP	PEST	STATE	RATE	CRITICAL COMMENTS
Apples	Apple Dimpling Bug (*Campylomma liebknecht*), Plague Thrips (*Thrips imaginis*)	Qld, NSW, Vic, SA, WA only	8 mL or 16 mL/100 L	Apply when pest numbers reach accepted threshold levels. Applications should be made as early as possible during the blossoming period and early in the morning when bees are not actively foraging. Use the high rate for both knockdown and residual control. Only one application at this rate should be required per season. In orchards where appropriate crop monitoring facilities are available, the low rate may be used for knockdown control only. When this low rate is used, a second application at the low rate may be required to control re-infestation. Spray to run-off using a total spray volume of 1000 to 2500 L/ha depending on tree size.
Bananas	Banana Scab Moth (*Nacoleia octasema*)	Qld only	200 mL/100 L	Apply 40 mL of prepared spray to each banana bell. Use a suitable bell injection instrument to inject the required volume directly into the bell as it emerges from the throat of the banana plant while in the upright position. The correct site for injection is in the top half to one third of the bell just below the distinct swelling where the male flower mass ends and the female flower cavity (bottom hand of fruit) start. Keep injection equipment clean and use lubricants sparingly. Monitor for thrips activity and treat only when thrips are active.
	Flower Thrips (*Thrips florum*)	Qld, NSW only		
Pears	Two Spotted Mite (*Tetranychus urticae*), Pear Looper, Longtailed Mealy Bug (crawlers), Lightbrown Apple Moth, Codling Moth	Vic only	40 mL/100 L	Monitor the mite population from mid December onwards. Apply the product before the mite population reaches economic damage levels (ie around 20-30 motiles/25 leaves). A follow-up treatment may be required 3 to 4 weeks later. If more than 2 miticide applications are required use an alternative rotational miticide. Spray to run-off using a total spray volume of 2000-4000 L/ha depending on the tree size. NOTE: When using Bifentin 100 SC in pears, it is not necessary to tank-mix additional insecticides for control of Codling Moth and Lightbrown Apple Moth, Pear Looper and Longtailed Mealy Bug Crawlers.
Roses, Carnations & other ornamental plants	Two Spotted Mite (*Tetranychus urticae*)	All States	28 or 40 mL/100 L	Apply at first sign of pest infestation and before pest populations build up to damaging levels. Repeat as necessary on a 10-14 day interval. Best results are obtained from preventative rather than curative applications. Where indicated, use the higher dosage for knockdown of established pest infestations or when longer residual activity is required. Spray to run-off using a spray volume of 1000-1500 litres per ha (10-15 L/m^2)covering both leaf surfaces.
	Aphids		20 mL/100L	
	Caterpillars and Loopers including Heliothis (Corn Ear Worm, Native Budworm), *Helicoverpa* spp., Light Brown Apple Moth, *Epiphyas postvittana*, Geranium Plume Moth (*Sphenarches anisodactylus*)		20 mL/100L	Apply at first sign of pest infestation and before pest populations build up to damaging levels. Repeat as necessary on a 10-14 day interval. Best results are obtained from preventative rather than curative applications. Spray to runoff using a spray volume of 10-15 litres per 100 square metres covering both leaf surfaces.
	Whitefly (*Trialeurodes vaporariorum*), Poinsettia White Fly (*Bemisia tabaci Biotype B*)		20-80mL/100 L	Apply at first sign of pest activity and repeat at intervals of 7-10 days while pest pressure persists. More than three sprays may be required to control an existing infestation. Spray to run-off covering both leaf surfaces. Use the higher rate when pest pressure is high, when conditions favour pest development or when increased residual protection is required.
	Mealy Bug (*Pseudococsus longispinus*)		20 mL/100L	Apply at first sign of pest activity and repeat at intervals of 7-10 days while pest pressure persists. Spray to run-off covering both leaf surfaces.
	Plague Thrips (*Thrips imaginis*, *Thrips simplex* and *Thrips hawaliensis*)		20 mL/100L	Apply at first sign of pest activity and repeat at intervals of 7-10 days while pest pressure persists. Ensure that flowers and buds sprayed. Spray to run-off. When buds are opening rapidly and pest pressure is high reducing the spray interval to 3-4 days will give better results. Monitor the population by regular inspection.
	Cutworm (*Agrotis* spp.) in beds, containers and pots		1.2 L/ha 12 mL/100 m^2	Spray evenly over the area to be treated. After application apply approximately 5 mm of sprinkler irrigation.
			20 mL/ 100 L	Apply as a drench at the rate of 2 litres of prepared spray per square metre of pot area.

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WITHHOLDING PERIOD:
PEARS: DO NOT APPLY LATER THAN 14 DAYS BEFORE HARVEST

Farmalinx Bifentin 100 SC Termiticide and Insecticide
CONDITIONS OF USE BY AUTHORISED PERSONS:
The pest control operator must be licensed under state legislation.
The pest control operator must notify site supervisor, if any, and workers who come into contact with uncovered treated soil prior to laying the moisture membrane, to wear appropriate personal protective equipment, and to observe re-entry requirements. (For personal protective equipment refer to "SAFETY DIRECTIONS", and for re-entry refer to "PRECAUTIONS AND RE-ENTRY PERIODS", below).

GENERAL INSTRUCTIONS
Urban Pest Control: Farmalinx Bifentin 100 SC Termiticide and Insecticide has powerful knockdown and residual activity against various insect pests. Ants, cockroaches, fleas, flies, mosquitoes, spiders, ticks and wasps are controlled by direct contact with spray and also by residual action as they come in to contact with the treated surfaces.
Termites: The use of Farmalinx Bifentin 100 SC Termiticide and Insecticide will help prevent and control subterranean termite infestations in and around buildings and structures when used in accordance with the Australian Standard AS 3660 Series, Termite Management. A dilute termiticide solution must be adequately dispersed into the soil to establish a barrier between the building and subterranean termites in the soil. The purpose of a termite barrier is to prevent concealed termite entry into the building.
The biology and behaviour of the termite species involved should be considered by the Pest Control Operator in determining which control measures are most appropriate to control and prevent termite infestation.
Best results are obtained when Farmalinx Bifentin Termiticide and Insecticide is applied before pest populations build up to damaging levels.

Turf: This product can be used as a protective treatment when applied at regular intervals or as a knockdown treatment to control existing pests. Best results are obtained when the product is applied before pest populations build up to damaging levels.

INSECTICIDE RESISTANCE WARNING
For insecticide resistance management, Farmalinx Bifentin 100 SC Termiticide and Insecticide is a Group 3A insecticide. Some naturally occurring insect biotypes resistant to Farmalinx Bifentin 100 SC Termiticide and Insecticide and other Group 3A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Farmalinx Bifentin 100 SC Termiticide and Insecticide or other 3A insecticides are used repeatedly. The effectiveness of Farmalinx Bifentin 100 SC Termiticide and Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Farmalinx Pty. Ltd. accepts no liability for any losses that may result from the failure of Farmalinx Bifentin 100 SC Termiticide and Insecticide to control resistant insects.
Farmalinx Bifentin 100 SC Termiticide and Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier or Farmalinx Pty. Ltd. representative or local agricultural department agronomist.

GROUP 3A INSECTICIDE

Mixing & Application: Farmalinx Bifentin 100 SC Termiticide and Insecticide is a suspension concentrate requiring dilution with water prior to use. Add the required quantity of Bifentin 100 SC to water in the spray tank and mix thoroughly. Maintain agitation during both mixing and application. Ensure that spray lines are clean and free from contaminant pesticide, eg. herbicides.

For Termites: To facilitate even application of the termiticide solution over the area to be treated, the addition of a marker dye at label rates is recommended. On hard to wet soils, the penetration of the termiticide solution may be improved by the addition of a soil surfactant at label rates.

For Treatment of Timber and Timber Based Products: Add the required quantity Farmalinx Bifentin 100 SC Termiticide and Insecticide to the diluent in the holding tank or glue mixer and mix thoroughly. Maintain agitation during both mixing and application.

For General Pest Control: Application of Farmalinx Bifentin 100 SC Termiticide and Insecticide should be made with equipment calibrated to deliver a fine dilute spray in a suitable volume of water to ensure thorough coverage. Use suitable application equipment and preferably cone nozzle combinations to deliver the appropriate spray volume and a droplet size of 150 to 200 microns. DO NOT apply as a fog or mist.

For Vector Control Applications: Farmalinx Bifentin 100 SC Termiticide and Insecticide can be applied by a variety of application techniques, such as power sprayers, hand held pump sprayers or backpack sprayers, which are operated to produce large droplets to minimise spray drift. However, the product must be not applied by ULV or fogging equipment, which are operated to produce small droplets that may result in off-target drift.

For Turf Applications: Application should be made with equipment calibrated to deliver a fine dilute spray in a suitable volume of water to ensure thorough coverage. Use suitable application equipment and preferably cone nozzle combinations to deliver the appropriate spray volume and a droplet size of 150 to 200 microns. DO NOT apply as a fog or mist. Maintain agitation during both mixing and application.

COMPATABILITY: Farmalinx Bifentin 100 SC Termiticide and Insecticide is compatible with commonly used fungicides such as Dithane M45*, Antracol*, Bravo 500* and Kocide*
Surfactants: Farmalinx Bifentin 100 SC Termiticide and Insecticide contains a surfactant. Additional surfactant may only be necessary on hard to wet plants and in high volume sprayers.

CRITICAL APPLICATION DETAILS
For Treatment of Timber and Timber Based Products: The application of Farmalinx Bifentin 100 SC to both Timber and Timber-based products as specified in the directions for use table will protect treated products form damage by subterranean termites. In most situations protection will be afforded against all termite species including *Coptotermes acinaciformis* and *Mastodermes darwiniensis*. The treatment should be conducted in accordance with Australia Standard AS1604 Series.

Treatment of Structures: The pest control operator must notify site supervisor if any, and workers who come in contact with uncovered treated soil prior to laying the moisture membrane, to wear appropriate personal protective equipment, and to observe re-entry requirements. (For personal protective equipment refer to "SAFETY DIRECTIONS", and for re-entry refer to "PRECAUTIONS AND RE-ENTRY PERIODS", below).
The use of Farmalinx Bifentin 100 SC will help prevent and control subterranean termite infestations in and around buildings and structures when used in accordance with the Australian Standard AS 3660 Series. Termite Management - A dilute termiticide solution must be adequately dispersed into the soil to establish a barrier between the building and subterranean termites in the soil. The purpose of a termite barrier is to prevent concealed termite entry into the building.
The biology and behaviour of the termite species involved should be considered by the pest control operator in determining which control measures are most appropriate to control and prevent termite infestation.
The application of Farmalinx Bifentin to form both horizontal and vertical chemical barriers must be in accordance with the Australian Standard AS 3660 Series.
For treatment of new and existing buildings, both horizontal and vertical barriers may be required, around and under the building. External perimeter barriers and where required, internal perimeter barriers are an essential part of this treatment. The purpose of a chemical termite soil barrier is to provide a continuous, no gap barrier between the building and the termite colony. It is therefore essential that the Pest Control Operator is familiar with the construction details of the building. For further details, refer to the "Horizontal Barrier Treatments" and "Vertical Barrier Treatments" statements in this leaflet and to the Australian Standard AS 3660 Series.

Horizontal Barrier Treatments: Use 5 L of solution per m^2 of soil. Apply the termiticide solution evenly to the soil surface area to ensure the provision of a continuous barrier with no gaps. To minimise drift, use low pressure, high volume spray equipment delivering large coarse droplets. On impervious soils where the application of 5 L/m^2 would cause excessive run-off, the application volume may be reduced provided the concentration of the solution is increased by a corresponding amount. For example, the volume of applied concentrate must remain constant at 25, 50 or 75 mL/m^2, depending on the location and the situation. Do not apply solution volumes below 2 L/m^2.
In situations where the soil surface is very dry and conditions are conducive to rapid drying, the area to be treated should be moistened prior to the termiticide application.
It is important to note that when applying a horizontal barrier to the perimeter of a building or structure the chemical barrier is deemed to have a depth of 80 mm. In situations where the solution will not readily wet the soil to the required depth, loosen soil to a depth of 80 mm by 150 mm wide and apply 1.5 L of solution per lineal metre.

Vertical Barrier Treatments: To install a vertical barrier use a minimum of 100 L of solution per m^3 of soil. Vertical barriers must be a minimum of 150 mm wide, extend down to 80 mm below the top of the footing and be complete and continuous. Vertical barriers can be installed by trenching and treating the soil as it is backfilled, by soil rodding or by the use of certified reticulation systems, as described in the Australian Standard AS 3660 Series. The preferred method of installing a vertical barrier treatment is either by trenching and treating the soil as it is backfilled or by delivery via a certified reticulation system. When using the soil rodding method to establish a vertical barrier the distance between rod spacings should be as per the following table. To improve soil penetration, the soil should be loosened to a depth of 150mm.

Soil Type	Rod spacing (mm)
Heavy clay	150
Clay loams	200
Loams	250
Sands	300

Perimeter Barrier Treatments: Perimeter barriers consist of horizontal barriers at least 150 mm wide adjoining a vertical barrier of at least 150 mm in width. A perimeter barrier must completely surround all buildings, pipes, piers and service penetrations. In buildings with suspended floors with greater than 400 mm crawl space, perimeter barriers should be installed to surround piers, stumps and service penetrations and completely abut all substructure walls.
To ensure provision of a continuous barrier use a minimum of 100 L of solution per m^3 of soil. This equates to a delivery volume of 5 L of solution per linear metre for a 300 mm vertical barrier, or 10 L of solution per linear metre for a 600 mm vertical barrier.
Termites may gain access behind engaged piers against single brick walls unless the soil is treated on both sides of the wall down to the footing.

Post-Construction Under Slab Treatments: For concrete slabs, the solution needs to be injected through pre-drilled holes through the slab, at intervals between 150 mm and 300 mm. The following table shows the recommended hole spacing and recommended volume of spray solution required per hole, depending on the soil type.

Soil Type	Hole spacing (mm)	Litres per hole
Heavy clay	150	1.5
Clay Loams	200	2
Loams	250	2.5
Sands	300	3

Application equipment used to inject Farmalinx Bifentin 100 SC through pre-drilled holes in an interior situation must be in good working order, free of any leaks and the injector must have tip shut-off to prevent nozzle dripping. Lateral dispersion tips are recommended. Drill holes must be resealed following injection of the Bifentin 100 SC solution. The decision and/or need for drilling concrete floor slabs should only be made after a thorough inspection of the building. The degree of termite activity should also be taken into consideration.
Treatment in Conjunction with Physical Barriers: In situations where the termite protection system is to consist of a combination of both physical and chemical barriers, each certified system must be installed according to the relevant and appropriate product specification and the Australian Standard AS 3660 Series.

Reticulation Systems: Farmalinx Bifentin 100 SC can be used through reticulation systems to form horizontal and vertical barriers under and around structures and all service penetrations. The reticulation system must be certified and be capable of distributing the termiticide solution according to the product label and the Australian Standard AS 3660 Series.
In situations using reticulation systems to form barriers around the perimeter and/or service penetrations only, a full pre-construction soil applied Bifentin 100 SC Termiticide and Insecticide horizontal barrier is recommended. It is the responsibility of the builder and all relevant sub-contractors to ensure that all termite barrier systems are installed in accordance with the relevant product installation directions and the Australian Standard AS 3660 Series.

Service Requirements: Service requirements are to be determined as a result of at least an annual inspection by a licensed Pest Control Operator. More frequent inspections may be required in high risk termite areas.
In determining the need for service, factors such as local termite pressure, breaches of the barrier and termiticide longevity should be considered.
Subterranean termites are on occasions capable of bridging termite barriers and therefore regular inspections, as detailed in the Australian Standard AS 4349.3, will significantly increase the probability of detection of termite activity before any damage or costly repairs are required.
Several factors contribute to longevity of the termite treatment and must be considered when evaluating the need for re-treatment. The actual protection period will depend on the termite hazard, climate, soil conditions and rate of termiticide used. Refer to Table A for the expected protection periods provided.

PRECAUTIONS AND RE-ENTRY PERIODS: DO NOT spray directly on humans, pets or animals. Avoid contact with food, food utensils and preparation surfaces.

RE-ENTRY PERIOD: Treatment of Timber and Timber-based Products: DO NOT handle treated timber until it is completely dry.

Pre-Construction: Re-entry: Do not allow re-entry into uncovered treated areas until the spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck, wrist and elbow-length PVC, neoprene or nitrile gloves and chemical resistant footwear. Clothing must be laundered after each day's use.

Post-Construction and urban pest control: Re-entry: DO NOT allow people and pets to enter treated areas until the spray has dried(normally 3-4 hours) and ventilate buildings before reoccupying. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow-length PVC, noeprene or nitrile gloves and chemical resistant footwear. Clothing must be laundered after each day's use.

Re-entry Period for vector control applications: Ventilate indoor treated areas and allow all areas to completely dry (normally 1-2 hours) before re-occupying. When prior entry is necessary, wear cotton overalls buttoned to the neck, wrist and elbow-length PVC, neoprene or nitrile gloves and chemical resistant footwear. Clothing must be laundered after each day's use.

Crops, Ornamentals, Turf: DO NOT allow entry into treated areas until the spray deposits have dried or been watered in after treatment. When prior entry is necessary, wear suitable protective clothing(ie water-proof boots, overalls and gloves). Clothing must be laundered after each day's use.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
Dangerous to fish and aquatic organisms. Do not contaminate dams, rivers, streams, waterways or drains with the product or used container. DO NOT apply to sand, mud, mangrove or aquatic habitats. Drift from treated areas may be hazardous to organisms in adjacent aquatic sites. Extreme caution must be used to avoid aquatic contamination.
Avoid spraying flowers that attract and harbour bees.

PROTECTION OF PETS AND LIVESTOCK: Dangerous to bees. DO NOT spray any plants in flower when bees are foraging. Spray in the night or early morning when bees are not actively foraging. Before spraying remove pets and animals from the areas to be treated. Cover or remove any open food and water containers. Cover or remove fish ponds, aquariums etc. before spraying. Do not allow re-entry until spray has dried.

STORAGE, SPILLAGE AND DISPOSAL
Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight. In case of spillage, confine and absorb spilled product with absorbent material such as sand, clay or cat litter. Dispose of waste as indicated below or according to the Australian Standard AS 2507 - Storage and Handling of Pesticides. DO NOT allow spilled product to enter sewers, drains, creeks or any other waterways.
Triple rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging 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 regulation. Do not burn empty containers or product..

For refillable containers empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

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

FARMALINX
Bifentin 100 SC

TERMITICIDE AND INSECTICIDE

ACTIVE CONSTITUENT: 100 g/L BIFENTHRIN

GROUP 3A INSECTICIDE

For the control of a range of urban interior & exterior pests, including spiders, mosquitoes, flies, and other pests, for protection of structures, timber and timber products from subterranean termite damage and for control of various pests in turf, orchards and ornamentals as specified in the directions for use table.

IMPORTANT: RESTRICTED CHEMICAL PRODUCT ONLY TO BE SUPPLIED TO, OR USED BY AN AUTHORISED PERSON.

IMPORTANT: THIS LEAFLET IS PART OF THE LABEL ATTACHED TO THE CONTAINER. READ THOROUGHLY BEFORE OPENING OR USING THIS PRODUCT.

FARMALINX Pty Ltd ABN 95 134 353 245
Level 25, Suite 2506, Tower 2, 101 Grafton Street, Bondi Junction NSW 2022

farmalinx

SAFETY DIRECTIONS
Poisonous if swallowed. May irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin.
For termite control in buildings and structures: When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC or nitrile gloves. After each days use, wash gloves and contaminated clothing. **For handheld application :** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, washable hat and elbow length PVC or nitrile gloves. When using prepared spray wear protective waterproof clothing, elbow length PVC or nitrile gloves and water resistant footwear. After each day's use, wash gloves and contaminated clothing. Wash hands after use.

FIRST AID: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

MSDS: Additional information is listed in the Material Safety Data Sheet which can be obtained from the supplier.

CONDITIONS OF SALE
Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. No warranty (other than non-excludable statutory warranties) of merchantability or fitness for a particular purpose, express or implied, extends to the use of the product contrary to label instructions, or under off-label permits not endorsed by FARMALINX Pty Ltd or under abnormal conditions. FARMALINX Pty Ltd accepts no liability for any loss or damage arising from incorrect storage, handling or use.

farmalinx
Partners in Agriculture
FARMALINX Pty Ltd ABN 95 134 353 245
Level 25, Suite 2506, Tower 2,
101 Grafton Street, Bondi Junction NSW 2022
T: 02 9389 2455 **F:** 02 9389 2844
Website: www.farmalinx.com

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