

PROFESSIONAL PEST MANAGEMENT

TECHNICAL BROCHURE

TOMORROW'S TERMITE SOLUTION IS ALREADY HERE

LABEL EXTENSION
7 YEAR PROTECTION*

FOR LIFE UNINTERRUPTED™

 **Altriset**[®]
Termiticide

syngenta[®]

®

Tomorrow's termite solution is already here

- ▶ Stop termites feeding within hours
- ▶ Superior transfer for colony control
- ▶ Kills 100% of directly or indirectly exposed termites within 14 days
- ▶ Protects homes for many years
- ▶ Exempt from poison scheduling

Providing you reassurance and peace of mind you're using the new standard in termite control.

“ We use ALTRISSET because we know it works. We've seen fantastic results with ALTRISSET. It transfers through, and wipes out, the termite population. We also love ALTRISSET because it is unscheduled. ”

David Drury from Frontline Termite and Pest Control in Victoria

ALTRISSET stops termites feeding within hours

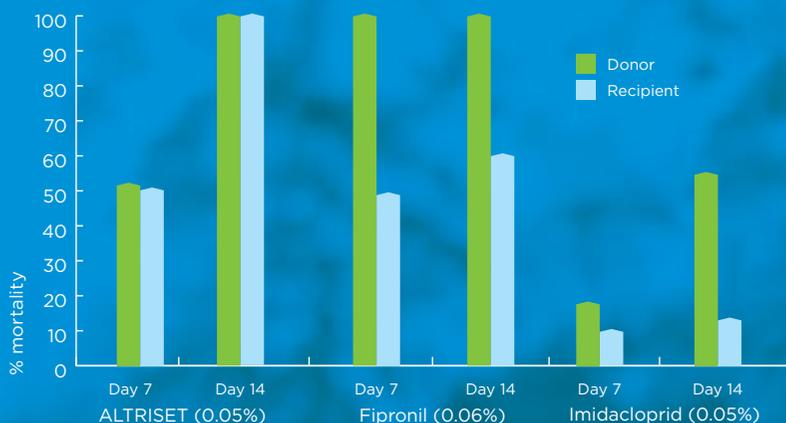
Stops termites feeding within 2-4 hours with no activity within 72 hours, after only 1 minute exposure to ALTRISSET.



Reference: Saran *et al.* *J.Econ. Entomol.* 107(5): 1878 -1889 (2014).

Kills 100% of directly or indirectly exposed termites in 14 days

Transfer of non-repellent termiticides from termites exposed to treated soil



Note: Fipronil and Imidacloprid are the active ingredients in a number of termiticides

Conclusion: ALTRISSET is transferred readily from donor termites (exposed to termiticide) to recipient termites (indirectly exposed to termiticide), resulting in 100% mortality of all termites within 14 days.

While fipronil had 100% kill of donor termites, only 62.5% of recipient termites are killed after 14 days confirming that the transfer properties of fipronil are not that effective. Imidacloprid gave low levels of mortality and provided no evidence on termiticide transfer.

Source: Stine-Haskell Research (DuPont 2007). Target Pest: *R. virginicus*.

Real transfer for termite colony control

It is not always possible to locate termite nests so direct treatment of nests is not normally possible. Termites exposed to ALTRISSET don't die immediately and are able to transfer the active ingredient to other termites and back to the nest, leading to a greater chance of complete termite colony elimination.

Aggregation effect

ALTRISSET affects mobility and increases aggregation. This delayed mortality and increased social contact accelerates transfer throughout the colony.



0.01% (1/5th of label rate) ALTRISSET: Termites begin to group and become more social.

Untreated: Termites are 'independent' and moving freely within petri dish.

Conclusion: Even at 0.01% ALTRISSET exhibits unique behavioural effects on termites. After exposure, termites aggregate, increasing the social interaction among termites. This leads to increased chance of sharing ALTRISSET with unexposed members of the colony and more comprehensive management.

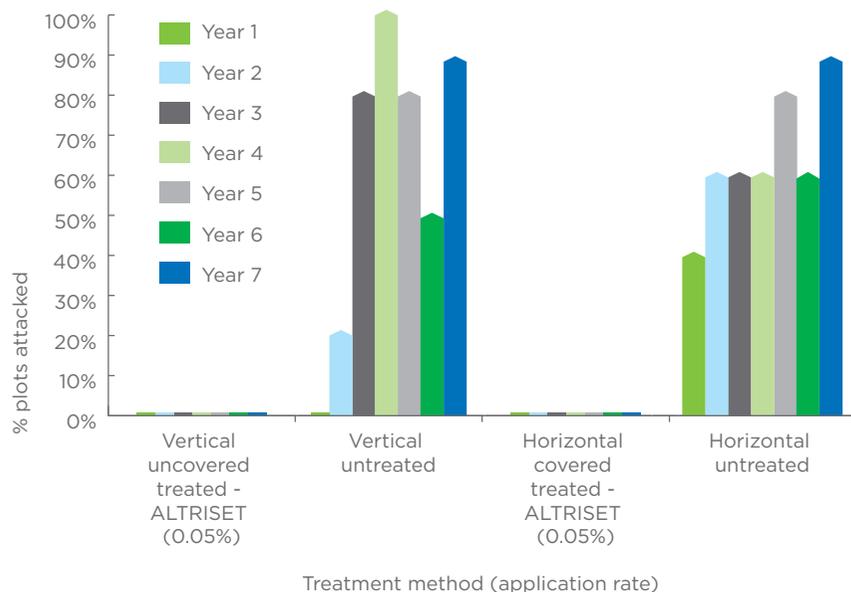
NOTE: Not all the termites in the untreated group can be seen because they are hiding from the light under the filter paper, which is natural behaviour for untreated termites.

Reference: Saran et al. *J.Econ. Entomol.* 107(5): 1878 -1889 (2014).

NOW WITH
7 YEAR
PROTECTION*

Protects properties for years

ALTRISSET termiticide was challenged under field trial protocols in a trial in Gosford (NSW). The performance of ALTRISSET at the Gosford field site was excellent, with both high and low doses delivering 100% protection in horizontal and vertical treatments after 7 years. As the graph below shows, termite pressure was relatively low in the first two years of the trial but conditions in the past 7 years have tested ALTRISSET and it has continued to perform with zero termite activity in the treated sites.



Source: Agrisearch Service Pty Ltd, Gosford, NSW

*Up to 7 years protection, south of Tropic of Capricorn

Ongoing house trials in Australia

- ▶ From mid-2009 until 2011, 28 house trials were set up with ALTRISSET using a perimeter trench treatment barrier. This was done to determine if the ALTRISSET treated zone stopped termite infestation
- ▶ In 2011, a further 5 houses were added and these included direct treatment with ALTRISSET as a foam prior to soil barrier treatment
- ▶ The houses were located across Australia with different climates, soil types, construction methods and varied levels of exposure from termite species including *Mastotermes* in the tropical north, *Coptotermes*, *Nasutitermes* and *Schedorhinotermes*
- ▶ After treatment, the houses were inspected at 30 day intervals. The results proved that termites are not locked into structures by ALTRISSET and that once exposed to ALTRISSET, termites die within 14 days
- ▶ All houses still in the trial (17 houses[^] at April 2016) continue to have either 6 or 12 month timber pest inspections and all are still free of termite infestation

[^] Over time some houses have been sold with new owners unwilling to continue being involved with the ongoing trial.

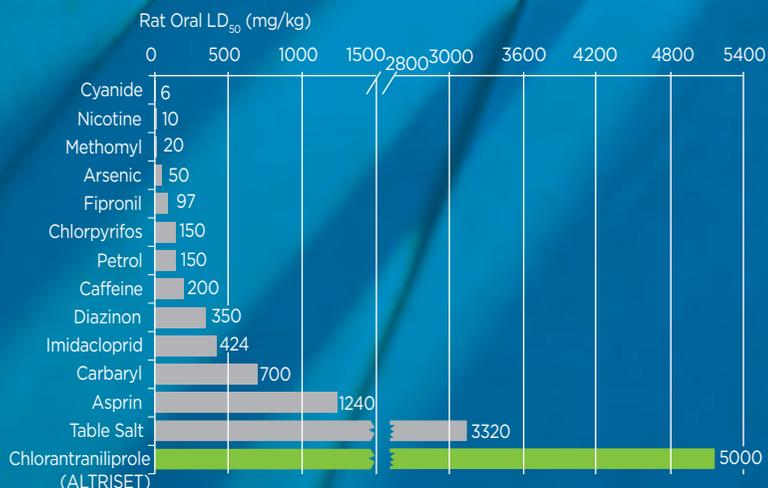


Exempt from poison scheduling

The targeted, unique mode of action of ALTRISSET means it has a very low toxicity to mammals, birds, earthworms and even honeybees.

Chlorantraniliprole has an extremely low toxicity as the graph below illustrates. This is primarily due to the unique mode of action and the fact that only certain insect muscles are sensitive to and targeted by, its activity.

Higher values mean lower toxicity



Safeguard you and your staff

ALTRISSET is designed for use inside and outside all structures. Additionally, given ALTRISSET is the only termite protection product that is exempt from poison scheduling, it is the ideal product to use in confined spaces such as subfloors.

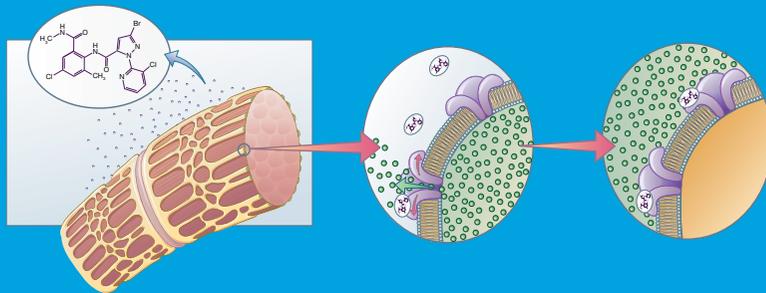
Personal Protective Equipment is not required with ALTRISSET. No odour and no skin irritation means an improved experience for the applicator. Your clients will also be more reassured knowing that you are using a product exempt from poison scheduling inside their home or business.

Products/ Active	Eye Protection & Face Mask	Nitrile Gloves	Respirator	Overalls	Washable Hat
ALTRISSET	Not required	Not required	Not required	Not required	Not required
Imidacloprid	Yes	Yes	Not required	Yes	Yes
Fipronil	Yes	Yes	Yes	Yes	Yes
Bifenthrin	Yes	Yes	Yes	Yes	Yes

What makes ALTRISSET different?

The class of chemistry to which chlorantraniliprole (the active ingredient in ALTRISSET) belongs was inspired by the insecticidal properties of a natural substance found in the trees and shrubs of the *Ryania* spp. It targets the insect muscles (other liquid termiticides affect the nervous system) as is shown in the diagram below.

ALTRISSET mode of action



Phase 1 Exposure

Insect comes in contact with or ingests chlorantraniliprole the active ingredient in ALTRISSET.

Phase 2 Activation

Chlorantraniliprole binds to and activates the ryanodine receptors located in the insect's muscles, and causes them to open.

Phase 3 Paralysis and Death

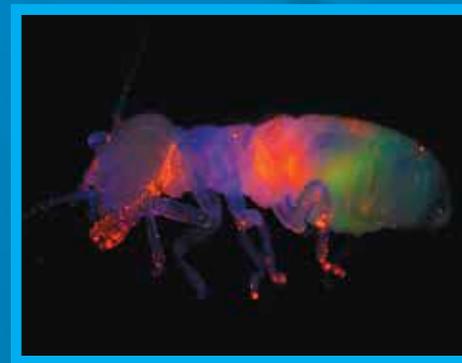
Calcium ions flow out of the open ryanodine receptors, depleting calcium needed for muscle contraction. Paralysis of the insect muscles leads to death.

The evidence worth chewing over

Studies have proven that ALTRISSET is very effective against termites, stopping them feeding within hours, which prevents any further damage to the property that is infested.

Laboratory tests have shown that termites tunnel through the treated zone and quickly acquire a lethal dose of ALTRISSET. Once affected by ALTRISSET, termites will begin to exhibit increased aggregation, enhanced grooming and contact with other colony members for hours.

Affected termites will become more lethargic and show signs of muscle paralysis; decreased coordination and mortality will ultimately occur within several days. The delayed mortality and increased colony interaction are key reasons why ALTRISSET is so effective.



This picture illustrates a termite worker that tunneled through sand treated with ALTRISSET at 0.05%. The worker "picked up" and ingested large amounts of the active ingredient as evidenced by the glowing areas.

The high concentration of chlorantraniliprole on the mandibles of the termite causes the feeding cessation. Chlorantraniliprole on the cuticles of the termite is readily passed to other termites through contact and grooming.

ALTRISSET CONTINUES TO RAISE THE BAR

EFFECTIVE

- ▶ 100% directly and indirectly exposed termites within 14 days
- ▶ Colony elimination
- ▶ Protects properties for years

VERSATILE

- ▶ Barrier treatment
- ▶ Direct treatment as liquid or foam
- ▶ Pre-construction
- ▶ Subfloors and confined spaces
- ▶ Sensitive sites

FAST ACTING

- ▶ Stops feeding within 2-4 hours
- ▶ Unique mode of action

UNSCHEDULED

- ▶ No PPE requirements
- ▶ Low toxicity to mammals, birds, earthworms and bees
- ▶ No odour and skin irritation

EASY-TO-USE

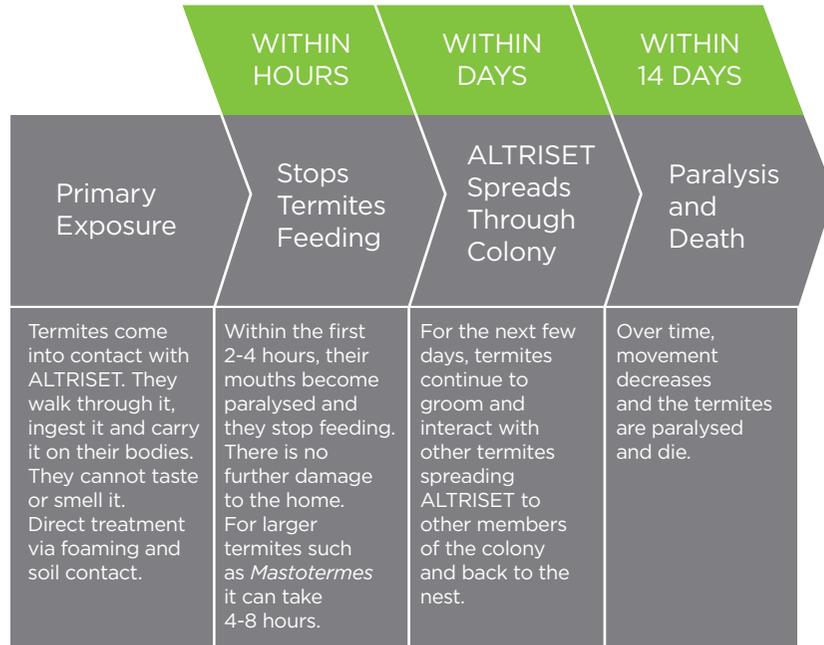
- ▶ No need to isolate the area being treated
- ▶ Does not lock termites in — termites don't die too quickly and don't form a repellent barrier

Now it gives you and your customers the confidence of 7 year protection.*

It's no wonder ALTRISSET is fast becoming the preferred termiticide among Australia's leading pest control experts.

*Up to 7 years protection, south of Tropic of Capricorn. Refer to APVMA approved label.

The ALTRISSET termite control timeline



FOR LIFE UNINTERRUPTED™



To learn more about ALTRISSET Termiticide, contact Syngenta Professional Pest Management on 1800 022 035

ALTRISSET termite treatment protocol

We all know that termite control is not an easy process and requires thorough inspections and treatments by qualified timber pest control professionals, using appropriate equipment and innovative products to ensure the control and elimination of termites is achieved.

We understand the challenges you face as a pest management professional. We are committed to working with you to find effective solutions to these challenges. ALTRISSET offers you an option that delivers safety in combination with effective termite control.

Training

We routinely conduct training with customers in conjunction with our distribution partners. These are tailored and can be conducted onsite at your company premises. If you would like training for your team to learn more about our innovative products and how to apply them, please contact us.

www.syngentapestmanagement.com.au

www.altriset.com.au

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