

Intrigue Features and Benefits

- eradicates colonies of *Coptotermes* and *Nasutitermes*
- the only dust to eradicate *Schedorhinotermes*
- can be applied to termites in galleries, nests or aggregation devices
- specific mode of action
- Schedule 5 Caution label
- minimal safety equipment required
- favourable toxicological profile
- preferred dust for use in sensitive situations such as homes, schools and work places
- no time delay for termites to take up active
- perfect partner for use with Premise Termiticide
- easy to measure packaging
- distinctive blue colour
- non irritant to Pest Managers and clients
- reduces challenge to termite barrier treatment
- essential for jobs where it is impossible to apply a continuous barrier
- termites can be treated as soon as the customer agrees
- no franchise agreement required
- your customer records remain your property



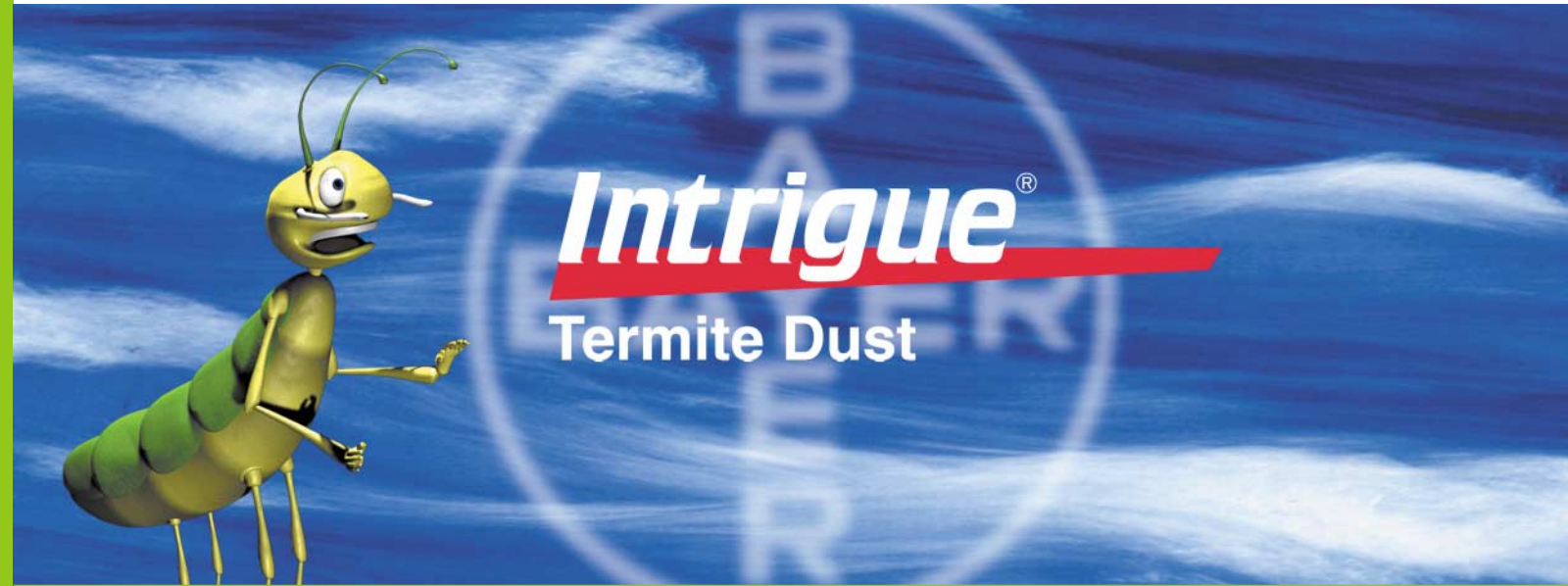
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A friendlier, more effective dust treatment from Bayer

Technical information

Termites cause more damage to homes than flood, fire and storms put together. Surveys find that more than one in five houses will be attacked during their lifetime.

Termites have a well developed social structure. A colony may be made up of a million individual insects. The termite queen mates with the king and produces the eggs. The eggs give rise to nymphs which progress through a series of moults to become either workers or soldiers

(which are sterile) or alates. Workers build the nest and tunnels, forage for food, tend the nymphs, eggs and queen and feed the soldiers. The soldiers defend the colony against enemies such as ants.



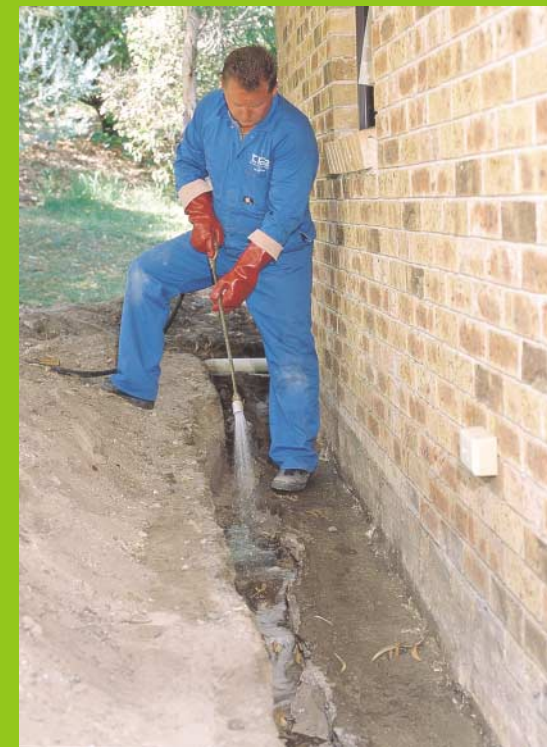
Methods of termite control

Currently there are three main methods of termite control in Australia.

1. Soil applied termiticides act to protect the house against concealed entry by termites. Soil termiticides cannot reliably eradicate colonies.
2. Arsenic dust can be applied to termite workings in an attempt to eradicate the colony. Many homeowners may be concerned about a Schedule 7 Dangerous Poison being used in their homes.

3. Baits aim to eradicate the colony and are placed in the ground around an infested house. The termites must then locate the baits and carry the toxin back to the colony and pass it around. The disadvantage of baiting is the time delay from when termites are found in a house to when they locate the baits outside and start feeding.

Termites



Soil Treatment

The aim of a soil applied chemical treatment is to isolate the house from the termite colony.

Premise, the no odour termiticide from Bayer, is Australia's most popular treatment for existing termite infestations.



The termite queen is the most important termite in the colony. Without her there will be no eggs, nymphs, workers or soldiers and therefore, no future for the colony .

The feeding of such a large number of termites must be co-ordinated. After feeding on timber, foraging worker termites return to the nest full of chewed wood. The cellulose in the wood is digested by micro-organisms in the gut. The digested cellulose is passed around to feed the other termites

which cannot feed themselves or do not forage. This process is called trophallaxis. In this way, the entire colony can be fed while only a relatively small number of termites actually contact the food source.

What is Intrigue?

Intrigue, developed in Australia by Bayer, is the world's first termite dust containing a chitin synthesis inhibitor (CSI). Intrigue offers PCOs a welcome alternative to current dust treatments.

It combines the application technique of arsenic dust but with the much more favourable toxicological profile of an insect growth regulator.





Unhealthy termite

Healthy termite

Due to its mode of action, Intrigue is relatively specific to insects. It can be used with confidence in all situations.

Who can use Intrigue?

Intrigue is for the use of licensed, competent Pest Managers only and is sold through pest control distributors. As termite dusting is a highly skilled practice this product will not be available to the general public. In fact, Bayer strongly recommends that all Pest Managers complete an Intrigue training course prior to using Intrigue in the field. This is to ensure that the best possible results are achieved.



Other Species

Intrigue has been used to successfully control *Nasutitermes walkeri* and *Nasutitermes exitiosus* which can cause significant damage in some regions. Intrigue is not yet registered for use against *Mastotermes darwiniensis*, as further studies are required.

Intrigue can be used to eradicate treated colonies. However, there may be more than one colony around a house so it is strongly recommended that a Premise soil treatment be applied.

What is the scheduling of Intrigue?

Intrigue is classified in Schedule 5 or 'Caution'. It contains 80% triflumuron. Triflumuron has oral and dermal LD₅₀s of >5000 mg/kg for rats.

What safety equipment is needed to use Intrigue?

When using chemicals wear cotton overalls buttoned to the neck and wrist. Also elbow length rubber gloves and a disposable dust mask should be worn. There is no need for a respirator.

Use with Premise

Intrigue has been shown to eradicate termite colonies. However, Intrigue can only affect the termite colony that is treated. Other colonies may be active in the area and so may pose a future threat to the structure. To insure against future attack by these colonies, the structure should be treated with a soil-applied termiticide such as Premise. Premise is the only no odour soil treatment available and has proven itself to be the most reliable termiticide in Australia. In addition, Premise has also been shown to reduce the number of foraging termites in the vicinity of the Treated Zone.

Premise plus Intrigue The 10 Point Programme

1. inspection of property
2. dusting of termite galleries and/or nests using Intrigue
3. re-inspect after one month
4. apply Intrigue to activity again
5. one week later apply Premise Treated Zone
6. at same time install monitors outside house
7. inspect at 6 monthly intervals including monitors
8. if monitors infested, place aggregation device over top to collect more termites
9. apply Intrigue to termites in aggregation device
10. continue inspections

Intrigue



Applying Intrigue: *dusted termites return to the nest.*



Is Intrigue safe?

The active ingredient of Intrigue is triflumuron. It is a chitin synthesis inhibitor which only affects organisms which produce chitin (insects and crustaceans). Thus all vertebrates (birds and mammals), which do not produce chitin, will not be affected by Intrigue. As the application is in very low doses and is directed only in termite workings, there is little risk to any non-target organisms.

Label Extract DIRECTIONS FOR USE (All States and Territories except TAS)

Situation	Pest	Rate	Critical Comments
Termite nests (trees, stumps, posts, mounds, cavities)	Subterranean termites <i>Coptotermes</i> spp., <i>Schedorhinotermes</i> spp., <i>Nasutitermes</i> spp.	5-10g per nest	Drill several holes into the nest and apply Intrigue Dust using a hand blower or powered equivalent. Ensure adequate penetration by applying dust to all active holes. If there is no decline in nest temperature or activity within 3 months, re-apply Intrigue dust. Seal holes in trees with a suitable caulking compound after dusting.
Termite activity when nest location not known e.g. active workings, in timber on ground or in aggregation devices		5g per 100mL of termites	Dust as many termites as possible, minimising the amount of stress and disturbance. The colony may take more than 3-12 months to be eradicated. Re-apply if termite activity has not declined within 3 months. Several applications may be required to eradicate larger colonies.

PRODUCT:	Intrigue	SCHEDULING:	Caution
ACTIVE INGREDIENT:	Triflumuron 800g/kg	PACK SIZE:	100g timber box (containing 10 x 10g plastic bottles)
FORMULATION:	Dusting powder	SHIPPER:	2 boxes per shipper
CLASS OF CHEMICAL:	Insect Growth Regulator (Chitin Synthesis Inhibitor)	DISTRIBUTION:	Available only to Pest Managers



Lo Res

Developing termites (nymphs) are the future of the colony.

As they undergo several moults they are most vulnerable to the effects of Intrigue.

Developing termites (nymphs), which are still undergoing moults, are particularly vulnerable to Intrigue. Those termites, which have not reached the final instar, die as they attempt to moult. However, Intrigue has an even more important effect on a termite colony. The queen is the only termite capable of reproducing at any given time. When a colony is treated with Intrigue the queen disappears first. It is believed she stops producing viable eggs and is assassinated by the workers. Any attempt at replacing the queen will be unsuccessful as a moult is required.

With no ability to reproduce, the colony has no future. Fully grown workers no longer moult. However, studies have shown that worker termites will eventually die without moulting. Again, the exact mechanism is not known but it could be that Intrigue interferes with the chitinous gut lining of the termites which is continually replaced. Soldiers are the last termites to die. Without worker termites to feed them they probably starve to death.

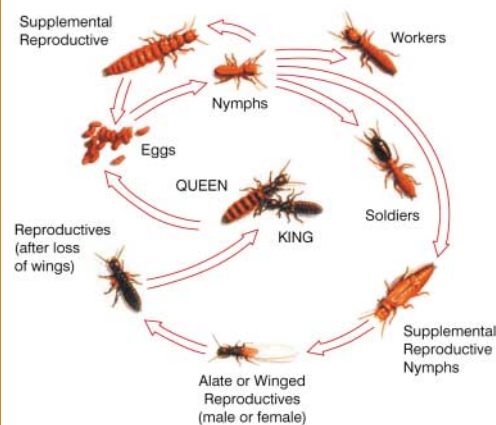
Colony

How does Intrigue work?

Intrigue contains the active ingredient triflumuron. Triflumuron is an insect growth regulator (IGR) which acts as a chitin synthesis inhibitor (CSI). Chitin synthesis inhibitors act to prevent the enzyme necessary to produce chitin, which makes up insect exoskeletons, from functioning. Young insects, which have been in contact with a CSI, will die at their next moult as their new exoskeleton is incomplete.

How is the termite colony affected?

The effects of Intrigue are not immediately apparent. Termites do not perceive it as harmful. Dusted termites will return to the nest and be groomed by their fellow workers. Eventually a small dose of Intrigue passes to every member of the colony including the queen.



Intrigue affects the queen first, (halting viable egg production), then developing termites, and workers with soldiers the last to die.



Lo Res

Skilful dusting techniques are critical to success.

As many termites as possible should be dusted.

How is Intrigue applied?

Intrigue is applied in very small quantities to termite workings using a termite hand puffer. It may also be applied using powered applicators such as the recently developed A-Gun.

Intrigue is applied to active termite galleries, aggregation devices (eg bait boxes) and nests. The most important point when using Intrigue is to dust as many termites as possible. The greater the number dusted the greater the chances of success. Repeat applications may be necessary.

Does it work?

Intrigue has been developed in Australia and has been found to work against Australian termites. Trial work has been carried out over the past four years with excellent results. Extensive trials have been carried out against *Coptotermes*. In the first trials termites were dusted directly in their nests and monitored using a temperature probe. In the second set of trials, termites were aggregated in bait boxes or buckets by known nests and dusted. At some sites, the tree was cut down at the end of the trial and the nest opened to reveal no live termites. The graphs below show the results. Complete eradication of termite colonies was achieved in as little as four weeks but may take as long as 12 months depending on the size of the colony and the conditions.

Further supervised field trials have been carried out by Pest Managers which also confirm the effectiveness of Intrigue. A competent dusting technique is essential to achieve the best results.

KEY TO FIGURES

- 1. Healthy colony (obvious and wide spread termite activity in the area)
- 2. First signs of colony decline (reduced activity in area)
- 3. Clear indications of major injury to colony (mottled termites, few younger caste termites found)
- 4. Minimal evidence of termite activity (very little activity in area, fungal attack in abandoned areas)
- 5. No sign of termite activity in area.
- Time of repeat treatment

Figure 1: Results from Intrigue direct dusting sites (*Coptotermes spp.*)

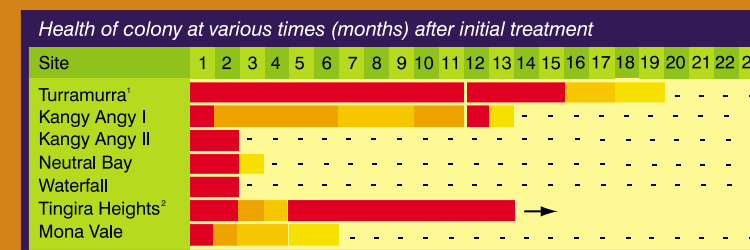
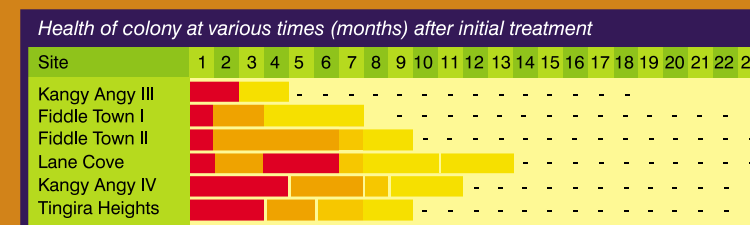


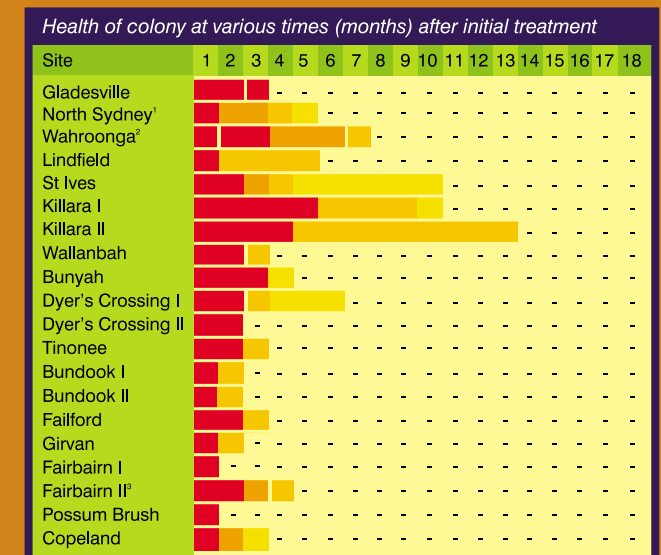
Figure 2: Results from Intrigue remote dusting sites (*Coptotermes spp.*)



¹ poor initial application, second attempt successful
² unsuccessful - transferred to remote dusting trials

Schedorhinotermes intermedius is a problem termite species which has become more commonly encountered in recent years. It is especially a problem in NSW and Queensland. Termite activity was dusted in galleries, in aggregation devices and, in some instances, nests. The results against this species were excellent with control being achieved on average in two to three months.

Figure 3: Results vs *Schedorhinotermes*



¹ trial discontinued as house sold - termite numbers greatly reduced at last inspection
² termites found 19 months after initial treatment (probably a second colony)
³ nest broken open at this point - no nymphs or reproductives found.