KORDON®

TERMITE BARRIER

AUSTRALIAN INNOVATION / GLOBAL BACKING

Bayer Environmental Science

BAYER



Orange sheet - 200µm LDPE
White synthetic web - impregnated with deltamethrin (untreated sample)
Black sheet - 50µm UV stable LDPE

- ***ABCB certification number 2003 /001***
- ***10 year / $100,000 warranty***
- ***100% Australian design.***
- ***100% Australian made.***

LONG TERM PROTECTION

KORDON®
TERMITE BARRIER

Your Most Important Asset -



For most people - the family home is the most important asset. But without the right protection - it can also be our biggest headache.

In Australia termites cause more damage to homes than fires, floods and storms combined. One in five homes is affected by termite damage and the damage to each home can result in very expensive rectification work. Termite damage is not covered by household insurance so the cost of this repair is the burden of the building owner

As a builder or home owner - protecting, maintaining and caring for your investment, is essential. Every stage requires decisions that will have direct results on your building's value and life span.

One of the most confusing of these decisions - is the selection of a termite management system that suits your requirements.

The starting point for this decision - is the choice of either a chemical or physical barrier. Every system offers advantages (and disadvantages) and based on your individual requirements and building styles some may suit you better than others.

Chemical barriers - *whilst effective, can be completely or partially compromised by external factors - such as landscaping or renovation - something few homeowners consider when planning improvements to their home. For this reason - a certain degree of vigilance is required to ensure adequate termite protection with a chemical barrier. Important considerations are the length of protection and the cost or ease of re-treating.*

Physical barriers - *offer a more 'set and forget' approach. No liquid chemicals are applied. What you see is what you get.*

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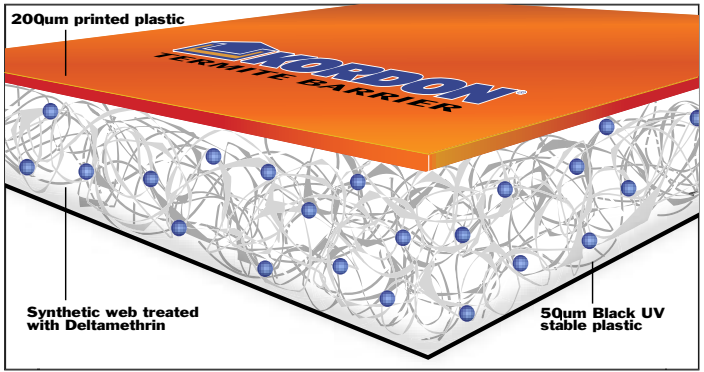
Your Choice of Protection

Kordon provides the best from both worlds. Kordon is a building product, which could be compared to treated timber in so far as it is termite proof and termite repellent.

Kordon's repellency creates an unpleasant environment for foraging termites, who once confronted with Kordon will go forage elsewhere. This is a huge advantage over common physical barriers where termites will investigate the complete barrier until they find a gap or a weakness. As Kordon, like treated timber, contains a repellent within the product it is a "life of the building product" and requires no re-treating.

KORDON IS UNIQUE:

It comprises a layer of webbing, to which a precise treatment of deltamethrin (a synthetic pyrethroid) is applied. The webbing is then sealed between two robust sheets of plastic. The rate of deltamethrin is 100% consistent - you simply cannot over or under treat with KORDON - the rate of protection is consistent and guaranteed every time it is installed.



The purpose of a pre-construction physical termite barrier is to prevent the concealed entry of termites in to a building. Termites could trail up the outside wall around the barrier but they would leave a visual mud lead if they did. The current Australian Standard 3660 states that regular, competent inspections should be carried out, at least on an annual basis. Annual inspections become an integral part of your termite management system and provide cost effective long term insurance to your most important asset.

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Environmental and Health Choices

From an environmental perspective - *KORDON offers a host of advantages. As KORDON is safely encapsulated between the two plastic sheets KORDON is the ideal choice for allergen free housing or environmentally sensitive sites. It is for this very reason KORDON has been chosen for a large number of schools, hospitals and public buildings over the last 5 years.*

Bayer is one of the worlds most trusted names in life, health and environmental sciences. The wealth of technical and commercial expertise which Bayer provides offers KORDON installers, builders and home owners the reassurance, support and backing of one of the worlds largest, most progressive and innovative organisations.

KORDON - proudly developed and manufactured by Bayer in Australia.



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Bayer Environmental Science

The Bayer acquisiton of Aventis CropScience in 2002 has resulted in a new and vital division called Bayer Environmental Science.

We are the world's largest environmental science business group and the most innovative creator of responsible pest and disease management solutions.

Our range includes products combining high performance with low toxicity and environmental sustainability. We serve a mosaic of different customers across both the non-agricultural professional market and the urban consumer market. Our global network of resources is further complemented by our in-depth knowledge and experience in the Australian market.

Our goal is to increase our lead as the most innovative creator of responsible pest control solutions. We are continually developing new low-dose technology and integrated pest management techniques to replace older, less desirable methods. Our resources and capabilities enable us to set higher standards for the industry as a whole.

By pooling our knowledge and resources with the experience and understanding of the people we serve, we will achieve new practices that are environmentally sustainable as well as cost effective.

This approach benefits everyone - including the wider community and the environment we share.

Bayer Environmental Science provides for Australian innovations with global backing.

KORDON® TERMITE BARRIER

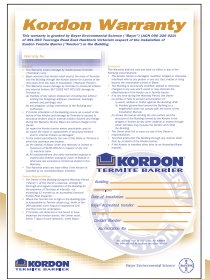
Bayer Environmental Science

BAYER

Guaranteed Termite Protection

Kordon is a unique Australian developed product that has been extensively tested for 14 years by Bayer, the CSIRO, State Forestry Departments, State Building Authorities and Building Design academics.

In all evaluation work carried out by Bayer, Kordon has achieved 100% performance as a physical barrier. Termites do not attempt to penetrate Kordon Termite Barrier.



- *Kordon Termite Barrier is certified by the Australian Building Codes Board – Certification Number : **2003/001***
- *Kordon Termite Barrier complies with AS 3660.1 and the BCA*
- *Kordon Termite Barrier has no affect on the structural design of the building.*
- *Kordon has been tested and approved for use in "Allergen Free" construction.*
- *Kordon Termite Barrier has been tested and approved to perform as a physical barrier for 50+ years (the commercial life of a building).*

Long Term Warranty

Bayer CropScience provides a 10 year / $100,000 structural timber replacement warranty against termite penetration of the Kordon barrier. The Kordon Termite Barrier can only be installed by currently accredited Kordon installer's.

*Bayer CropScience and the accredited installer provide a complete set of documentation to the building owner upon completion of the building project. These documents include the **Kordon 10 year Warranty**, the **Certificate of Compliance** to the Australian Standard and the manufacturers specifications, the **Installation Report** detailing where Kordon has been installed and the annual inspection **Meter Box Sticker** to record regular inspection details.*

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Kordon Features

The Kordon Termite Management system is a physical barrier designed to prevent concealed termite access to new buildings.

The Kordon Termite Management system incorporates an approved termiticide and offers long term protection to new buildings. Kordon also acts as the moisture vapour membrane when installed as the termite and moisture membrane barrier in a complete under slab system.

Installers, home owners and the environment are also protected by this termite management system. Kordon is approved for use in council areas where the use of soil termiticide treatments have been prohibited.

Kordon Repellency

Termite ingress to buildings where Kordon has been installed will be deterred by the repellency of Kordon. This feature is unique to Kordon and has resulted in the products leading market position and 100% performance for 14 years.*

** Bayer development trial results*

Compliance

ABCB National Certification 2003 /001

AS 3660.1 – 2000. Building Code of Australia

Consistency

Kordon is manufactured to strict quality guidelines. It is not possible to under treat using Kordon.

Accredited installers

Kordon is installed by accredited installers who have been trained by Bayer to install Kordon to the manufacturers specifications.

Flexible

Kordon can be installed in many difficult and complex situations such as multiple penetrations or step downs. It can be moulded around unusual shapes and can be quickly cut and joined.

Tough

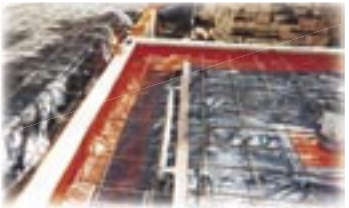
Kordon is a robust product. It takes a sharp knife to cut Kordon. A blunt object has little chance of penetrating the product. Accidental holes are easily repaired by patching.



bearers and joists



perimeter installation



typical in-fill installation

Extensively tested (14+ years), trialed by CSIRO

- ***10 year warranty – life of building performance***
- ***Environmentally friendly***
- ***Tough, Robust, yet easy to handle***
- ***100 % Australian designed and made***
- ***Fully accredited and licensed installers***
- ***Repels termites***
- ***Bayer termite expertise and technology***
- ***ABCB National Cert No. 2003/001***



Kordon TB - in-fill slab



retaining wall installation



Kordon TMB - full under slab



Kordon TMB - multiple penetrations

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Kordon Hotline: 1 800 634 913
Website: www.kordontmb.com.au

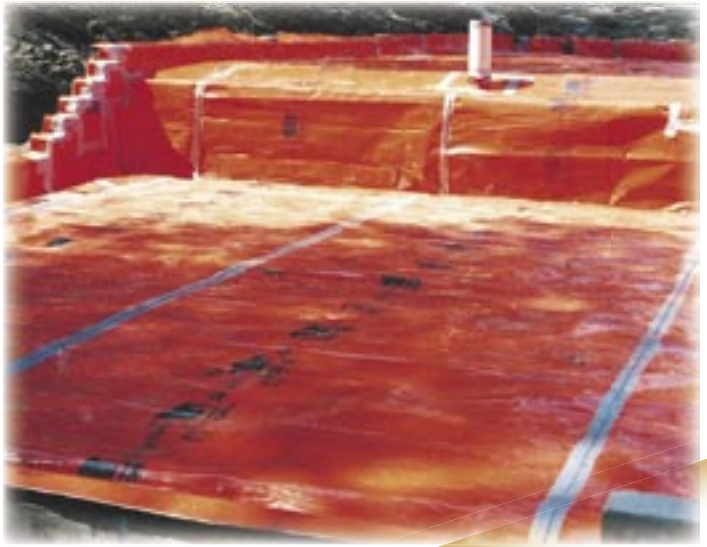
Kordon TMB - Termite Moisture Barrier

Kordon Termite Moisture Barrier (TMB) is a complete under slab treatment providing both termite and moisture membrane protection. Kordon TMB is installed on top of the bedding sand before the steel reinforcing mesh is laid.

All pipes and penetrations are individually protected by Kordon as part of this treatment. The concrete is then poured on top of Kordon TMB.

When installed as a complete under slab barrier, Kordon TMB is the most comprehensive termite treatment system available. The physical presence of Kordon TMB over the site provides repellency to termites for the entire area. Because of this repellency, Kordon TMB is an excellent choice for areas of high termite risk.

***AS 2870** Kordon TMB must be overlapped by 200 mm to comply with moisture membrane requirements and taped with quality duct tape. This holds the Kordon in place until the concrete is poured. Kordon TMB is repellent to termites and the overlapped joints have 2 layers of the repellent Kordon which provides extra protection. Extensive studies have proven that the termites do not penetrate through these areas*.*



Kordon TMB Full Under-slab showing flexibility with stepdowns

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**14 years Bayer trial data*

Kordon TB - Termite Barrier

Kordon Termite Barrier (TB) is a flexible termite protection system which can be used as part of a complete termite barrier. The Kordon TB warranty covers termites coming through where the product has been installed.

Kordon TB is used in conjunction with the concrete slab to form a complete termite barrier system.

Kordon Termite Barrier offers protection against termites, through the areas of the building where there is the greatest risk of concealed termite access (ie: wall cavities and pipe penetrations).

Kordon Termite Barrier is only part of a termite management system for a new building. To comply with the building regulations, the slab must be poured to the concrete standard AS 2870. The slab then becomes part of the termite barrier and the Kordon Termite Barrier protects the high risk areas from concealed termite ingress.

The decision on which Kordon System to use should be determined through consultation with the accredited installer, the home owner, builder, building designer, architect and engineer.



Kordon TB - Framed perimeter installation

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Termite Facts



Termites have been a natural part of the ecosystem on earth for more than 150 million years. Although commonly called a 'white ant', they are not ants and in fact, are most closely related to cockroaches.

Australia has approximately 300 species of termite and of these only about 15 attack timber important to humans, the rest are mainly grass feeders. Termites can be roughly divided into 3 groups: dampwood, drywood and subterranean. Dampwood termites generally feed on moist rotten logs on the forest floor and rarely cause a nuisance to humans. Drywood termites live in small pockets in the dead wood of trees and timber in houses. They obtain their moisture from the timber they eat and require no contact with the soil. Subterranean termites are generally ground-dwelling and require soil contact or some external source of moisture. These by far, cause the most damage to timber in-service in Australia and will be the type of termite talked about below.

Termite Biology *Termites are social insects in that they live and work together in large colonies with each individual having a specific task to perform to enable the colony to function. These tasks can be divided into three main roles ie: working, protecting and reproducing. Each task falls to different types (castes) of termite ie: worker, soldier and reproductive, with each caste having a specialised body shape and behaviour which enables them to perform these tasks.*

The worker *does as its name suggests and does it 24 hours a day, 7 days a week. Workers build the nest and galleries, tend the eggs and young, gather food and feed the rest of the colony whilst being wingless, sterile and blind.*

The soldiers *are distinguished from other castes by their heads, which are heavily armoured and coloured. They too are wingless, sterile and blind. Because their mandibles are so modified or specialised, soldiers must be fed by the workers. The primary function of the soldier is to defend the colony against predators such as ants. Soldiers rely on chemical as well as physical weapons. Some soldiers bite their attacker whilst others spray or inject a poison. Some have strongly built heads, which may be used as plugs to seal the nest from predators. The soldier caste is the most distinctive and is used to identify a particular species.*

The reproductive or alate castes *are the potential kings and queens of new colonies. They possess eyes, functional reproductive systems and wings. They usually swarm (leave the colony) in spring to early summer or late summer to early autumn, often through specially constructed exits. They normally swarm at dusk and may be attracted to lights at night and are commonly found in spider webs.*

After swarming the alates break off their wings and after a brief courtship, begin building a new colony. The original mating pair become the new king and queen. The king does not change shape during this phase, however the queen's abdomen becomes enormously enlarged until she is completely immobile becoming an egg laying machine and in some species, capable of laying up to 2000 eggs a day.

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Termite Facts

Nests *Termites build various types of nest. Some termites have a completely underground existence, without a central nest whilst others build a central nest in the soil, or in dead or living trees. Still other species attach their nest to a tree but maintain soil contact via galleries running down the outside of the trunk. A termite mound is the most familiar form of termite nest. Mounds are often very distinctive in form depending on the species of termite. They can vary in size and shape from hardened flat lumps to the tall, columnar structures, which may be more than 7 m high.*

Feeding behaviour *Termites feed on dead or living plant material containing cellulose. Cellulose is digested by intestinal protozoa or bacteria, which also contain essential amounts of nitrogen. Often termites dispose of excess, dead and diseased members of the colony by cannibalism, thereby conserving nitrogen.*

Some species of timber are resistant to termites, but none is 'termite proof'. Termites will often damage materials they cannot digest. eg: plastics, rubber, metal or mortar. Primarily, this damage occurs when the indigestible items are encountered in the termites' search for food. Most termites forage for food by means of underground galleries or covered runways which extend from the central nest to food sources above or below ground.

The gallery system of a single colony may exploit food sources over as much as one hectare, with individual galleries extending up to 50 m in length.

Apart from grass-eating species, which forage in the open, all termites remain within a closed system of galleries where they are protected from natural enemies such as ants, and from temperature and humidity extremes.



Distribution and importance *There are about 15 species of subterranean termites which commonly attack timber-in-service throughout Australia with the most common being coptotermes, schedorhinotermes, nasutitermes and the giant northern termite mastotermes darwiniensis. Generally the amount of termite activity and therefore damage, increases the further north in Australia you go, with soil type also having an important influence on termite distribution.*

In reality, any structure containing wood is exposed to possible subterranean termite invasion unless protective measures are taken.



**Thanks to DPI-Queensland Forestry Research Institute for information.*

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Kordon Support

Support
Australian Made
Kordon was designed in Australia to suit Australian conditions.
It is an Australian made product.

Technical Support
Kordon is supported technically by a team of professionals working in the pest control and building industry. Kordon is made by Bayer, one of the world's largest research and development life science companies.

National Certification

Preferred by Architects and Building Designers
Recent market research has found Kordon to be the preferred method of termite protection specified by architects and building designers.*

Sensitive Building Sites
Kordon can and has been used on many sensitive building sites. For example, world heritage listed areas on Fraser Island, hospitals, schools and childcare centres where many other termite barrier systems could not have been installed due to environmental and health related considerations.

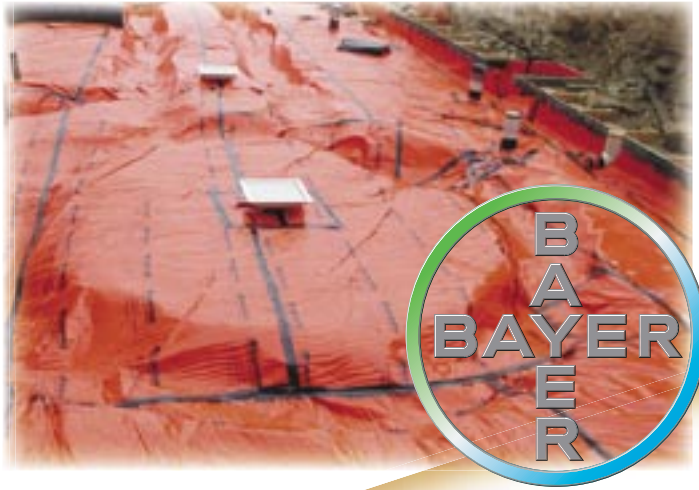


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*ACA Research

Visit our extensive Website: www.kordontmb.com.au

- *Accredited Installers.*
- *ABCB Certificate No. 2003/001*
- *Complies with AS3660 and the Building Code of Australia.*
- *10-year, $100,000 structural damage warranty.*
- *Repels termites without soil contamination.*
- *Environmentally friendly.*
- *Designed and manufactured in Australia.*



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Kordon Hotline: ***1 800 634 913***
Website: ***www.kordontmb.com.au***

Kordon Accreditation

Kordon is installed by accredited Kordon Installers.
Kordon installers have been trained by the manufacturer (Bayer Environmental Science) to ensure that installation is precise and carried out correctly. Contact your local installer for information or a price to supply and install Kordon

For further information:
***Kordon Hotline:* 1 800 634 913**
***Website:* www.kordontmb.com.au**

Accredited Installer:

® Kordon is a Registered Trademark of Bayer A.G. Leverkusen Germany.
Bayer Environmental Science is a business group of Bayer CropScience.

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