0184P FMC HOMEGUARD TERMITE MANAGEMENT

Branded worksection

This branded worksection *Template* has been developed by NATSPEC in conjunction with **FMC AustralasiaPty Ltd** and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check www.natspec.com.au for the latest updated version.

Worksection abstract

This worksection *Template* is applicable to FMC HomeGuard Precision Termite Management System.

***Guidance* text**

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the NATSPEC Toolbar or the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

***Optional* style text**

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- *0314 Concrete in situ* for concrete slab used as a termite management system.

Documenting this and related work

You may document this and related work as follows:

- Termite management systems are not described elsewhere. Coordinate with other worksections, such as *0222 Earthwork*, *0314 Concrete in situ*, *0331 Brick and block construction*, *0381 Structural timber* and *0382 Light timber framing*.
- Slabs on ground: Coordinate with the concrete worksections where slabs on ground to AS 2870 or AS 3600 are used as part of the termite control system. AS 3660.1 cites both standards for this purpose and advises that, if using AS 3600, due regard must be given to minimising shrinkage cracking.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search acumen.architecture.com.au, the Australian Institute of Architects' practice advisory subscription service, for termite management and warranty periods.

Specifying ESD

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

FMC Australasia has been providing quality pest management products to the commercial, residential and industry markets in Australia since 1975. In 1994 FMC developed Biflex, which has become Australia's most widely used and successful termite management product. In 2006 FMC launched HomeGuard to the Australian construction market as the first scientifically proven single sheet termite management system that provides both a physical and chemical termite protection system deemed to satisfy the provisions of the Building Code of Australia.

1.1 RESPONSIBILITIES

General

Requirement: Provide FMC HomeGuard Precision Termite Management Systems, as documented.

Documented is defined in *0171 General requirements* as meaning contained in the contract documents.

Performance

Objective: To achieve whole of building protection including to the following:

- Soil treatment under slabs.
- Subfloor areas.
- Perimeters of concrete slabs-on-ground.
- Control joints in concrete slabs.

- Termite caps.
- Service penetrations and other vulnerable areas.

Delete if BCA level of protection only is required as defined in BCA B1.4(i) and BCA 3.1.3.

1.2 COMPANY CONTACTS

FMC technical contact
Website: www.fmcaustralasia.com.au/contact-us

1.3 CROSS REFERENCES

General
Requirement: Conform to the following:

- *0171 General requirements*.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. *0171 General requirements* references the *018 Common requirements* subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.4 STANDARD

General
Termite management systems: To AS 3660.1.

See AS 3660.2 for termite management in existing buildings and AS 3660.3 for assessing the effectiveness of proposed systems and the termite resistance of materials and components. For timber pest inspections of existing buildings, see AS 4349.3.

1.5 MANUFACTURER'S DOCUMENTS

Technical manuals
Materials and installation manuals: www.fmcaustralasia.com.au/homeguard

1.6 INTERPRETATION

Definitions
General: For the purposes of this worksection the following definitions apply:

- Bifenthrin: A synthetic, broad-spectrum pyrethroid insecticide that affects the nervous system of insects.

- Bifenthrin is registered by the Australian Pesticides and Veterinary Medicines Authority registrar, for use in conformance with the pesticides registrar's approved label.

- Chemical treated sheet material: A planar product impregnated with a termiticide tested in conformance with AS 3660.3 and registered with the pesticides registrar.
- Granular material: Termite resistant particles tested to AS 3660.3 and placed to form a termite management system. This includes physical termite management system of mineral granules and chemical termite management systems made of impregnated materials.

Edit the **Definitions** subclause to suit the project or delete if not required. List alphabetically.

1.7 SUBMISSIONS

Certification
Certificate of installation: Submit certificate to AS 3660.1 Appendix A3.

Operation and maintenance manuals
Maintenance regime: For systems requiring post construction monitoring, provide a maintenance manual with the details of the following:

- Inspection frequency.

For example, monthly, quarterly, annually.

- Instructions for inspection of termite activity and treatment effectiveness.

- Contact details of installers and manufacturer's authorised supplier of replacement parts/components.
- Reapplication requirements.

Edit, as appropriate.

Products and materials

Product data: Submit manufacturer's data for each product/material of the following:

- Construction details, material description and dimensions of individual components.
- Treatments and application procedures.

Type tests: Submit results, as follows:

Type tests are carried out off-site. However, submission of evidence of a successful type test may be called up here for requirements specified in **SELECTIONS** or **PRODUCTS**, if there are no **SELECTIONS**.

- Termite management systems to AS 3660.3.

Records

Completion: Submit record drawings identifying the locations of the installed system.

Management system report: At the end of the defects liability period, submit a report on the efficacy and status of the termite management system.

Subcontractors

General: Submit names and contact details of proposed active FMC HomeGuard accredited pest management company.

Warranties

Requirement: Submit FMC HomeGuard and the installer's warranty of the material, workmanship and application.

The FMC HomeGuard Termite Management System offers a $1 million for 50 year warranty. Design for access for inspection to AS 3660.1.

1.8 INSPECTION

Notice

Inspection: Give sufficient notice so that inspection may be made of the following:

- Completed earthworks or substrate preparation before system application/installation.
- The completed termite management system.

Amend to suit the project adding critical stage inspections required.

Hold points, if required, should be inserted here.

2 PRODUCTS

Many termite control problems will be avoided if termite resistant structural materials are used.

2.1 GENERAL

Product substitution

Other termite management systems: Conform to PRODUCTS, **GENERAL**, **Substitutions** in *0171 General requirements*.

The *0171 General requirements* worksection clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

Requirement: To FMC HomeGuard's recommendations. Do not store for prolonged periods in direct sunlight. Do not allow products to enter sewers, drains, creeks or other waterways.

Product identification

General: Deliver materials to the site in the manufacturer's original sealed containers or packing, legibly marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.

- Quantity.
- Product reference code and batch number.
- Date of manufacture.
- Material composition and characteristics such as volatility, flash point, light fastness, colour and pattern.

Edit the list to suit the project or delete if not required.

2.2 FMC HOMEGUARD PRECISION TERMITE MANAGEMENT SYSTEM

The APVMA (Australian Pesticides and Veterinary Medicines Authority) maintains the Public Chemical Registration Information System (PubBCRIS) database for registered products. See portal.apvma.gov.au/pubcris.

FMC HomeGuard termite management systems are registered with the pesticides registrar.

General

Standard: To AS 3660.1 Section 5 and Section 6.

Certification: CodeMark Certificate of Conformity No. CM40175 Rev4.

See CodeMark Certificate for conditions and limitations.

Type testing: To AS 3660.3. Section 4.

The FMC HomeGuard termite management system Group 3A insecticides consists of the following components:

HomeGuard TMB (termite moisture barrier)

Description: A high impact 0.2 mm thick single polymer sheet, impregnated with bifenthrin termiticide and tested to AS 3660.3.

Standard: Vapour barrier and damp-proofing membrane to AS 2870 clause 5.3.3.2 and AS 2870 clause 5.3.3.3.

Certification: Certificate No. CMI-ER31006.

The purpose of HomeGuard TMB sheet is to provide whole of building protection by deterring termites from gaining concealed access to the building. HomeGuard TMB may be installed as a complete underslab treatment providing both termite and moisture protection or as a flexible termite management system that can be used as part of an integrated termite management system. HomeGuard TMB conforms to AS 2870 as a vapour barrier and damp-proofing membrane.

HomeGuard DPC (damp proof course)

Description: A 0.5 mm thick UV stabilised polymer sheet, impregnated with bifenthrin termiticide and tested to AS 3660.3.

Standard: Damp-proof course to AS/NZS 2904.

Certification: CertMark Product Certification Scheme Certificate No. CMA-TT10051.

The purpose of HomeGuard DPC is to provide protection to building perimeters. HomeGuard DPC may be used for perimeter applications in combination with the concrete slab acting as a physical termite barrier and/or in combination with other termite management systems. It has an embossed surface to minimise brick slippage.

HomeGuard PB (perimeter barrier)

Description: A 0.3 mm thick, UV stabilised blue polymer sheet, impregnated with bifenthrin termiticide and tested to AS 3660.3.

The purpose of HomeGuard PB is to provide protection to building perimeters. HomeGuard PB may be used for perimeter applications in combination with the concrete slab acting as a physical termite barrier and/or in combination with other termite management systems. It has an embossed surface to minimise brick slippage.

HomeGuard Collars

Description: Preformed plastic collar, impregnated with bifenthrin termiticide, for preventing termite entry via service penetrations.

The collars are moulded to specific pipe sizes and designed to fully integrate within the concrete slab. HomeGuard Collars may be used for protection of service penetrations in combination with the concrete slab acting as a physical termite barrier and/or in combination with other termite management systems.

HomeGuard Granular Termiticide (GT)

Standard: To AS 3660.1 Section 6.

Description: A plastic granule formulation containing 1 g/kg of bifenthrin that is dispersed fully throughout the plastic granule.

HomeGuard GT is used in specific situations such as in the building perimeter cavity. The product can be used in combination with the other FMC HomeGuard Precision Termite Management System components. HomeGuard GT can also be used as a stand-alone perimeter cavity installation in some situations. It is especially suitable for double brick constructions.

HomeGuard Protectacote Termite and Waterproofing Barrier

Description: An acrylic polymer latex composition with a high loading of inorganic fillers that cures to form a termite resistant and waterproof film.

When applied, HomeGuard Protectacote Termite and Waterproofing Barrier forms a tough and flexible termite resistant film.

Certification: CodeMark Certificate of Conformity No. CMA-CM40156 Rev 3.

See CodeMark Certificate for conditions and limitation.

3 EXECUTION

3.1 GENERAL

Installation

Requirement: Conform to FMC HomeGuard recommendations, using FMC HomeGuard accredited pest management company.

3.2 FMC HOMEGUARD PRECISION TERMITE MANAGEMENT SYSTEM

Pre-installation

Site clearing: Before installation, remove all tree stumps, logs, roots, timber off-cuts, building debris, removable framework and other waste materials from the area where it is to be installed.

Sheet material

Standard: To AS 3660.1 Section 5.

Requirement: Install FMC HomeGuard Precision Termite Management Systems, as documented and to the manufacturer's recommendations, including the following:

- All edges, junction’s penetrations, temporary block-outs, under door sills.
- All perimeter cavity wall lines around each of the new buildings.
- At the joints between new concrete slabs.
- At the junction between old and new concrete slabs and old brickwork and new slabs.
- Between flooring wall plates abutting existing concrete slabs/thickenings/existing structure.
- Under stud wall bottom plates and concrete/particleboard floors.
- All service penetrations through the slab floor to the new buildings.
- Other locations as required conforming to AS 3660.1.
- Joining sheets: Join sheets using Termiflex termiticidal adhesive sealant to FMC HomeGuard's recommendations.
- Minimum sheet overlap: 200 mm. Use cloth tape or Termiflex Sealant to seal overlaps and sheet joins.
- Prevent impairment of installed FMC HomeGuard sheet material from levelling pegs or formwork.

Repairing tears and gaps: Repair ripped or torn sheets by applying a piece of HomeGuard TMB, sufficiently sized to cover the gap or tear with a 200 mm minimum overlap. Bond together as for joining sheets.

Vertical penetrations: Install and FMC HomeGuard collar to all vertical penetrations. Conform to AS 3660.1 and FMC HomeGuard installation requirements.

HomeGuard TMB

Complete under slab installation: Install over the bedding sand before laying steel reinforcing mesh. Make sure there is sufficient overlap at the slab edge to allow full moisture and termite protection.

Retaining walls: Install HomeGuard TMB down to the base of the wall plus 200 mm across the footing, to cover the base course mortar joint, secure to the external masonry wall. Seal joints and edges with an adhesive or a bonding agent to FMC HomeGuard's recommendations.

Construction joints: If not installing HomeGuard TMB as a continuous barrier, install a minimum 300 mm wide strip under construction joints by adhering to the moisture membrane. Locate strip centred on of the construction joints. Extend the HomeGuard TMB 200 mm past the slab edge and pin

to the outer wall of the formwork, allowing sufficient loose sheet to accommodate for the concrete pour.

New concrete to existing masonry or concrete joints: Fix one edge of HomeGuard TMB to the existing vertical edge surface using an adhesive or a bonding agent to FMC HomeGuard's recommendations. Start the sheet within 20 mm of the upper edge of the new concrete. Make sure the sheet bonded to the upper surface of the moisture membrane with an adhesive or a bonding agent to FMC HomeGuard's recommendations, and is continuous towards the footing and for at least 150 mm under the new slab.

HomeGuard DPC and PB

Extent: Extend HomeGuard Sheeting from the slab to the exterior surface of all perimeter cavity wall lines, around each of the new buildings so that it is visible at the exterior.

Infill slab: Secure HomeGuard DPC or HomeGuard PB to the outer edge of masonry wall, fold over and secure to the internal face of wall towards the footings. Secure in place with an adhesive or a bonding agent to FMC HomeGuard's recommendations before pouring slab.

Rebated slab edge: Secure HomeGuard DPC or HomeGuard PB to the slab edge below the (frame) bottom plate and the upper surface of the brickwork place with an adhesive or a bonding agent to FMC HomeGuard's recommendations.

Corners: Install HomeGuard DPC or HomeGuard PB at corners so that sheets are smooth and continuous. Allow folding at corners by making slits from the edge of the sheets to slab corners. Bond sheets together as for joining sheets.

HomeGuard Collars

Extent: Provide a collar to all service pipe or similar concrete slab penetrations.

Application: Only use HomeGuard Collars if a snug fit can be achieved. Install HomeGuard Collars to the requirements of the FMC HomeGuard Product Manual and AS 3660.1.

If not, use other systems instead, e.g. use HomeGuard TMB. Termites can gain access through openings more than 1 mm wide.

Installation: Position correctly sized collar, to form a snug fit, over the penetration.

Reinforcing mesh: Cut clear of penetration pipe so that the collar can be positioned entirely over the slab.

Multiple penetrations: Use HomeGuard Collars, to the FMC HomeGuard product manual.

HomeGuard Collars are recommended for cluster penetrations

HomeGuard Granular Termiticide (GT)

Standard: To AS 3660.1 Section 6.

A variety of perimeter cavity treatment options are available depending on the slab design.

Preparation: Make sure that the cavity is free from any large mortar ‘dags’ and other objects which may act as a bridge for the termites through or across the protection zone.

Installation:

- Provide a minimum 75 mm external masonry wall strip shielding height above finished ground level.
- Pour HomeGuard GT granules into the wall cavity to a minimum of 40 mm in height.
- Adhere a strip of HomeGuard PB to the course of bricks underneath the weep hole area, using either Termiflex or other adhesive, to manufacturer’s recommendations. Define the inspection zone by extending the strip from the face of the brickwork and penetrate 35 mm to 50 mm into the granules.

3.3 COMPLETION

Termite management system notice

General: Permanently fix a durable notice in a prominent location to BCA B1.4(i)(ii) or BCA 3.1.3.4 and AS 3660.1 Appendix A.

This sign is nominated in the *0581 Signage* worksection for statutory signs. If the *0581 Signage* worksection is included in the project specification delete and cross refer as appropriate.

Waste materials

Progressive cleaning: Make sure no waste materials which could attract termites remain on the site.

Warranties

Type: Renewable.

Minimum period: 1 year warranty renewal for 50 years or the design life of the structure.

Form of warranty: Conditional upon annual inspection of the property to AS 3660.2 by a HomeGuard accredited pest management company.

The form(s) required should be provided as part of the contract documentation.

Certificate of installation

General: To AS 3660.1 Appendix A.

Completion inspection

Report: At the end of the defects liability period, inspect the termite management systems and prepare a report on their efficacy and status.

Annual inspection is recommended. Accordingly, there should be one at the end of the normal 12 month defects liability period.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 SCHEDULE

Termite management systems schedule

Property	TB1	TB2	TB3
Location			
Under slabs			
Slab penetrations			
Slab control joints and footing/slab joints			
Building perimeters			

Refer to AS 3660.1 to assist in making appropriate selections.

TB1, TB2, TB3: These designate each instance of type or location of the item scheduled. Edit to align with the project's codes or tags. Edit codes in the **Schedule** to match those on drawings.

Location: e.g. Raised timber floors, Concrete slabs on ground.

Under slabs: e.g. HomeGuard TMB.

Slab penetrations: e.g. HomeGuard TMB, HomeGuard Collars 40, 50, 80, 100 mm.

Slab control joints and footing/slab joints: e.g. HomeGuard TMB.

Building perimeters: e.g. Chemical spray. HomeGuard DPC.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 2870	2011	Residential slabs and footings
AS/NZS 2904	1995	Damp-proof courses and flashings
AS 3660		Termite management
AS 3660.1	2014	New building work
AS 3660.2	2017	In and around existing buildings and structures
AS 3660.3	2014	Assessment criteria for termite management systems
BCA 3.1.3.4	2016	Acceptable construction - Site preparation - Termite risk management - Durable notices
BCA B1.4(i)(ii)	2016	Structure - Structural provisions - Determination of structural resistance of materials and forms of construction

The following documents are mentioned only in the *Guidance* text:

AS 3600	2018	Concrete structures
AS 4349		Inspection of buildings
AS 4349.3	2010	Timber pest inspection
BCA 3.1.3	2016	Acceptable construction - Site preparation - Termite risk management
BCA B1.4(i)	2016	Structure - Structural provisions - Determination of structural resistance of materials and forms of construction
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2018	Specifying ESD