CertMark Australasia Pty Ltd
CodeMark Assessment

 # CMD400018/6

For

Camilleri Under Slab Injection System

PURPOSE

The "CAMILLERI" System is a reticulation system consisting of polyethylene pipe perforated at specified regular intervals which distribute a liquid termiticide into sand/soil layer.



CERTIFICATE HOLDER

Camilleri Underslab Pty Ltd
72 Churchill Mines Road
Dundathu Qld 4650
Ph: 07 4121 5996
Fax: 07 4121 6518
www.camilleriunderslab.com.au

TECHNICAL OPINION

Building Code of Australia

In the opinion of CertMark Australasia Pty Ltd (CMA), the Camilleri Under Slab Injection System is a suitable reticulation system for use under concrete slabs or as a perimeter protection system around a structure. When installed in accordance with the manufacturer's instructions and injected with an APVMA approved termiticide the system will deter attack from subterranean termites. The system meets the requirements of AS3660.1:2000 and the Building Code of Australia if installed under the following conditions:

1. The Camilleri Under Slab Injection System comprises a number of proprietary components that may only to be installed by Registered Installers in accordance with the Installation Manual for Camilleri Under Slab Injection System CUSIS-AITM Version 3 (September, 2012).
2. No Substitution of any component part of the System is permissible without the express written approval of Camilleri.
3. A Certificate of Installation (for quality control) must be signed by the Installer as verification of installation in accordance with the Installation Manual for Camilleri Under Slab Injection System CUSIS-AITM Version 3 (September, 2012).
4. Any proposed applications of the Camilleri Under Slab Injection System that fall outside of the scope of the Installation Manual for Camilleri Under slab Injection System CUSIS-AITM Version 3 (September, 2012) should be referred to Camilleri for evaluation and approval.
5. The termiticide is injected at the concentration level quantity and pressure as specified on the APVMA approved label as well as in concert with the recommendations of the Camilleri Under Slab Injection System.
6. A durable notice in accordance with BCA requirements (clause B1.4 (i) 9ii) volume one and part 3.1.3.2 (b) of Volume two is attached to the building which states that "The Camilleri Under Slab Injection System" has been installed.
7. When used in conjunction with other termite barriers all treatments must comply with the performance requirements of AS3660.1.2000.
8. When external perimeter and penetrations protection system is used in conjunction with the concrete slab as a barrier the slab must be monolithic slab-on-ground construction in compliance with the Australian Standard AS2870-1996, to form a full and continuous termite barrier.
9. Suitable soil is to be used for back fill on the installed system and this soul must be free of heavy clay deposits, rocks, timber and other debris.
10. The maximum length of perforated pipe is 16 metres per pipe.
11. The external perimeter application can be installed either in conjunction with the full system laid under the slab prior to construction, or on its own once the slab has been poured.
12. Annual Audits are made once a year to ensure that the product, manufacturer and client are meeting the requirements given at the time of Certification.

Notes:

i) The inclusion of the reference to the BCA is aimed at assisting those involved in the design; specifying and building approval/permit process relate the Appraisal to the relevant Performance Requirements of the BCA.

ii) Any changes made to the BCA will be reviewed during the term of validity of this CodeMark Determination and, where necessary, any amendment required will be published.

RELATED INFORMATION

VALIDITY OF THE OPINION

Condition:

This CodeMark determination applies only to Camilleri Under Slab System for control of subterranean termites.

Withdrawal:

The CodeMark Determination will be withdrawn or amended if CMA considers that a change in design or manufacturing quality renders the basis of the appraisal invalid, or if reported field experience convinces CMA of unsatisfactory quality or performance.

Term of Validity:

This CodeMark Determination will lapse three years after the date of issue unless revalidation has been requested and granted.

RELEVANT DOCUMENTS

- Camilleri Under Slab Injection System CUSIS-AITM Version 3 (September, 2012).
- Standards Australia, AS3660.1- 2000 'Termite management Part 1: New Building work'.

ASSESSMENT OPINION EXTRACT

The Camilleri Under Slab Injection System will satisfy the performance requirements AS3660.1-2000 and the BCA as detailed on CodeMark Certificate # CMA-CM40018

1. Volume One: BP1.1 (b)(xv).

2. Volume Two: P2.1 (b)(xv).

3. State Additions: Volume Two: QLD P2.1.1 (limited only to actions by subterranean termites).

APPRAISAL

DESCRIPTION

This description is based on information supplied by the certificate holder.

General:

Emulsions of the APVMA registrar Termiticide are injected through polythene pipes laid at regular intervals under the slab including around service penetrations. The system can also be installed around the perimeter of the building abutting the slab below the finished ground level.

Benefits:

Camilleri Under Slab Injection System provides a series of distribution pipes laid on the site prior to the slab being poured, allows replenishment with Termiticide to protect dwellings and structures.

Components:

Pipes CU001	13mm inside diameter grade 12 polyethylene pipe.
Feeder Pipe CU002	13mm inside diameter grade 12 polyethylene pipe perforated with a 1.5mm hole at 150mm spacing's .
End plug CU003	Used to end runs of distribution pipe.
Elbows CU004	Used to create corners in poly pipe.
Joiners CU005	Repairs or joins 2 lengths of poly pipe.
T Piece CU006	Used to branch poly pipe of the same size.
Ratchet Clip CU007	Used on all fittings to secure fittings into poly pipe. Recommended for every connection.
Pump up connector CU008	For connecting to pump system to inject the termiticide.
Valve Box(Small) CU008	Holds the pump up connectors for servicing the system.
Bayonet Connector Poly Click CU10	For pipe connection.
Valve box Large CU011	Holds the pump up connectors for servicing the system.
Steel Peg CU012	Designed to on the feeder line in place during construction of the system.
Bayonet cap Red CU015	Clicks onto 12mm hose connectors and joins to poly pipe. Bug cap keeps out ants and insects when not in use
Durable metal label CU025	To be attached to the bayonet connectors within the Valve Box to denote any lengths of pipe that are less than 16metres in length.
Valve box small Square CU0h46	Holds the pump up connectors for servicing the system.

Installation:

(1) The system is to only be installed and maintained by suitably qualified pest control technicians.

(2) The system is laid beneath the membrane and on top of the graded fill layer of at least 50mm in depth.

(3) The pipes are held in place by steel pegs (part number CU012).

(4) Each length of pipe is plugged at the innermost end and left protruding out of the foundations at the outermost end. When all pipes are laid, they are connected with a feeder pipe to the inlet point which leads back to the feeder box. The valve lid is screwed down for security. When the building is complete a suitable APVMA registered termiticide is pumped into the system as the rates given on the label or in Installation Manual for Camilleri Under Slab Injection System CUSIS-AITM Version 3 September 2012.

(5) When walls are more than 16metres in length, 16 metre lengths of perforated pipe are laid consecutively from each end of the wall. Any remaining lengths being bridged by extra pipes which are extended to the building extremity with unperforated feeder pipe.

(6) If being installed as a full under slab system the pipes are laid at intervals to cover the entire sand bed starting not more than 250mm from the edge of the slab. The Pipe is fixed on the wall of the footing trench which acts as a perimeter system.

(7) For perimeter installation to a poured slab or existing house a trench is dug at 100mm deep around the complete perimeter of the building. The perforated pipe is then laid hard up against the footings (or to within 150mm from the footings) in 16 metre lengths and plugged at the further most end of each 16metre length. Low density Poly Pipe is then connected to each length of the perforated pipe. A non-return valve is fitted to each end. These pipes are used to feed the perforated pipe lengths and are directed back to the previously installed Valve box.

(8) For slab penetration a length of perforated pipe is cut to encircle the penetration. The pipe is connected to a T piece Part number CU006 and joined to a feeder pipe through the footings. This pipe is directed to the valve box and a non return vale is placed on the end.

Durability:

The system is designed and constructed to meet the following :

- Has been designed to achieve a service life of 50 Years during which period the termite barrier including its components are expected to maintain efficacy and function as a termite barrier in accordance with AS3660.1-2000;
- Has been designed in accordance with a quality management system that incorporates a set of rules for design , manufacture, installation and maintenance of all elements of the system; and
- The components used in the manufacture of the termite barrier have been selected for their intended purpose and are expected to operate in accordance with their specification for the duration of the design life of the system.

Design Information:

General: The Camilleri Under Slab Injection System is designed to deliver a controlled amount of termiticide to critical areas where termites may gain undetected entry to a building. The system is based on known technology that incorporates empirical irrigation technology with the latest termiticide technology.

The system comprises a system of polyethylene pipes and associated fittings which are configured into a form that will deliver an even dose of termiticide to areas of the building at risk of undetected subterranean termite ingress. These pipes can either be laid under the slab prior to pouring or around the perimeter of the building post construction.

Maintenance:

It is a requirement of AS3660.1-2000 that the following records are kept;

- A site plan showing the configuration of the system installed.
- The type of chemical used by the installer of the system. (This chemical must be approved by the APVMA for use in a reticulation system).
- The amount of termiticide injected into the system.
- The date of installation.
- The name of the company installing the system.
- The name and pest control licence number of the installer of the system.

Annual inspections of the system are to be made to ensure that no bridging or breaching of the system has occurred. If the system has been compromised by subterranean termites appropriate actions should be taken as detailed in AS3669.2-2000. Termite management—In and around existing buildings and structures—Guidelines

Re treatment intervals should be not less than recommended by the chemical manufacturer. Retreatment should also be undertaken if the chemical barrier is disturbed in any way.

BASIS OF THE DETERMINATION

CMA CodeMark Determination has assessed the following aspects in undertaking the Certification:
(a) Installation procedures
(b) Physical Properties
(c) Chemical properties.
(d) Relation to relevant BCA clauses
(e) The ability of the installation details to meet the requirements of the BCA and relevant Australian and international standards.

Inspections:

CMA Determination representatives have inspected installations of the systems and found the level of performance satisfactory.

CodeMark Certification:

CodeMark is a building product certification scheme. The CodeMark scheme supports the use of new and innovative building products by providing a nationally and internationally accepted process for products to be assessed for compliance with the requirements of the building codes of Australia and New Zealand. The scheme provides confidence and certainty to regulatory authorities and the market through the issue of a Certificate of Conformity.

The ABCB and New Zealand's Department of Building and Housing (DBH) manage the scheme in their respective countries. The Joint Accreditation System of Australia and New Zealand (JAS-ANZ) have accredited CertMark to evaluate and certify building products. Relevant legislation requires building control authorities to accept CodeMark certified products.

	Date
	6/9/12

John Thorpe
Director
CertMark Australasia Pty Ltd

World Federation of Technical Assessment Organisations

WFTAO is the World Federation of Technical Assessment Organisations, a worldwide network for co-ordinating and facilitating the technical assessment of innovation in the construction field.

WFTAO comprises officially recognised national bodies active in the field of technical assessments for construction products and systems. The WFTAO currently has members from twenty-one countries across the global market.

The primary objective of WFTAO is to facilitate the transfer of national products to the global marketplace through the acceptance of technical assessments delivered by its members.

A favourable technical assessment delivered by a WFTAO member will:

- Provide a means of demonstrating the fitness for purpose of the product with building regulations
- Be more readily accepted by building control personnel
- Show that the holder's manufacturing and QA systems meet high standards
- Save valuable selling time, by easing acceptance of new products in a conservative market
- Provide a good opportunity for press coverage for the holders to use the distinctive WFTAO logo on advertisements, literature and display material, identifying themselves as quality-conscious companies and enhancing their image