



CertMark Australasia Assessment Brief

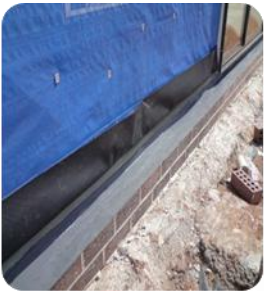
TERM-seal™ Systems

Certificate Holder

Termseal (AUST) Pty Ltd
4-5/19 Moonbi St,
Brendale Qld. 4500

PURPOSE

The TERM-Seal Systems is a termite barrier system.



Termseal (AUST) Pty Ltd

TECHNICAL OPINION**Building Code of Australia**

In the opinion of CertMark Australasia Pty Ltd (CMA), the TERM-seal System meets the requirements of the Building Code of Australia if installed under the following conditions:

1. Installed by TERM-seal™ accredited installers
2. Product installation shall be carried out in accordance with the TERM-seal™ Active Systems Manual June 2009v1, Commercial construction Manual 2009v1, Passive Systems Manual June 2009v1, or Collar manual June 2009v1 as applicable
3. The durable notice installed in accordance with BCA 2009 Volume One: B1.4 (i)(ii) and BCA 2009 Volume Two: 3.1.3.2(b) must be permanently fixed to the building in a prominent location, such as a meter box or the like indicating:
 - a. The method of termite risk management; and
 - b. The date of installation of the systems; and
 - c. The manufacturer's recommendations for the scope and frequency of future inspections for termite activity.
4. When used as a termite barrier in conjunction with a concrete slab the slab must be designed and constructed according to AS 2870: 1996 (up to amendment 4, 05/2003) or AS 3600: 2001 (up to Amendment 2, 10/2004).
5. When used as a termite barrier in masonry walls, the mortar joint under the barrier shall be full (have no gaps or porosity).
6. 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 this clause with 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 Appraisal and, where necessary, any amendment required will be published.

RELATED INFORMATION**VALIDITY OF THE OPINION****Condition:**

This Appraisal applies only to TERM-seal Systems.

Withdrawal:

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

RELEVANT DOCUMENTS

- (1) TERM-seal installation manual Numbers:
 - TERM-seal™ Active Systems Manual August 2012v2,
 - Commercial construction Manual 2009v1,
 - Passive Systems Manual June 2009v1
 - Collar manual August 2012v2
- (2) Australian Buildings Code Board, Building Code of Australia.
- (3) Reverent Australian Standards.
- (4) Relevant International Standards.

APPRAISAL OPINION EXTRACT

The TERM-seal System will satisfy the performance requirements of the BCA as detailed on CodeMark Certificate #CMA-CM40017

Volume One: BP1.1 (limited only to actions by subterranean termites)

2. Volume Two: P2.1 (limited only to actions by subterranean termites)

State Variation:

1. Volume Two – QLD P2.1.1 (limited only to actions by subterranean termites)

APPRAISAL	
DESCRIPTION This description is based on information supplied by the applicant.	
General: TERM-seal termite systems and the associated products have been developed for termite proofing new and existing buildings. The systems also meet with the requirements for water-proofing, damp-coarsing and under-slab vapour barrier solutions. TERM-seal Active Systems products are APVMA approved for use. It should be noted that the CodeMark certification associated with this Appraisal only refers to the Termite control aspect of the TERM-seal product. For information regarding the use of this system for waterproofing please contact the manufacturer.	
Benefits: (1) Kills and repels termites (2) Will last the Lifetime of the building (3) Unique 2 in 1 termite and waterproof barrier.	
Component	Function
TERM-seal Ura-Fen Active Perimeter Barrier	TERM-seal Ura-Fen Active (containing 0.2% - Bifenthrin) that kills termites is a Cavity Perimeter System. It has a lifetime of the building product warranty.
TERM-seal™ PRM Active Cord Strip and Capping Strip	TERM-seal™ PRM Active (Poly Re-enforced membrane) is TERM-seal Multi-Purpose Active, termite resistant and waterproof compound that is impregnated into a poly fibre industrial fabric, using knifing technology, cured through a drying bank and slit to convenient widths of 110mm, 150mm, 230mm and 300mm The active constituent is 0.1% Bifenthrin when cured. The sheeting is manufactured to meet the requirements of AS/NZS 4347.1, AS3660.1 and

	doubles as a damp-course over masonry. The TERM-seal™ PRM Active sheeting has been tested as suitable as a damp-course. TERM-seal™ PRM Active is used with TERM-seal™ Multi-Purpose Active and TERM-seal™ Sealant Active to adhere the PRM to joints in concrete slabs, as masonry cord protection (110mm) and as part of an ant capping (150mm) system for bearer and joist construction, to form a full and continuous physical termite barrier and damp course around perimeter cavities for all types of construction
TERM-seal Ura-Fen Major	TERM-seal™ Ura-Fen Active is a two component, Polyurethane settable foam. It is specially engineered for use in building situations for filling gaps, fissures and cavities, TERM-seal™ Ura-Fen contains 0.2% Bifenthrin as active constituent when cured. TERM-seal Ura-Fen major is dispensed in either a: part A (20Litre) and part B (20 Litre) supplied containers as a 2 drum unit for dispensing through a dispensing machine in 750ml Part A x 750ml Part B twin disposable cartridges and dispensed with a purpose type gun in 300ml Part A x 300ml Part B twin disposable cartridges and dispensed with a purpose type gun
TERM-seal™ Prime-coat	TERM-seal™ Prime-coat is a ready to use solution. TERM-seal™ Prime-coat must be applied on all applications prior to the first coat of TERM-seal™ Multi-purpose Active or

	<p>TERM-seal™ Sealant Active, especially to older or contaminated, porous and friable surfaces that have been cleaned. Application is by brush, roller or spray gun and has a coverage rate of 10 square metres per one litre, and at normal ambient conditions is touch dry in 10-15 minutes.</p> <p>It is available in 4 litre pails and 15 litre buckets.</p>
<p>TERM-seal™ Ura-Fen Active and TERM-seal Ura-Fen Major</p>	<p>TERM-seal™ Ura-Fen is a two component polyurethane settable foam containing 0.2% Bifenthrin as active constituent when cured. The foam comes together by the mixing of polyol and isocyanate components that create an exothermic reaction to create a settable, termite resistant and waterproof barrier. TERM-seal™ Ura-Fen is dispersed to form a barrier a minimum of 40mm thick.</p>
<p>TERM-seal™ Ura-Fen Shield TWB</p>	<p>TERM-seal™ Ura-Fen Shield TWB is a triple-layer termite and moisture proof sheet barrier. It consists of an open cell polyurethane matrix containing the active ingredient (0.2% Bifenthrin) sandwiched between two untreated polyolefin sheets that act as a water vapour barrier. The top polyolefin top cover sheet is black in colour and the lower sheet is dark grey in colour. It may be installed in conjunction with TERM-seal™ Sealant active.</p>
<p>TERM-seal™ Reinforcing Band (Reo-band FG)</p>	<p>TERM-seal™ Reo-band FG is non-woven fibreglass matt, which is available in 100mm, 130mm, 205mm and 502mm wide rolls, 160m in length. Used with the TERM-seal™ Multi-Purpose Active to re-</p>

	<p>enforce joints and corners</p>
<p>TERM-seal™ Penetration Collars</p>	<p>TERM-seal™ Penetration Collars are supplied to fit penetration interior diameter sizes of 40mm, 50mm, 65mm, 80mm and 100mm.</p>

Installation:

Product installation must be carried out in accordance with:

- TERM-seal™ Active Systems Manual August 2012v2,
- Commercial construction Manual 2009v1, Passive Systems Manual June 2009v1
- Collar manual August 2012v2 as applicable

When used as a termite barrier in conjunction with a concrete slab the slab must be designed and constructed according to AS 2870: 1996 (up to amendment 4, 05/2003) or AS 3600: 2001 (up to Amendment 2, 10/2004).

When used as a termite barrier in masonry walls, the mortar joint under the barrier shall be full (have no gaps or porosity to provide an 75mm inspection zone).

Damp proofing:

CodeMark certificate **CMA-CM40017** relates only to the use of the TERM-seal system as a Termite barrier. However the Termseal System has been tested by the CSIRO in relation to its effectiveness as a damp proof material in accordance with:

- AS/NZS 4347 Damp-proof courses & flashings- Method 6: Determining impact resistance (falling dart test).
- ASTM E96 Water Vapour Transmission - 0.43g/m²/24 hours.
- CSIRO Falling Aggregate Test.

This testing was conducted on 29 May, 2009 CSIRO Test Report # 4792. It is noted herein that the Termseal Polyolefin termite blanket - TERM-seal Ura-Fen Shield TDB passed all of the above tests. For detailed information on the use of this system as a damp proof course contact the manufacturers.

Durability:

The TERM-seal System has been proven to conform to the durability requirements of the BCA.

BASES OF THE APPRASIAL

CMA has assessed the following aspects in undertaking the Certification:

- (a) Installation procedures
- (b) Physical Properties
- (c) Relation to relevant BCA clauses
- (d) The ability of the installation details to meet the requirements of the BCA and relevant Australian and international standards.

The following documents and inspections were used in carrying out the Certification and Appraisal.

Manufacturer's and Installation Information:

Installation August 2012v2

Various technical drawings supplied by the manufacturer.

Technical data sheets and in house laboratory results supplied by the manufactures NATA accredited testing facility.

Test Reports:

(1) Report on the TERM-seal design life by Dr. Roger Franklin. Dated 12th July 2009.
(2) Entomological review of FMC Home Guard and TERM-seal Termite Management System by Dr. Roger Franklin 12th July 2009.
(3) Thermal insulation materials made of rigid polyurethane foam (PUR/PIR) technical report dated October 2006
(4) Report from FMC 9th June 2009
(5) TERM-seal Active Trial, 16th June 2004
(6) Trial Inspection TERM-seal Active System, 29th October 2004.
(7) TERM-seal Active Trial, 15th April 2005
(8) TERM-seal Active Trial, 17th November 2005
(9) TERM-seal Active Trial, 15th May 2006
(10) TERM-seal Active Trial, 6- 7th February 2007
(11) TERM-seal Active Trial, 16th August 2007

(12) Trial Protocol TERM-seal Active System, 4th April 2004
(13) Trial Protocol TERM-seal Active System, 3rd June 2004
(14) Trial Protocol TERM-seal Active System, 13th July 2005
(15) Trial Protocol TERM-seal Active System, 30th March 2006
(16) Trial Protocol TERM-seal Active System, 6th February 2007
(17) Trial Protocol TERM-seal Active System, 16th July 2007
(18) Trial Protocol TERM-seal Passive System, Broome, 4th April 2004
(19) Trial Protocol TERM-seal Passive System, Broome, 6th April 2004
(20) Trial Protocol TERM-seal Passive System, Broome, 16th July 2004
(21) Trial Protocol TERM-seal Passive System, Broome, 27th October 2004
(22) Trial Protocol TERM-seal Passive System, Broome, 16th March 2005
(23) Trial Protocol TERM-seal Passive System, Broome, 17th November 2005
(24) Trial Protocol TERM-seal Passive System, Broome, 19th May 2006
(25) Trial Protocol TERM-seal Passive System, Broome, 6th February 2007
(26) TERM-seal Physical Barrier System Trial against Coptotermes Acinaciformis. Cairncross State Forest NSW, 23rd August 2003
(27) TERM-seal Physical Barrier System Trial against Coptotermes Acinaciformis. Cairncross State Forest NSW September 2003
(28) TERM-seal Physical Barrier System Trial against Coptotermes Acinaciformis. Cairncross State Forest NSW, 1st December 2003
(29) TERM-seal Physical Barrier System Trial against Coptotermes Acinaciformis. Cairncross State Forest NSW, 10th December 2003
(30) TERM-seal Physical Barrier System Trial establishment site 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 10th December 2003
(31) TERM-seal Physical Barrier System Trial inspection of sites 1 and 2,

Coptotermes Acinaciformis. Cairncross State Forest NSW, 14th March 2004
(32)TERM-seal Physical Barrier System Trial inspection of sites 1 and 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 5th June 2004
(33)TERM-seal Physical Barrier System Trial inspection of sites 1 and 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 4th December 2004
(34)TERM-seal Physical Barrier System Trial inspection of sites 1 and 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 5th July 2005
(35)TERM-seal Physical Barrier System Trial inspection of sites 1 and 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 23th March 2006
(36)TERM-seal Physical Barrier System Trial inspection of sites 1 and 2, Coptotermes Acinaciformis. Cairncross State Forest NSW, 6th February 2007
(37)Trial Protocol TERM-seal Polyurethane Foam System 1st September 2006. Cairncross State Forest NSW and Broome WA.
(38)Trial Protocol TERM-seal Polyurethane Foam System 30th October 2006. Cairncross State Forest NSW and Broome WA.
(39)Trial Protocol TERM-seal Polyurethane Foam System 7th February 2007, Broome WA.
(40)Trial Protocol TERM-seal Polyurethane Foam System 16th August 2007, Broome WA.
(41)Trial Protocol TERM-seal Polyurethane Foam System 7th November 2007, Broome WA.
(42)Trial Protocol TERM-seal Polyurethane Foam System 30th July 2008, Broome WA.
(43)Trial Protocol TERM-seal Polyurethane Foam System 25th February 2009, Broome WA.

(44)Trial Protocol TERM-seal Polyurethane Foam System September 2006, Cairncross State Forest NSW
(45)Trial Protocol TERM-seal Polyurethane Foam System 6th February 2007. Cairncross State Forest NSW.
(46)Trial Protocol TERM-seal Polyurethane Foam System 16th July 2007, Cairncross State Forest NSW.
(47)Trial Protocol TERM-seal Polyurethane Foam System 7th November 2007 Cairncross State Forest NSW
(48)Trial Protocol TERM-seal Polyurethane Foam System 21st May 2008 Cairncross State Forest NSW.
(49)Trial Protocol TERM-seal Polyurethane Foam System 13th February 2009, Cairncross State Forest NSW.
(50)First year report, TERM-seal Ura-fen Shield Termite and Waterproof Barrier
(51)Chemistry and manufacturer report on the TERM-seal Ura-dfen Shield Termite and Waterproof Barrier
(52)Report from RNA Consultants on the TERM-seal Ura-fen Shield Termite and Waterproof Barrier
(53)A bucket Trial Protocol inspection and report prepared for the APVMA and reference to 64037/47238
(54)Report by the CSIRO
(55)CodeMark certificate Global-Mark.
(56)Report from Building Ecology Unit

Other Documents:

- (a) Rohm and Hass Technical information on acrylics alkyds.
- (b) IRG/WP03-3311 Wood Protecting Chemicals.
- (c) TERM-seal Active Trial, 4th April 2004
- (d) Label for the TERM-seal Ura-fen Shield Termite and Waterproof Barrier
- (e) Notice of registration of a chemical from the APVMA
- (f) Presentation and overview of the system supplied by the manufacturer
- (g) TERM-seal Active Systems Product Overview
- (h) TRM-seal Passive Systems Installation Manual for Termite and Waterproofing Management Systems
- (i) TERM-seal penetration collars installation manual
- (j) Certificate of Installation of the TERM-seal System
- (k) Commercial Construction Installation Manual for the TERM-seal Active Systems Termite and Waterproof Barrier
- (l) MSDS for TERM-seal Ura-fen Active
- (m) MSDS TERM-seal PRM Active
- (n) APVMA Registration for the TERM-seal Multi-purpose Active Termite and Waterproof Barrier.
- (o) A Form 16 under the Queensland Building Registration Act.
- (p) Copy of the Pest Management Act Queensland
- (q) Bifenthrin Pesticide Data Sheet.
- (r) TERM-seal Australia Application for accreditation.
- (s) TERM-seal Ura-fen Shield Raw Material Specification
- (t) TERM-seal Label
- (u) MSDS Sheet for TERM-seal Ura-fen Shield Termite Barrier
- (v) Product Technical Sheet from Joyce Foam Products.

Inspections:

CMA auditors have inspected installations of the systems and found the installation systems meet the stated quality standards as detailed in the relevant installation manuals.

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.

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



John Thorpe
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CertMark Australasia Pty Ltd
17/8/12