Certificate of Conformity

Certification Body:

CertMark International
ABN: 80 111 217 568
JAS-ANZ Accreditation
No. Z4450210AK
PO Box 7144, Sippy
Downs Qld 4556
+61 (07) 5445 2199
www.CertMark.org

Certificate Holder:

PC Plastics Pty Ltd
ABN: 81 164 968 423
5 Workshop Street
Brassall QLD 4305
Ph: 07 5563 3003
www.Biofilm.com.au

Certificate number: CM40163-I01-R01

THIS TO CERTIFY THAT

BioFilm Termite Management System

Type and/or use of product:

An under slab, perimeter and penetration system to deter concealed entry by subterranean Termites into a building.

Description of product:

BioFilm is a physical-chemical Termite exclusion system utilising a high resistance Polyethylene film containing bifenthrin.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA 2016

	Volume One	Volume Two
Performance Requirement(s)	BP1.1 Structural Reliability - Limited to Termite Actions (a)&(b)(xv)	P2.1.1 Structural Stability and Resistance – Limited to Termite Actions (a)&(b)(xv)
Deemed-to-Satisfy Provision(s):	Not applicable to this product	Not applicable to this product
State or territory variation(s):	Not applicable to this product	QLD P2.1.3

SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

1. Must be installed by a licensed BioFilm installer accredited by PC Plastics Pty Ltd.
2. Must be installed in accordance with the BIOFILM Training Manual Version 1.3 March 2018.
3. Footings and Slabs must be constructed in accordance with the requirements of AS 2870-2011 or AS 3600-2009 - Concrete Structures including amendments.
4. A durable notice, installed in accordance with BCA Volume One 2016: B1.4 (i)(ii), including NT variation, & BCA Volume Two 2016: 3.1.3.4, including QLD variation, must be affixed in a prominent location(s) to the building.
5. This Certificate is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Certificate is outside of this document's scope and the installation of the certified product/system will not be covered by this CodeMark certification. This may result in the product being classified as a non-conforming building product/system.

Building classification/s:

Classes 1,2,3,4,5,6,7,8,9 & 10

John Thorpe - CMI

Don Grehan – Unrestricted Building Certifier

Date of issue: 16/04/2017

Date of expiry: 30/11/2020

Certificate of Conformity

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

As per page one.

A2 Description of product

Biofilm is a professional Termite Management System. The purpose of Biofilm is to deter concealed entry by subterranean Termites from the soil into a structure above the Termite barrier as per AS 3660.1-2014, Biofilm is not designed as a remedial treatment for existing Termite damage.

Biofilm contains an active ingredient that is dispersed fully throughout the plastic sheeting. This means that there is no top or bottom to the sheet – it may be installed equally effectively no matter which side is up. Biofilm must be used for perimeter application either in combination with a concrete slab acting as physical Termite barrier, and/or in combination with other Termite Management Systems as per AS 3660.1-2014. When used in combination with a concrete slab acting as a physical barrier, the slab must be poured in accordance with AS 2870.1 Residential slabs and footings recommendations.

A3 Product specification

BioFilm is a physical-chemical Termite exclusion system utilising a high resistance Polyethylene film containing 1g/kg bifenthrin.

Roll sizes:

- 50mm – 6m Width x 50m Length

A4 Manufacturer and manufacturing plant(s)

This field is voluntary. For more information, please contact Certificate Holder.

A5 Installation requirements

To be installed in line with Biofilm Training Manual Version 1.3 March 2018.

Pest	Situations	Rate	Critical Comments
Subterranean Termites	Domestic, commercial and industrial structures to form a complete perimeter pre-construction treatment providing both Termite and moisture protection or as a flexible Termite Management System that they may be used as part of an integrated Termite Management System.	Single sheet thickness is sufficient to form an effective Termite and moisture barrier.	Biofilm Termite Management System must be installed as a complete and continuous barrier. Any gaps, punctures or tears present in the sheet after installation must be repaired.

Source: *APVMA Approval No 81353/114532*

Critical application details. Installing Critical application Biofilm must be in accordance with Australian Standard AS 3660.1-2014 recommendations.

Pre-Installation	Prior to installing Biofilm, it is recommended that a site inspection is performed, and the following precautions are carried out. Elimination of any active nest of economically important wood feeding species of subterranean Termite (as per AS 3660.1-2014) found within the property boundary up to a distance of 50m from the proposed new building work. All tree stumps, logs, and roots, shall be excavated and removed from the building footprint. All timber off-cuts, building debris, removable framework and other waste materials shall be removed from the area where the Biofilm is to be installed. All structural material below the ground should be made from Termite resistant material such as masonry, concrete, steel etc.	
Joining sheet	In almost all use situations Biofilm is held in place by construction materials as the structure is built. In such cases adhesives or bonding agents used to join sheets are required until these construction components are installed. In situations where construction materials do not exert pressure on sheet overlaps such as perimeter cavities a permanent bond must be created. Such a bond can be made by high strength construction adhesives or heat-sealing using a portable heat sealer.	
	Biofilm sheeting can be joined using a heat sealer, an appropriate adhesive, or bonding agent. Appropriate adhesives are those designed by the manufacturer to provide a construction grade impervious bond between the two plastic sheets, allowing the system to meet Australian Standard 3660. Termite Management System with respect to providing a barrier to subterranean Termites. If unsure of the suitability of the adhesive to be used contact the adhesive manufacturer for technical support. Ensure that a minimum of 200mm overlap is achieved when joining.	
Repairing Tears or Gaps	If the plastic sheeting is ripped or torn it must be repaired by applying a single sheet piece of sufficient size to fully cover the gap or tear plus a minimum overlap of 200mm. The repair sheet is to be bonded onto the tear/gap as detailed above in Joining Sheets.	
Perimeter treatment	In-fill Slab	Secure the plastic sheeting to the outer edge of the brickwork and fold the sheet over the top of the brickwork securing it to the internal brickwork towards the footings. Ensure that prior to the slab being poured that the sheet is securely held in place using an appropriate adhesive or bonding agent designed by the manufacturer to provide a construction grade bond between the sheet and the material it is being bonded to. If a separate damp proof course material is being used it is installed above the Biofilm level.
	Rebated slab edge	Biofilm should be installed before the timber frame has been raised. Attach one edge of the sheet to the slab to ensure the frame bottom plate will be placed on top of the sheet using an appropriate adhesive or bonding agent. The second edge is fixed to the upper surface of the brickwork with the outside leading edge being visible in the damp proof course (DPC) horizontal mortar joint using an appropriate adhesive or bonding agent designed by the manufacturer to provide a construction grade bond between the sheet and the material it is being bonded to. Any excess Biofilm sheet is installed into the cavity.
Corners	Corners must be carefully installed ensuring finished comer is smooth and sheeting is continuous. Make slits from the edge of the sheet into the corner of the slab to allow folding of the sheet around the corner. At a corner two sheets must be joined and sealed using an appropriate adhesive or bonding agent designed by the manufacturer to provide a construction grade bond between the sheet and the material it is being bonded to with a minimum of 200mm overlap.	
Service Penetrations	Vertical penetrations in the perimeter	When installing Biofilm as a perimeter application, service penetrations must be protected. To construct a Biofilm penetration collar, each penetration requires 2 patches of Biofilm (minimum size 300mm x 300mm). Make a crosswise slit in one of the patches and pull it tightly down over the penetration. Using an appropriate adhesive or bonding agent designed by the manufacturer to provide a construction grade bond between the sheet and the material it is being bonded to, adhere the patch to the Biofilm sheet and then wrap the patch around the penetration and adhere the two together. Using the second patch make a crosswise slit and pull the patch over the penetration down onto the first patch. Again, use an appropriate adhesive or bonding agent designed by the manufacturer to provide a construction grade bond between the sheet and the material it is being bonded to, attach the patch to the Biofilm sheet and the penetration. Adhere the edges of the patches to the moisture membrane. Ensure there are no gaps between the square Biofilm patches and the penetration.
	Multiple penetrations in the perimeter	Clusters of penetrations in close proximity are termed multiple penetrations or cluster penetrations. Treat each penetration separately ensuring a minimum of 100 mm Biofilm sheet extends from each penetration and the Biofilm sheet is overlapping between each of the penetrations. Ensure a double layer of Biofilm sheet, as described in the vertical penetrations directions above, protects each penetration.

Service Requirements:	Biofilm contains an insecticide, which will both kill and repel Termites that come into contact with it. The objective of Biofilm is to prevent concealed access from subterranean Termites. Termites can still crawl around the barrier, but if this occurs, a visual mud trail (often referred to as a tunnel or lead) will be evident and regular inspections will identify this.
	Regular competent inspection is recommended as part of an ongoing Termite Management System. Service requirements are to be determined as a result of at least an annual inspection by a licensed Pest Control Operator. More frequent inspections may be required in high-risk Termite areas. In determining the need for service, factors such as local Termite pressure, breaches of the barrier and Termiticide longevity should be considered
	Subterranean Termites are capable of bridging Termite Management System and therefore regular inspections, as detailed in the Australian Standard AS 4349.3-2010, will significantly increase the probability of detection of Termite activity before any damage or costly repairs are required.

Source: *APVMA Approval No 81353/114532*

Other installation considerations

a. The concrete slab must be constructed in accordance with the requirements of AS 2870-2011 Residential Slabs and Footings – Construction & AS 3600-2009 - Concrete Structures.

b. Inspections must be undertaken annually in accordance with the BioFilm Training Manual Version 1.3 March 2018, to determine that no bridging or breaching of the Termite Management System has occurred.

c. In accordance with BCA Volume One 2014: B1.4 (i), (i) & (ii), including NT & QLD state & territory variations, and BCA Volume Two 2014: Part 3.1.3.2 (b), including QLD state variations, a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like indicating:

- **i.** The method of Termite Risk Management; and
- **ii.** The date of installation of the systems; and
- **iii.** The installers or manufacturers recommendations for the scope and frequency of future inspections for Termite activity.

A6 Other relevant technical data

No other relevant technical data.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Termite Risk Management – A2.2 (a)(i) & (iii) & 1.2.2 (a)(i) & (iii) reports from NATA accredited test lab and reports from an appropriately qualified person.

B2 Reports

1. APVMA Registration 81353/114532.
2. Eurofins; Certificate of Analysis Reference No. 14-0900; Bifenthrin Content; Dated 11th November 2014.
3. Ecospan; Technical Assessment of the Efficacy of the Biofilm Termite Blanket; (DR John French); Dated 12th November 2014.

The Certificate Holder has chosen not to make the above evidence of compliance publicly available, due to the documents being considered commercial in confidence.