



CSIRO

BUILDING PRODUCTS & SYSTEMS  
**Appraisals**

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## TECHNICAL ASSESSMENT 350

July 2007<sup>1</sup>

### High Performance Bushfire Weepa

1. March 2009. Update to BCA and reference to Australian Standard 3959

#### PURPOSE

A permanent weephole former to create a weephole in masonry walls, which stays clean during construction, and prevents the entry of embers and vermin including insects, mice, cockroaches, and snakes into the wall cavity.

#### APPLICANT

Weepa Products Pty Ltd, PO Box 3325 South Brisbane  
QLD 4101 (ABN 52 011 011 457)

## TECHNICAL OPINION

In the opinion of CSIRO Appraisals, the High Performance Bushfire Weepa is suitable for use as a weephole in masonry construction under the following conditions:

1. The High Performance Bushfire Weepa is installed in accordance with the Weepa Pty Ltd installation instructions (11 December 2006) and the Weepa Products Pty Ltd "Bulletin – Perfect Rendered Weepholes" (if the wall in which the High Performance Weepa is installed is to be rendered).
2. The High Performance Bushfire Weepa is suitable for installation in Level 1, 2 and 3 construction in bushfire-prone areas as defined in AS 3959:1999; and medium, high and extreme bushfire attack categories as defined in the BCA 2008.
3. The High Performance Bushfire Weepa is suitable for installation in Bushfire Attack Levels BAL-LOW, BAL-12.5, BAL19, BAL-29, BAL-40 as defined in AS 3959-2009 and is also suitable for installation in Bushfire Attack Level BAL-FZ when a minimum setback distance of 10 m from the classified vegetation is achieved.
4. Following installation, the High Performance Bushfire Weepa should be inspected and the cover removed in accordance with the Weepa Products Pty Ltd "Bulletin – removing Grate after painting and cleanup".
5. The High Performance Bushfire Weepa is not a termite barrier.

## BUILDING CODE of AUSTRALIA

In the opinion of CSIRO Appraisals, the High Performance Bushfire Weepa described in this Technical Assessment and installed under the conditions listed in this Technical Assessment will satisfy the performance requirements of clauses BP1.1 BP 1.2 and GP5.1 (Volume 1 - Class 2 to 9 buildings) and Clauses P2.1 and P2.3.4 (Volume 2 – Class 1 and 10 Buildings) of the Building Code of Australia 2008 and Regulations 114(1)(b) & 114(2)(c) of Building Regulations 2006 (Victoria) incorporating amendments as at 11 March 2009 that include the Building Amendment (Bushfire Construction) Interim Regulations 2009.

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) Users of this Technical Assessment must review and determine the impact of any amendments made to the BCA including referenced documents after the date of publication of this Technical Assessment.

## RELATED INFORMATION

### VALIDITY OF THE ASSESSMENT

**Condition:**

This Technical Assessment applies only to the use of the High Performance Bushfire Weepa as described herein.

**Withdrawal:**

This Technical Assessment will be withdrawn or amended if CSIRO Appraisals considers that a change in design or manufacturing quality renders the basis of appraisal invalid, or if reported field experience convinces CSIRO Appraisals of unsatisfactory quality or performance.

**Term of Validity:**

This Technical Assessment is valid until 31 December 2009. Technical Assessments may be amended during the term of validity. Users of this Technical Assessment should verify that it remains valid and is the current version by checking on the CSIRO Appraisals website: <http://www.cmmt.csiro.au/services/appraisals>.

### RELEVANT DOCUMENTS

The High Performance Bushfire Weepa, Installation Instructions (11 December 2006).

Standards Australia AS 3959:1999 Construction of buildings in bushfire-prone areas (Amdt No. 2:June 2001).

Standards Australia AS 3959-2009 Construction of buildings in bushfire-prone areas

Standards Australia AS 3700:2001 Masonry Structures (Amdt No.1 May 2002).

Building Code of Australia 2008.

### APPROVED ASSESSMENT EXTRACT

The High Performance Bushfire Weepa as manufactured by Weepa Products Pty Ltd, PO Box 3325 South Brisbane Qld 4101 (ABN 52 011 011 457) is suitable for use as a weephole in masonry construction, including in bushfire prone areas, when the conditions of CSIRO Appraisals Technical Assessment 350 are fulfilled.

# APPRAISAL

## DESCRIPTION

The following description is based on information provided by the applicant.

### **General:**

The High Performance Bushfire Weepa is a plastic weephole former with a mortar protector, vermin guard and stainless steel spark arrester.

### **Installation of the High Performance Bushfire Weepa:**

The High Performance Bushfire Weepa is a small plastic rectangular shaped object that is placed during the laying of masonry to ensure weepholes are properly formed and stays clean of mortar. It remains in the wall after construction and prevents the entry of sparks and burning embers into the wall cavity in the event of a bushfire, as well as assisting in preventing the entry of vermin such as insects, mice, cockroaches and snakes into the wall cavity.

## DESIGN INFORMATION

### **General:**

The High Performance Bushfire Weepa is a small plastic rectangular shaped object incorporating a mortar protector, vermin guard and stainless steel spark arrester.

### **Durability:**

CSIRO Appraisals has not assessed the durability of the High Performance Bushfire Weepa.

## BASIS OF APPRAISAL

CSIRO Appraisals has assessed the following aspects in undertaking this appraisal:

- (a) installation procedures,
- (b) physical properties,

The following documents and inspections were used in carrying out the appraisal:

### **Manufacturer's and Installation Information:**

1. **Weepa Products Pty Ltd 'Installation Instructions for High Performance Bushfire Weepa' (11/12/06)**  
This covers the method of installation of the High Performance Bushfire Weepa during the laying of new masonry construction and retrofitting in existing masonry walls.
2. **Weepa Products Pty Ltd "Bulletin – Perfect Rendered Weepholes"**  
This document sets out how to render around a High Performance Bushfire Weepa.
3. **Weepa Products Pty Ltd "Bulletin – removing Grate after painting and cleanup"**  
This document sets out how to clean around a High Performance Bushfire Weepa and remove the cover following installation.
4. **Metal Mesh Pty Ltd. Confirmation of Material/Manufacture (30 October 2006).**  
This contains the specifications for the mesh used in the High Performance Bushfire Weepa.
5. **Polvin Compounds Pty Ltd. Specification and Data Sheet.**  
This contains the specifications for one of the plastics used in the product.
6. **Basell-Moplen Data Sheet.**  
This contains the specifications and characteristics of one of the plastics used in the product.
7. **Weepa Products Pty Ltd. Operations Manual (31/10/06).**  
This document outlines the quality control and packaging and labelling procedures for the High Performance Bushfire Weepa.

### **Test Reports**

1. **CSIRO CMIT Test Report "Tests on Various Weephole Products when Exposed to Simulated Bushfire Exposure Consisting of Radiant Heat and Simulated Ember Attack". (Report No. FNA 0066 dated 8 February 2005).**  
This report details tests undertaken on a version of the High Performance Bushfire Weepa to the principles of WFRA Standard FES025C Version 2.31.2: Performance of External Construction Elements Subjected to Simulated Bushfire Attacks, Part C: Radiant Heat Test, issued July 2004. The test specimen was subject to a peak of approximately 60KW/m<sup>2</sup> received thermal radiation for greater than 2 minutes and a minimum of 12.5KW/m<sup>2</sup> received thermal radiation for 10 minutes.

**2. CSIRO CMIT Letter of Opinion “Likely Fire Performance of Modified Weephole Former if Tested to the Principles of WFRA Standard FES025C Version 2.31.2: Part C”. (Assessment No. FCO-2446 dated 29 August 2005).**

This letter of opinion states that the refinements to the High Performance Bushfire Weepa from the tested prototypes when tested to the principles of WFRA Standard FES025 C Version 2.31.2: Part C would not differ adversely from the ‘Standard grade polypropylene weephole body and PVC grate with stainless steel mesh insert behind the grate’, reported in CSIRO Report No. FNA0066. The modified High Performance Bushfire Weepa would be expected to maintain integrity during the test, the steel mesh to remain in place and the weephole self extinguish.

***Inspections***

CSIRO Appraisals representatives have inspected installations of the High Performance Bushfire Weepa and found them to be satisfactory.



Kenneth KJ Lofhelm  
CSIRO Appraisals



CSIRO Appraisals is a project of CSIRO Manufacturing and Infrastructure Technology providing a range of assessment products including:

- Technical Assessments – appraisals of innovative products, systems or materials that may or may not be covered by Australian Standards or building regulations.
- Interim Reports – appraisals of products that have not yet reached the fully developed or manufacturing phase. They aid with product development and may be used as a step towards a subsequent Technical Assessment.
- Certification Assessments – appraisals of products, systems or materials solely against the requirements of the BCA and used for gaining approval from Federal or State authorities.

From 1978, under the auspices of the Australian Building Systems Appraisal Council (ABSAC), CSIRO ran an appraisal service in conjunction with the Australian Institute of Building Surveyors, the Housing Industry Association, the Insurance Council of Australia and the Master Builders Association. In 1999, CSIRO Appraisals was formed to continue the business of ABSAC under the sole patronage of CSIRO. This new scheme retains the committee structure of technical and interstate advisers that operated as ABSAC. All past ABSAC publications and appraisals are being continued and supported by CSIRO Appraisals.

CSIRO Appraisals is a founding member of the World Federation of Technical Assessment Organizations

Technical Assessments are intended to help all those concerned with the approval, specification and use of new

products or systems. They are objective assessments of the product, system or material but are not approvals or endorsements. They may be submitted to approval authorities as part of the justification process required to obtain approval.

Each Technical Assessment has been prepared by CSIRO Appraisals and then reviewed, revised and finally endorsed by the Technical Advisory Committee (TAC), detailed below. CSIRO makes the appraisals on a national basis by obtaining input from regional committees in each State and Territory to take account of variations in local building regulations, practice and local climatic features.

CSIRO Appraisals bases its assessment on the product and information it receives and cannot accept responsibility for deviations in the manufactured quality and performance of the material, product or system. However, Technical Assessments will be withdrawn where adequate quality or performance has not been maintained.

This Technical Assessment is given a term of validity until 31 December 2009. Users of Technical Assessments should verify that Technical Assessments remain valid and are the current version by checking on the CSIRO Appraisals website: <http://www.cmit.csiro.au/services/appraisals/>.

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**J. OTHER/OPTIONAL INFORMATION**

**14. ABSTRACT** *(CSIRO Appraisals Approved Assessment Extract)*

The High Performance Bushfire Weepa as manufactured by Weepa Products Pty Ltd, PO Box 3325 South Brisbane Qld 4101 (ABN 52 011 011 457) is suitable for use as a weephole in masonry construction, including in bushfire prone areas, when the conditions of CSIRO Appraisals Technical Assessment 350 are fulfilled.