

Australian Standard<sup>®</sup>

**Waterproofing membranes for external  
above-ground use**

**Part 2: Design and installation**



This Australian Standard® was prepared by Committee BD-013, External Waterproofing Membranes. It was approved on behalf of the Council of Standards Australia on 2 July 2012. This Standard was published on 14 September 2012.

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The following are represented on Committee BD-013:

- Australian Building Codes Board
  - Australian Chamber of Commerce and Industry
  - Australian Institute of Waterproofing
  - Australian Tile Council
  - CSIRO Manufacturing and Infrastructure Technology
  - Housing Industry Association
  - Importers Distributors and Sealants Manufacturers Association of Australia
  - Master Builders Australia
  - South Australian Housing Trust
  - TAFE NSW
- 

This Standard was issued in draft form for comment as DR AS 4654.2.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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## PREFACE

This Standard was prepared by the Standards Australia Committee BD-013, External Waterproofing Membranes, to supersede AS 4654.2—2009 *Waterproofing membrane systems for exterior use—Above ground level, Part 2: Design and installation*.

This Standard has been prepared in response to numerous requests from industry representatives in the field of external waterproofing, especially in the areas of roofs, decks and balconies.

The objective of this Standard is to provide a consistent and reliable approach to the design and installation of external waterproofing membrane systems.

The objective of this revision is to align this Standard with the protocols and requirements as set out by the Australian Building Codes Board (ABCB).

This Standard is Part 2 of a series of Standards on external waterproofing, as follows:

AS

4654      Waterproofing membranes for external above-ground use

4654.1    Part 1: Materials

4654.2    Part 2: Design and installation (this Standard)

Figures throughout this Standard indicate the membrane system as a heavy dashed layer line. The system may comprise a single layer or multiple layers.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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## STANDARDS AUSTRALIA

## Australian Standard

## Waterproofing membranes for external above-ground use

## Part 2: Design and installation

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out requirements for the design and installation of above-ground external waterproofing membranes for use in buildings and structures (for example roofs and balconies).

The waterproofing membranes covered by this Standard are also suitable for landscaped areas.

This Standard is not intended for use in applications such as structures below ground level, swimming pools and spas. It excludes concrete admixtures or penetrant sealers and decorative coatings.

**1.2 NORMATIVE REFERENCES**

The following are the normative documents referenced in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

4654 Waterproofing membranes for external above-ground use.

4654.1 Part 1: Materials

**1.3 DEFINITIONS**

For the purpose of this Standard, the definitions below apply.

**1.3.1 Bioresistance**

Resistance to degradation by biological attack.

**1.3.2 Collar**

A device to seal a sleeve to the substrate.

**1.3.3 Drainage cell**

A durable material used to overlay the membrane to protect it from physical damage and allow the transfer of moisture to relieve hydrostatic pressure.

NOTE: Timber and timber-based products are not acceptable for use as drainage cells.

**1.3.4 External waterproofing membrane systems**

A combination of membrane-associated products used in the membrane's installation such as primers, mechanical fasteners, waste outlets and flashings that form a waterproof barrier.

**1.3.5 Fillet**

A triangular or curved profile used at internal intersections to assist the membrane to accommodate the transition from horizontal to vertical surfaces.

### 1.3.6 Membrane

An impervious barrier to liquid or water, which can be sheet or liquid applied.

NOTE: A membrane can have many parts but only one layer.

### 1.3.7 Potable water

Water that is suitable for human consumption, food preparation, utensil washing and oral hygiene. Sometimes referred to as drinking water.

NOTE: For the testing of products for use in contact with drinking water, see AS/NZS 4020.

### 1.3.8 Pressure seal

A durable, mechanical fastening system that applies even pressure to the exposed edge of the membrane to prevent deformation of the flashing or the pressure seal, which has a profile suitable for the application of a gasket seal between the pressure seal and the substrate.

### 1.3.9 Protection board

A durable material used to overlay the membrane to protect it from physical damage.

NOTE: Timber and timber-based products are not acceptable for use as protection board material.

### 1.3.10 Root-resistant

Capable of preventing root penetration through a membrane.

### 1.3.11 Screed

A layer of material (usually cement based) of defined minimum thickness, which sets in situ and which may be interposed between the structural substrate and bedded finish.

### 1.3.12 Sleeve

A device secured to the substrate to allow the penetrating service (e.g., pipe or duct) to move independently of the substrate.

### 1.3.13 Substrate

A surface to which a material or product is applied.

### 1.3.14 Trafficable surface

NOTE: For slip-resistance of trafficable surfaces, see AS/NZS 4586.

#### 1.3.14.1 *Trafficable surface, maintenance*

Surface that is intended to withstand traffic experienced during maintenance procedures.

#### 1.3.14.2 *Trafficable surface, pedestrian*

Surface that is intended to withstand pedestrian traffic.

#### 1.3.14.3 *Trafficable surface, vehicular*

Surface that is intended to withstand vehicular traffic.

### 1.3.15 Waterproof

The property of a material that does not allow moisture to penetrate through it when tested in accordance with AS 4654.1.

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