BRANZ Appraised

Appraisal No. 1308 (2026)

BITUTHENE® 3000 DAMP PROOF MEMBRANE (ALLCO)

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BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 BITUTHENE® 3000 is a self-adhesive damp-proof membrane (DPM) for basement retaining walls and floors. It is applied under floor slabs and foundations and to the exterior face of basement retaining walls to prevent liquid water or water vapour penetrating to the interior face in spaces where moisture may cause damage.

1.2 BITUTHENE® 3000 is supplied as self-adhering, polymer-rubber modified bitumen sheets.

Scope

2.1 BITUTHENE® 3000 has been appraised for use as a DPM within the following scope:

- on buildings subject to non-specific design under floor slabs complying with NZS 3604 and behind concrete masonry basement walls and under floor slabs complying with NZS 4229; and,
- in buildings subject to specific design with substrates of in-situ or precast concrete complying with NZS 3101 or concrete masonry complying with NZS 4230 and NZS 4210; and,
- where subsoil drainage and free draining granular backfill has been placed behind basement walls.

2.2 BITUTHENE® 3000 must be adequately protected against damage during backfilling and in service.

2.3 The products must be installed by Allco Waterproofing Solutions Ltd licensed applicators.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, BITUTHENE® 3000, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years. BITUTHENE® 3000 meets this requirement. See Paragraph 9.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.3. BITUTHENE® 3000 meets this requirement. See Paragraphs 11.1–11.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. BITUTHENE® 3000 meets this requirement.

Technical Specification

4.1 Materials supplied by Allco Waterproofing Solutions Ltd and GCP Australia Pty Ltd are as follows:

- **BITUTHENE® 3000** - a self-adhesive, modified bituminous membrane made up of 1.4 mm rubberised asphalt and 0.1 mm cross-laminated polyethylene outer face for use as a below ground DPM. It is supplied in 1.5 mm thick x 1 m wide x 20 m long rolls.
- **BITUTHENE® Solvent Primer** - a high-penetration, solvent-based modified bitumen for priming dry concrete. It is supplied as a black solution in 20 L pails.
- **BITUTHENE® Primer B2** - a rubber-based solution for priming all damp or wet surfaces. It is supplied as a black solution in 18.9 L pails.
- **BITUTHENE® Primer Type C** - VOC-free, low-odour, water-based bitumen emulsion for priming damp or green concrete. It is supplied as a black solution in 20 L pails.
- **BITUTHENE® Liquid Membrane** - a two-component polyurethane-bitumen mastic used to seal critical areas and details. It is supplied as a 5.7 L pail kit.
- **Aquadrain 15X** - a prefabricated drainage composite consisting of a heavy filter fabric adhered to a high strength plastic drainage core. It is supplied in 1.2 m wide x 15.6 m long rolls.

Handling and Storage

5.1 Handling and storage of all materials, whether on-site or off-site, is under the control of the installer. Dry storage must be provided for all products and the membranes must be protected from sunlight and ultraviolet (UV) radiation. Rolls of membrane must be stored on end.

5.2 Products must be within their shelf life at the time of installation.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Work Method Statement (WMS): Allco Waterproofing Solutions, Application of Single Layer BITUTHENE® 3000 Membrane, Version 2.0, dated 07/07/2026.

6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

Substrate Design

Walls

7.1 Substrate design must be in accordance with the NZBC to a relevant standard, such as NZS 3101 for concrete, and NZS 4229 or NZS 4230 for concrete masonry.

7.2 The substrate must have a surface finish that is smooth, clean and free from defects or irregularities which may damage the membrane or allow water to become trapped behind the membrane.

Control Joints

7.3 Where control or construction joints are formed in the substrate, Allco Waterproofing Solutions Ltd must be consulted for use of the membranes over these joints.

Concrete Slab-on-ground

7.4 The membrane must be laid on a minimum of 75 mm thickness of site concrete or well compacted sand. The structural concrete slab placed over the membranes must be a minimum of 100 mm thick.

Backfilling and Drainage

8.1 The membrane must be protected against damage by the placement of a protection material between the membrane and the granular fill.

8.2 The minimum requirement for backfilling is that a granular, free-draining material is used, with the top of the backfill capped with an impervious clay fill that may be covered with topsoil if required. The impervious capping and topsoil must slope with a minimum of 1:30 fall away from the wall.

8.3 A minimum 100 mm diameter subsoil perforated drainage pipe must be installed at the bottom of the wall. The pipe must be covered with a geotextile filter fabric, be laid at a minimum 1:200 fall, and discharge to a drainage outlet. Provision for cleaning the pipe must also be provided.

8.4 Backfilling should begin as soon as possible.

Durability

Serviceable Life

9.1 BITUTHENE® 3000 is expected to have a serviceable life of at least 50 years, provided it is installed and maintained in accordance with this Appraisal and continually protected from sunlight and UV radiation.

Maintenance

10.1 Annual inspections must be made of the membrane's top edge seal and protection, the backfill capping, and the drainage pipe to ensure all are functioning as originally designed.

10.2 If required, the drainage pipe must be cleared to remove any sediment or silt build-up. The slope of the backfill capping must be maintained at all times.

External Moisture

11.1 BITUTHENE® 3000 when installed in accordance with this Appraisal and the Technical Literature will prevent water vapour (DPM) from penetrating to the interior face of basement retaining walls and floors in spaces where moisture may cause damage. The membrane has a vapour flow resistance of not less than 90 MN s/g.

11.2 The membrane can be used to form sealed joints and to seal penetrations. The top edge of the membrane must be sealed to the wall as set out in the Technical Literature and protected.

11.3 Building designers must ensure junctions with other membranes, such as at the floor/wall junction, form a waterproof joint. These junctions have not been assessed and are outside the scope of this Appraisal.

Installation Information

Installation Skill Level Requirement

12.1 All design and building work must be carried out in accordance with the BITUTHENE® 3000 Technical Literature and this Appraisal. All building work must be undertaken by Allco Waterproofing Solutions Ltd licensed applicators. Where the work involves Restricted Building Work (RBW), this must also be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

System Installation

Substrate Preparation

13.1 All vertical surfaces must be checked to ensure they are dry, clean, smooth and free from sharp edges, loose or foreign materials, oil, grease or other deleterious material that may affect adhesion or may damage the membranes.

Priming

13.2 All substrates must be primed before application of the membranes. The supplier of the membrane, Allco Waterproofing Solutions Ltd, should be contacted to confirm the most suitable primer. Application instructions for the primers are contained in the technical data sheets.

Membrane Installation – Walls

13.3 External corners must be detailed with a minimum 300 mm wide strip of BITUTHENE® 3000 membrane. Internal corners at construction joints must be detailed with a minimum 20 x 20 mm fillet of BITUTHENE® Liquid Membrane, followed by a 300 mm wide strip of BITUTHENE® 3000 membrane centred over the joint. For continuous membrane application, starting at the lowest point, the membrane must be installed in accordance with the Technical Literature. Sheet edges must be overlapped a minimum 50 mm as marked on the sheets. End laps must be a minimum 50 mm with upper sheets lapped over lower sheets. Protection material must be installed before backfilling. Backfilling must commence immediately after the membranes are installed to ensure membranes are not left exposed to sunlight or UV radiation.

Membrane Installation – Floors

13.4 The membrane must be installed in accordance with the Technical Literature. Sheet edges must be overlapped a minimum of 50 mm as marked on the sheets, and end laps must be a minimum of 50 mm. The membranes must be inspected for damage and any damage must be repaired in accordance with the Technical Literature. The membrane must not be exposed to UV radiation for any longer than two months before the structural concrete slab is placed.

Inspections

13.5 The Technical Literature and the installation company's Quality Control sheets must be referred to during the inspection of the membrane installation.

Health and Safety

14.1 Safe use and handling procedures for the membranes are provided in the Technical Literature.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

15.1 The following testing of BITUTHENE® 3000 has been undertaken:

- Tensile strength, elongation, nail tear, water vapour permeability, low temperature flexibility after heat ageing, static indentation, dynamic indentation, unrolling at low temperatures, resistance to water pressure (also tested on joints), peel resistance from concrete heat aged, resistance to sliding, tensile strength of joints, chisel impact, air leakage, shear strength of joints, water vapour transmission, tensile strength, tear resistance, watertightness and resistance to static loading.

15.2 Test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

16.1 A durability opinion has been given by BRANZ technical experts.

16.2 Practicability of installation has been assessed by BRANZ and found to be satisfactory.

16.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

17.1 The manufacture of the membranes and primers have not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

17.2 The quality of materials supplied to the market is the responsibility of Allco Waterproofing Solutions Ltd.

17.3 Quality of installation and shelf life validity of materials on-site is the responsibility of the Allco Waterproofing Solutions Ltd licensed applicator.

17.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Allco Waterproofing Solutions Ltd.

17.5 Building owners are responsible for the maintenance of the membrane systems in accordance with the instructions of Allco Waterproofing Solutions Ltd.

Sources of Information

- NZS 3101:2006 Concrete structures standard.
- NZS 3604:2011 Timber-framed buildings.
- NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design.
- NZS 4230:2004 Design of reinforced concrete masonry structures.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

BRANZ

In the opinion of BRANZ, BITUTHENE® 3000 Damp Proof Membrane (Allco) is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to GCP Australia Pty Ltd, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. GCP Australia Pty Ltd:
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions;
   d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and quality of work;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by GCP Australia Pty Ltd.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to GCP Australia Pty Ltd or any third party.

For BRANZ

Claire Falck
Chief Executive

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16 July 2026