

**SPECIFICATION**

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

**Office Master**

**Preprufe & Bituthene 3000**

no address

Project Ref:

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**DRAFT**

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# 4131AT ALLNEX TANKING MEMBRANES

## 1 GENERAL

This section relates to the application of;

- Allnex Bituthene 3000 Self-Adhesive Tanking installed as a single layer on walls, with Preprufe Tanking membrane used under the slab.
- Preprufe installed as a single layer on walls, and under the slab.

### 1.1 RELATED WORK

Refer to ~ for ~.

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
BRANZ BU 397	Waterproofing Basements
BRANZ Good Practice Guide:	Concrete Floors and Basements

### 1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

Allnex Construction Products Architectural Manual

Allnex Construction Products Technical Data Sheets

BRANZ Appraisal 805 (2013) - Allnex Damp Proof and Tanking Membranes

Copies of the above literature are available from Allnex Construction Products

Web: [www.allnexconstruction.com](http://www.allnexconstruction.com)

Email: [cs.constructionnz@allnex.com](mailto:cs.constructionnz@allnex.com)

Telephone: 0508 882288

#### Warranties

### 1.4 WARRANTY - MANUFACTURER/SUPPLIER - BITUTHENE 3000

Provide a material manufacturer/supplier warranty:

20 years For Bituthene 3000 tanking

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of completed installation.

Refer to the general section 1237 WARRANTIES for additional requirements.

### 1.5 WARRANTY - INSTALLER/APPLICATOR - BITUTHENE 3000

Provide an installer/applicator warranty:

5 years For Bituthene 3000 tanking system installation

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### 1.6 WARRANTY - MANUFACTURER/SUPPLIER - PREPRUFE

Provide a material manufacturer/supplier warranty:

20 years For Preprufe tanking

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of completed installation.

Refer to the general section 1237 WARRANTIES for additional requirements.

**1.7 WARRANTY - INSTALLER/APPLICATOR - PREPRUFE**

Provide an installer/applicator warranty:

5 years For Preprufe tanking installation

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

**Requirements****1.8 QUALIFICATIONS**

Applicators to be experienced in the application of Allnex Tanking products and approved by Allnex New Zealand Ltd. If requested provide evidence of qualification / experience prior to commencing work.

**1.9 NO SUBSTITUTIONS**

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

**1.10 PRE INSTALLATION**

Convene a meeting between the applicator, contractor, all associated consultants and Allnex Construction Products to ensure all parties know what is required for effective performance of the system, prior to tanking installation.

**1.11 SPECIFIC DETAILS**

All detailing to be in accordance with Allnex Construction Products standard details. Where required, specific details must be requested and provided prior to proceeding with installation.

**1.12 FINISH SAMPLE**

Submit sample on request of Bituthene 3000, and/or Preprufe.

**1.13 INFORMATION FOR OPERATION AND MAINTENANCE**

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents: Allnex Tanking products maintenance requirements.

Provide this information prior to practical completion.

**Compliance information****1.14 INFORMATION REQUIRED FOR CODE COMPLIANCE**

Provide the following compliance documentation: -

- Installer's approval certificate from the manufacturer / importer / distributor
- Manufacturer's, importer's or distributor's warranty
- Installer's / applicator's warranty
- Producer Statement - Construction from the applicator / installer
- Other information required by the BCA in the Building Consent Approval documents.

**Performance****1.15 PRESSURE RATING**

Obtain written assurance from Allnex that the complete membrane system is capable of sustaining the designated water pressure head. Refer to SELECTIONS for the designated water pressure head.

**2 PRODUCTS****Materials - Bituthene 3000 system****2.1 BITUTHENE 3000 SELF ADHESIVE TANKING MEMBRANE**

Self adhesive membrane comprising of a modified bitumen sheet on a cross laminated polyethylene backing. 1.5mm thick x 1m wide x 20m long rolls.

**Components - Bituthene 3000 system**

- 2.2 NPX DRAINAGE AND PROTECTION SHEET  
Bituthene protection board.
- 2.3 ALLNEX APPROVED MEMBRANE PRIMER  
Allnex approved solvent based membrane primer.
- 2.4 BITUTHENE B2 PRIMER  
Solvent based primer for priming damp or green concrete.
- 2.5 RMA ADHESIVE PRIMER  
Water based primer for use on polystyrene blockwork.
- 2.6 SUPERSET  
Smoothing compound for concrete walls.
- 2.7 BITUTHENE MASTIC  
Mastic for small detail work.
- 2.8 BITUTHENE LIQUID MEMBRANE LM3000  
Two part asphalt-polyurethane mastic, for fillet forming and all other detailing of BITUTHENE and PREPRUFE membranes.
- 2.9 SOPRASOLIN TAPE  
Self adhesive tape.
- 2.10 ALUMINIUM STRIP  
9.2mm rebated aluminium strip to provide a straight top termination edge.

**Materials - Preprufe**

- 2.11 PREPRUFE SHEET TANKING & WATERPROOFING MEMBRANE  
Modified heavy duty sheet comprising of modified adhesive on a heavy polyethylene face. Preprufe 160R is a 1.2m wide x 35m long roll, Preprufe 300R is a 1.2m wide x 30m long roll.

**Components - Preprufe**

- 2.12 PREPRUFE TAPE  
Self-adhesive tape for sealing Preprufe end laps, cut edges and detailing Preprufe to piles, penetrations.
- 2.13 PREPRUFE CJ TAPE  
Self-adhesive tape for detailing Preprufe at construction joints and detailing Preprufe to piles.
- 2.14 PREPRUFE TIEBACK COVERS  
Pre-formed, high strength dome covers for fast waterproofing over tie backs.
- 2.15 BITUSTICK 4000 TAPE  
Double sided, self-adhesive bituminous tape for specialized membrane detailing.
- 2.16 PREPRUFE DETAIL TAPE  
Double sided, self-adhesive tape for specialized membrane detailing.
- 2.17 SWELLSEAL MASTIC WA  
Hydrophilic polyurethane mastic for detailing starter bars and forming hydrophilic waterstops to rough concrete surfaces.
- 2.18 BITUTHENE LIQUID MEMBRANE LM3000  
Two part polyurethane, for sealing around penetrations.
- 2.19 SOPRASOLIN TAPE  
Self adhesive tape.

- 2.20 ALUMINIUM STRIP  
9.2mm rebated aluminium strip to provide a straight top termination edge.

### 3 EXECUTION

#### Conditions

- 3.1 GENERAL  
Work and materials to BRANZ BU 397, BRANZ Good Practice Guide: Concrete Floors and Basements, and Allnex Construction Products Documents.
- 3.2 PLAN LAYOUT  
Plan installation so that joints are minimised and occur in suitable locations.
- 3.3 COORDINATE  
Coordinate all work with other trades to prevent damage to membrane. Plan work to minimise membrane exposure to sunlight or UV radiation.
- 3.4 STORAGE  
Take delivery of membrane in rolls undamaged, include for site handling facilities where required. Provide dry cool storage off the ground on a level surface for all products. Store membrane rolls on end, protect from sunlight and ultra-violet (UV) radiation.
- 3.5 SUBSTRATE  
To be smooth, clean, dry and stable. Free of contaminants, voids or protrusions. Conform that the substrate complies with the [NZBC E2/AS1](#). Substrate to have a relative humidity of 75% or less. Do not work on a wet substrate.
- 3.6 ACCEPTANCE OF SUBSTRATE  
Inspect substrate in its entirety, verify all details, penetrations and conditions. Comply with Allnex requirements prior to membrane installation. Installation of membrane indicates acceptance of substrate by installer.
- 3.7 WEATHER CONDITIONS  
Install membrane in fair weather, with ambient air temperature no less than 4°C.
- 3.8 DE-WATERING  
Water level to remain a minimum of 300mm below membrane works, until installation completed.

#### Application - preparation

- 3.9 DRAINAGE  
Water must be removed from the wall area. A strip drainage coil will be provided well below the final floor level (on the outside of the footing). Sit the drainage coil on clean, coarse drainage media and cover with the same. It is required that the coil will come to surface at the top end where it can be flushed and cleaned over the life of the building.
- 3.10 PRELIMINARY WORK  
Fill any voids in the substrate with Allnex Superset. Smooth off or remove any ridges or rough areas of mortar or concrete which may damage the membrane.
- 3.11 PROTRUSIONS  
Waterproof all protrusions using Bituthene LM3000 two-part polyurethane. Mix and use as per Allnex datasheets.
- 3.12 FILLETS  
Apply mastic to all internal corners to act as a fillet.

#### Application - Bituthene 3000 - Walls

- 3.13 PRIMING  
Apply in accordance with Allnex Construction Products specifications and application instructions. Apply Allnex membrane primer at 5 m<sup>2</sup>/L with a roller. Allow primer to fully dry off before applying the membrane. Only prime areas which are receiving the membrane on the same day.

**3.14 INSTALL BITUTHENE 3000**

Apply Bituthene 3000 in accordance with Allnex Construction Products specifications and application instructions. Apply to the primed surface whilst removing the backing paper. Sheets are to be overlapped 50mm minimum, lined up with printed guideline on the membrane and laps and rolled with Allnex J-roller to seal without wrinkles. End laps and cuts are to be overlapped 150mm minimum. Form taped joint to Preprufe installed under slab with Preprufe tape.

The upper (top) edge will normally be terminated at ground level. Secure the top edge with a mechanically fastened metal strip or by using an Allnex 9.2mm rebated aluminium strip. Bed strips in Bituthene LM3000 Liquid Membrane. Complete strip with Bituthene LM3000 Liquid Membrane.

If the upper termination area is above ground, protect from UV and damage using Allnex Soprasolin aluminised tape.

**3.15 INSTALL PROTECTION SHEETS**

Neatly scribe and fit protection sheets, spot fixing with construction adhesive. Use packing tape at all joins and at top termination prior to backfilling.

**3.16 INSTALL DRAINAGE BOARD**

Neatly scribe and fit drainage board to Allnex requirements.

**3.17 PROTECTION**

Protect the Bituthene 3000 from damage by NPX sheet material to provide protection and drainage.

**Application - Preprufe - Under Slab****3.18 INSTALL PREPRUFE**

Select the correct grade of Preprufe to be used according to the thickness of the slab. For slabs which are under 300mm thickness use Preprufe 160, for slabs which are greater than 300mm thickness used Preprufe 300. Preprufe is to be laid on compacted hard fill (prior to the concrete floor being poured). Install the reinforcing steel (by others). Remove the clear release film prior to the concrete being poured.

**3.19 WALL/FLOOR CONSTRUCTION JOINT**

Form joint between Preprufe under slab tanking membrane and wall tanking membrane using Preprufe CJ Tape, in accordance with Allnex construction product specifications and application instructions. Run the vertical material over the outside of the underfloor sheet to ensure correct discharge of any water.

Overlap sheets 75mm (remove the clear strip) to the mark line and roll with Allnex J-roller to seal, without wrinkles. If in any doubt about the joint, re-seal the joint area with Preprufe Tape and Roll with Allnex J-roller to seal, without wrinkles. Install Adcor hydrophilic waterstop to all Wall/Floor construction joints.

**3.20 DETAILING TO PILES - PILE TOP PROUD OF BLINDING**

Install PREPRUFE membrane to blinding and around pile with 10mm clearance. Cut a square of PREPRUFE membrane at least 150mm larger than pile. Mark pile diameter on PREPRUFE square and pie-cut membrane on inside of mark. Pie cuts to be minimum 75mm long. Install minimum 25mm x 25mm fillet of Bituthene LM 3000 to pile PREPRUFE turn-up. Extend BITUTHENE LM 3000 at 2.5mm thick, 75mm up pile and 75mm to PREPRUFE.

Remove release film from PREPRUFE pie-cut square, and place over pile and bed fully into BITUTHENE LM 3000 fillet. BITUTHENE LM 3000 must fill all gaps between pie-cuts and pile. Wrap PREPRUFE TAPE around pie-cut fingers (while progressively removing release films), over BITUTHENE LM 3000 and up pile to fully seal.

Seal PREPRUFE cut square to underlying PREPRUFE membrane using PREPRUFE TAPE. Roll all PREPRUFE TAPE with Allnex J-roller to seal without wrinkles. Apply a 20mm fillet of BITUTHENE LM at all pile starter bar junctions. Apply 10mm diameter bead of Swellseal Mastic WA around each starter bar, 100mm from pile top.

**3.21 DETAILING TO PILES - PILE TOP FLUSH WITH BLINDING**

Install PREPRUFE membrane to blinding, lapping onto pile top a minimum 50mm to 100mm. Mark membrane edge on pile top. Lift membrane to expose pile top. Remove release film. Apply BITUTHENE LM 3000 at 2.5mm thick to pile top, extending to the mark.

Install PREPRUFE, laying membrane into BITUTHENE LM 3000, ensuring it is fully bedded without gaps.

Apply BITUTHENE LM 3000 to membrane termination edge, extending 50mm onto PREPRUFE and 50mm onto pile top to seal fully.

Apply a 20mm fillet of BITUTHENE LM 3000 at all pile starter bar junctions. Apply 10mm diameter bead of Swellseal Mastic WA around each starter bar, 100mm from pile top.

**3.22 DETAILING TO PENETRATIONS - PIPES, DEWATERING WELLS, ETC**

Install PREPRUFE membrane to blinding and around penetration with 10mm clearance. Cut a square of PREPRUFE membrane at least 150mm larger than penetration. Mark penetration diameter on PREPRUFE square and pie-cut membrane on inside of mark. Pie cuts to be minimum 50mm long.

Install minimum 25mm x 25mm fillet of Bituthene LM 3000 to penetration PREPRUFE turn-up. Extend BITUTHENE LM 3000 at 2.5mm thick, 75mm up penetration and 75mm to PREPRUFE.

Remove release film from PREPRUFE pie-cut square, and place over penetration and bed fully into BITUTHENE LM 3000 fillet. BITUTHENE LM 3000 must fill all gaps between pie-cuts and penetration.

Wrap PREPRUFE TAPE around pie-cut fingers (while progressively removing release films), over BITUTHENE LM 3000 and up penetration to fully seal.

Seal PREPRUFE cut square to underlying PREPRUFE membrane using PREPRUFE TAPE. Roll all PREPRUFE TAPE with Allnex J-roller to seal without wrinkles. Apply 10mm diameter bead of Swellseal Mastic WA around penetration, 100mm from blinding.

**Backfilling****3.23 SUPERVISION OF BACKFILLING**

Backfilling to take place under supervision of the membrane installer.

**Application - Terminations / Flashings****3.24 TERMINATIONS/FLASHINGS**

Use an Allnex Standard detail to:

- mechanically fasten and terminate the top edge of the membrane.
- terminate the membrane over the under slab protection at the wall base.

**Completion****3.25 CLEAN UP**

Clean up as the work proceeds.

**3.26 LEAVE**

Leave this work in a sound, coherent, voidless and impermeable smooth condition, completely waterproof, free of any defect and with protection sheets firmly in place.

**3.27 REMOVE**

Remove debris, unused materials and elements from the site.

**4 SELECTIONS**

For further details on selections go to [www.allnexconstruction.com](http://www.allnexconstruction.com)

Substitutions are not permitted to the following, unless stated otherwise.

**Performance****4.1 PRESSURE RATING**

Designated water pressure head: ~ metres



**Tanking membrane - Wall**

## 4.2 BITUTHENE 3000

Location: ~  
 Substrate: ~  
 Brand/type: Bituthene 3000  
 Colour: Black  
 Primer: Allnex Membrane Primer  
 Tanking sealant: Bituthene LM 3000

**Tanking membrane - Under Slab**

## 4.3 PREPRUFE 160 - SLABS LESS THAN 300MM THICK

Location: ~  
 Substrate: ~  
 Brand/type: Preprufe 160  
 Finish/colour: white  
 Primer: ~  
 Tanking sealant: Bituthene LM 3000

**Tape**

## 4.4 PREPRUFE TAPE

Location: ~  
 Substrate: ~  
 Brand/type: Preprufe Tape  
 Finish/colour: white

## 4.5 PREPRUFE CJ TAPE

Location: ~  
 Substrate: ~  
 Brand/type: Preprufe CJ Tape  
 Finish/colour: white

## 4.6 PREPRUFE DETAIL TAPE

Location: ~  
 Substrate: ~  
 Brand/type: Preprufe Detail Tape  
 Finish/colour: white

## 4.7 BITUSTIK 4000 TAPE

Location: ~  
 Substrate: ~  
 Brand/type: Bitustik 4000 Tape  
 Finish/colour: black

**Protection sheet**

## 4.8 PROTECTION SHEET

Location: ~  
 Brand/type: ~  
 Thickness: 6 mm

**Drainage board**

## 4.9 NPX DRAINAGE AND PROTECTION SHEET

Location: ~  
 Brand/type: NPX drainage board

**Termination bar / flashing**

4.10 ALLNEX TERMINATION BAR / FLASHING

Location: ~  
Type: 9.2mm rebated aluminium strip

**Hydrophylic Waterstop**

4.11 ADCOR HYDROPHILIC WATERSTOP

Location: ~  
Substrate: ~  
Brand/type: GCP Adcor 500  
Finish/colour: Blue

4.12 SWELLSEAL MASTIC WA HYDROPHILIC POLYURETHANE MASTIC

Location: ~  
Substrate: ~  
Brand/type: Swellseal Mastic WA  
Finish/colour: Blue