

4422WE WPS EPIROOF® EPDM WATERPROOFING

1. GENERAL

This section relates to **Waterproofing Systems Ltd** epiROOF® membrane roofing, bonded to:

- construction plywood, including all underlays and accessories
- concrete, including all underlays and accessories.

1.1 RELATED WORK

Refer to ~ for ~

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

EPDM Ethylene Propylene Diene Monomer

1.3 DOCUMENTS REFERRED TO

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

NZBC E2/AS1 External moisture
AS/NZS 2269 Plywood - Structural - Specifications
BRANZ BU 345 Flat membrane roofs - design and installation
BRANZ BU 346 Flat membrane roofs - materials

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Waterproofing Systems Ltd documents relating to work in this section are:

epiROOF® Product Manual (3rd Edition October 2006)

Standard detailed drawings

[BRANZ Appraisal 533](#) - epiROOF® Roof Membrane

For copies of the above documents, or for technical assistance, contact your local **Waterproofing Systems Ltd** representative:

Northland, Auckland	021 - 917 773
Waikato, Bay of Plenty	021 - 457 953
Gisborne	021 - 457 953
Hawkes Bay, Manawatu	021 - 402 434
Wanganui, Taranaki	021 - 402 434
Wairarapa, Wellington	021 - 402 434
Marlborough, Nelson	027 - 544 5534

Christchurch, Dunedin	027 - 544 5534
Southland, Central Otago	027 - 544 5532

Web: www.waterproofing.co.nz

Telephone: 03 - 366 9495 (Head office) or 0508 (2WATER) 292837

Facsimile: 03 - 366 9496 (Head office)

Warranties

- 1.5 **WARRANTY - INSTALLER/APPLICATOR**
Installer's warranty for the system under normal environmental and use conditions against failure.

Execution warranty: 5 years

Provide this warranty on the installer's standard form.

- 1.6 **WARRANTY - MANUFACTURER/SUPPLIER**
Provide a materials warranty in the suppliers standard form.
Warranty period: 20 years for materials
From: Date of completion of application

Requirements

- 1.7 **QUALIFICATIONS**
Roofing work to be carried out by licensed applicators approved by Waterproofing Systems Ltd. Approved applicators may be found at:
Web: www.waterproofing.co.nz
Telephone: 03 - 366 9495 or 0508 (2WATER) 292837
- 1.8 **NO SUBSTITUTIONS**
Substitutions are not permitted to any specified **Waterproofing Systems Ltd** system, or associated components and products.
- 1.9 **PROJECT REGISTRATION**
Contact **Waterproofing Systems Ltd** to confirm that the project has been registered.
Web: www.waterproofing.co.nz/register
Telephone: 03 - 366 9495 or 0508 (2WATER) 292837
If the project has not been registered, telephone and provide all required details.

Performance

- 1.10 **PRE INSTALLATION MEETING**
Convene a meeting between the applicator, contractor, all associated consultants and **Waterproofing Systems Ltd** to ensure all parties know what is required for effective performance of the system.
- 1.11 **SPECIAL DETAILS**
Where a standard detail does not exist, or if a standard detail cannot be applied, an approved alternative must be obtained from **Waterproofing Systems Ltd** before proceeding with the installation.
- 1.12 **TEST**
Flood test horizontal applications with a minimum 50mm depth of water for 24 hours. Make good any lack of watertightness when the surface is completely dry.
- 1.13 **PERFORMANCE**
Accept responsibility for the weather-tight performance of the completed roofing system, including all penetrations through the roof and junctions with walls and parapets. All penetrations to comply with [NZBC E2/AS1](#) and **Waterproofing Systems Ltd** recommendations.

- 1.14 **QUALITY ASSURANCE**
Maintain quality necessary to assure that work is performed in accordance with this specification and the qualifying requirements of **Waterproofing Systems Ltd.**
- Ensure that **Waterproofing Systems Ltd's** Quality Control sheets are completed fully and faithfully for each installation area.

2. PRODUCTS

Materials

- 2.1 **EPIROOF® EPDM SHEET**
Single ply EPDM rubber membrane bearing the manufacturer's mark. Refer to SELECTIONS for type and thickness.
- 2.2 **EPISPAN EPDM SHEET**
Single ply EPDM rubber membrane bearing the manufacturer's mark. Refer to SELECTIONS for type and thickness.
- 2.3 **EPITAPE® SEAM TAPE**
Waterproofing Systems Ltd butyl type non-cured seam tape for forming side and end laps.
- 2.4 **NEOPRIME**
Waterproofing Systems Ltd solvent based chloroprene primer for concrete substrates.
- 2.5 **NEOSEAL SEALANT**
Waterproofing Systems Ltd butyl-type sealant for general purpose flashing and 3-way laps.
- 2.6 **EPIROOF® UNDER FLASHING TAPE**
Waterproofing Systems Ltd flashing tape for underflashing upstands, corners and penetrations.
- 2.7 **EPIROOF® COVER TAPE**
Waterproofing Systems Ltd cover flashing seal tape used to over flash in designated areas.
- 2.8 **EPIBOND® ADHESIVE**
Waterproofing Systems Ltd EPDM adhesive system.
- 2.9 **EDGE TRIM**
Metal or timber to **Waterproofing Systems Ltd** details to suit the specific location.

Accessories

- 2.10 **ROOFING ACCESSORIES**
Waterproofing Systems Ltd roof outlets, overflows, scuppers and rainwater heads.
- 2.11 **NEOCOAT**
Waterproofing Systems Ltd aluminium or coloured coating system used to provide a reflective heat-reducing or decorative finish to the membrane as required.

3. EXECUTION

Conditions



- 3.1 **GENERALLY**
[BRANZ Appraisal 533](#) - epiROOF® Roof Membrane
- 3.2 **STORAGE**
Take delivery of **Waterproofing Systems Ltd** epiROOF® branded rolls, undamaged and allow for site handling facilities where required. Store membranes and accessory materials under conditions that ensure no deterioration or damage. Ensure all tapes and adhesives are within their expiry dates. Note: Some of the epiROOF® materials are Class 3 flammable goods.
- 3.3 **CONFIRM LAYOUT**
Confirm layout as detailed on drawings. If not detailed on the drawings, confirm the layout to suit site conditions, and **Waterproofing Systems Ltd** specification.
- 3.4 **WEATHER**
Apply epiROOF® membrane system in dry atmospheric conditions and only when the air or substrate temperature is 6 degrees Celsius and above.

Application - preparation

- 3.5 **PRELIMINARY WORK**
Ensure that preliminary work, including formation of falls, flashing rebates, grooves, ducts, provision of battens and fillets and fixing of vents and outlets to levels, is complete and properly constructed to enable the system to work as intended. Ensure timber fillets fit neatly and that mitres are neatly formed. This work and the substrate to be smooth, clean and dry.
- 3.6 **ACCEPTANCE OF SUBSTRATE**
Confirm that the substrate complies with the [NZBC E2/AS1](#) for the relevant substrates and **Waterproofing Systems Ltd** documents, including fillets, sumps, outlets and projections, and ensure work is of the required standard.
- 3.7 **CONCRETE SUBSTRATE**
Ensure concrete substrate has been allowed to cure for at least 28 days and has a moisture content of less than 75% RH before commencing application. Prepare the surface, including vacuum cleaning and acid etching as necessary to leave smooth, clean, dry and free of debris. Where moisture is suspected allow to install grid tapes for venting.
- 3.8 **PLYWOOD SUBSTRATE**
Plywood to be minimum 18mm thick square-edged sheets and complying to AS/NZS 2269, minimum CD structural grade with the sanded C side upwards. Treated H3 with waterborne CCA treatment and kiln dried after treatment. Lay with staggered joints (brick bond) with all edges of the sheets fully supported. Provide 20mm timber fillets at the base of all upstands and chamfer all external edges with a minimum radius of 5mm. Fix with 10 gauge x 50mm stainless steel countersunk head screws with all sheets having 3mm space around all edges. Fix at 150mm centres on edges and 200mm in the body of the sheets. Plywood and the timber substructure to have a maximum moisture content of 20% when the membrane is installed. Plywood must not be LOSP treated.



Application - laying epiROOF®

- 3.9 GENERAL
Tape plywood joints using a polyethylene bond-breaker 25mm tape. Run out the epiROOF® membrane and allow to relax for 20 minutes before laying. Do not stretch sheets or tapes when laying.
- 3.10 SET-OUT
Neatly set out rolls starting at the lowest point of the roof and run perpendicular to the roof pitch. Allow for 50mm side laps and end laps. Pre-plan the work to keep the number of membrane laps to a minimum.
- 3.11 APPLY ADHESIVE
Open the epiBOND container and mix well with a hand stirrer. Apply adhesive to the epiROOF and substrate at a rate 1.0 litres per 1.5sqm (of applied area) by brush, roller or sprayer. Leave to tack dry before bonding the 2 surfaces together. Take care to ensure good even coverage of the adhesive.
- 3.12 BONDING LAPS
Form all laps to **Waterproofing Systems Ltd** requirements using the epiTAPE® lap system. Ensure all laps are a minimum of 50mm wide.
- 3.13 MINOR MOVEMENT JOINTS
Lay membrane across joint but leave unbonded on both sides.
Unbonded width: ~mm
- 3.14 INSPECT
Inspect and test lap joints on completion ensuring the lap is fully bonded with the epiTAPE®
- 3.15 PENETRATIONS
Form and finish upstands, downturns, penetrations, sumps and vents to conform to the epiROOF® Product Manual and [NZBC E2/AS1](#).
- 3.16 PENETRATIONS AND JUNCTIONS
Check that adjoining walls and parapets are prepared ready for the installation of the roofing. Confirm that openings have been prepared ready for the installation of skylights and other penetrations through the roof. Required work includes the following:
- roofing installation neatly finished to all sides of openings and to all wall and parapet junctions.
- installation of flashings (those required to be installed prior to installation of penetrating elements and/or wall linings).

Finishing

- 3.17 APPLY NEOCOAT COATING
If required, apply to the paint manufacturer and to **Waterproofing Systems Ltd** recommendations.
- 3.18 FOOT TRAFFIC
Foot traffic is to be limited during and after laying. Provide access boards for later operations and remove when no longer needed. Protect and maintain roofing until completion of the contract works.

- 3.19 ACCEPTANCE
Sign off acceptance of completed areas using the **Waterproofing Systems Ltd** Quality Control sheets.
- 3.20 SUBSEQUENT WORK
Make good any damage caused by later work by inserting a new whole or part infill sheet to maintain the appearance of the covering as originally laid.

Completion

- 3.21 CLEAN UP
Clean up as the work proceeds.
- 3.22 LEAVE
Leave work to the standard required by following procedures.
- 3.23 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS

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

- 4.1 EPIROOF® EPDM ROOFING MEMBRANE
Location: ~
Brand: epiROOF®
Thickness: ~
Colour: ~

- 4.2 EPIROOF® EPDM DECKING MEMBRANE
Location: ~
Brand: epiROOF®
Thickness: 1.5mm
Width: ~
Colour: ~

- 4.3 EPISPAN EPDM ROOFING MEMBRANE
Location ~
Brand: epiSPAN
Thickness: ~
Widths ~
Colour: Black only

- 4.4 MEMBRANE COATING
Brand: Neocoat
Number of coats: ~
Colour: ~

- 4.5 MEMBRANE COATING
Number of coats: ~
Colour: ~