



SRO 846 Waterproofing Specification - Planter boxes. Sheet Membrane - Protected System

Scope

The membrane systems are applied in sheets to approved substrates to form a fully bonded, protected continuous barrier against water penetration.

Applications

These membrane systems may be used in a number of situations such as;

- Inside planter boxes and/or under landscaping materials.

Substrates

Suitable substrates for the sheet membrane system include

- Concrete
- Core filled and reinforced concrete block walls,
- Brick walls that have been finished with flush joints and/or rendered.

Substrate Preparation

Substrates to which the sheet membranes are to be applied must be structurally sound and free of all contaminants (e.g. laitance). The substrates must have completed the recommended minimum curing/drying periods (e.g. 28 days for concrete) with all holes/voids filled with cement based patching mortars (e.g. [ARDEX A 46](#) or [ARDEX BR 345](#)) and all surface protrusions ground flat. All internal corners are to be shaped with a cement based coving fillet (minimum 50 x 50mm).

Ensure all penetrations for pipework through the membrane are suitable for the torch applied membrane to be applied and seal onto. All floor wastes (where fitted) shall be the type with a collection bowl and clamp ring to ensure the membrane is securely held into the bowl.

Membrane Systems

The sheet membrane system can be one of the following combinations;

1. Two layers of [ARDEX WPM 188](#) bitumen sheet
2. A single layer of [ARDEX Root Repell](#) weldable sheet
3. A single layer of [ARDEX WPM 615](#) thermoplastic polyolefin (TPO)
4. A single layer of [ARDEX Butynol](#) rubber sheet

Note: Bitumen sheet membranes are best suited for installation into planters that have at least 1.5m space between walls in any direction to facilitate heated torch application.

(1) Two layers of [ARDEX WPM 188](#)

Priming – Bituminous membranes only

- Prime all prepared substrates with [ARDEX WPM 240](#) Bituminous primer and let dry where the membrane is to be bonded
- Where the bottom layer of membrane can be loose laid onto blinding layers (concrete or compacted fill), do not apply the prime coat



Membrane installation – Two layers of [ARDEX WPM 188](#)

- Apply the bituminous sheet membranes to the prepared substrates using LPG or LNG torch techniques with sheet overlaps (100mm side-laps and 150mm end-laps) fully welded together
- Begin application from the lowest point and work upward to the highest points.
- Apply the base layer first before commencing to apply the second layer
- The second layer is to be placed so the overlaps of the base layer are covered by the mid-sections of the second layer sheet membrane. This ensures the bottom overlaps are resealed with the molten bitumen of the top layer

(2) One layer of [ARDEX Root Repell](#)

ARDEX Root Repell Weldable Waterproofing Membrane is a high performance, single-ply, butyl-based membrane that can be heat welded. It is suitable for waterproofing planter boxes, living roofs and as a damp proofing membrane.

It is specially formulated to contain a premium root inhibitor that repels root growth without killing the root. It is designed primarily for areas covered with or exposed to soil and plants and can be bonded to most building surfaces. Once installed, it will remain a permanently flexible waterproof lining.

Membrane Installation - [ARDEX Root Repell](#)

The Root Repell should be rolled out and cut to the measured length. It should be smoothed on contact to minimise air entrapment beneath the membrane.

Floor sheets must extend up the wall at least 150mm. with the membrane being laid tightly into all corners. Wall sheets should overlap the 150mm upstand. Seams and laps should be welded with the Leister Triac S Hot Air Gun. The seams and laps should then be rolled with a rubber roller to ensure they are secure.

(3) Single layer of [ARDEX WPM 615 Thermoplastic polyolefin \(TPO\)](#)

ARDEX WPM 615 TPO is a flexible roofing membrane made from the incorporation of an ethylene propylene rubber into a polypropylene matrix and produced with a polyester weft inserted reinforcement.

Priming is not required for prepared substrates as the membrane will be either adhesive fixed or mechanically fixed to the substrates.

Membrane Installation [ARDEX WPM 615 Thermoplastic Polyolefin \(TPO\)](#)

Installation of this membrane shall comply with the guidelines of the ARDEX technical manual by accredited applicators using approved hot air welding equipment to weld sheet overlaps and either:

- Adhesive fix using [ARDEX WPM 642](#) water based adhesive or
- Mechanical fixing using ARDEX Fixing plates and fasteners

(4) One layer of [ARDEX Butynol](#)

Is a synthetic rubber with properties that resist ageing from heat, sunlight and ozone. It has excellent gas impermeability and toughness. It will remain flexible at low temperatures.

Membrane Installation – [ARDEX Butynol](#)

The Butynol should be unrolled for 20 minutes prior to application. This is to relieve any induced stresses.



The Butynol Sheet is set out in the exact position in which it will be finally required. While it is held in place it is folded back lengthwise to expose half the underside. An even coat of ARDEX WA 98 Adhesive is then applied to the now exposed underside and the area left exposed. When the adhesive is 'touch dry' the sheet is worked back into its original position avoiding wrinkles and the inclusion of air bubbles.

This process is repeated with the other half of the sheet. When completed the whole sheet is then rolled with hand press rollers or something similar.

The next sheet is lapped over the first sheet by 50mm. All turn-ups and downs are to be neatly formed and cut to a straight line if necessary.

Butynol is not laid under tension. When the whole area has been covered and as the work progresses, the laps must be sealed.

Sheet Terminations

Once the membrane system has been applied, the top edge termination of the membrane shall be secured in the following way;

- [ARDEX Pressure Seal](#) mechanically fixed in position (Bitumen & TPO membranes)
- Over flashing termination

Membrane Protection

The sheet membranes must be protected from mechanical damage from the backfill materials or the self-supporting toppings placed over the installed membrane. Protective materials include the following;

- Ardex Protection Board
- Geotextile fabric minimum 5mm thick
- Geotextile wrapped drainage cells (e.g. [ARDEX DRS 10/18 GC](#))
- Plastic sheet (approx. 300micron thick) in two layers under toppings

Notes:

ARDEX has liquid applied membrane systems (SRO847) that are also suitable for Planter Boxes.

Disclaimer:

The recommendation selected is based upon questions answered on the ARDEX Australia website. This recommendation is designed as a general application for your described situation and should not be considered site specific documentation for general distribution. Always consult the latest relevant ARDEX Technical Bulletins and information on the product packaging and/or product data sheets (available on the ARDEX Website). Australian and other relevant standards should be followed during installation. If you have any further questions or would like further clarification please contact the ARDEX Technical Services Hotline on 1800 224 070 (9am to 5pm Monday to Friday).