



SRO 839 Waterproofing Specification – Roof / Deck Membrane **Three layer bituminous sheet membrane – protected system**

Scope

Three layer bituminous membrane system applied to approved substrates to form a fully bonded, protected continuous barrier against water penetration

Applications

This three layer membrane system may be used in a number of situations such as;

- Under self-supporting concrete toppings on driveways, decks or roof tops
- Under landscaping materials on suspended slabs over habitable areas
- Over contaminated substrates - external
- Over timber substrates - external

Substrates

Suitable substrates include

- Concrete
- Compressed fibre cement sheet
- Engineered timber (e.g. plywood)
- Contaminated surfaces that are otherwise structurally sound

Substrate Preparation

Substrates to which the bituminous sheet membrane are to be applied must be structurally sound concrete free of all contaminants such as laitance and/or curing compounds. The concrete must have completed the recommended minimum curing/drying periods (e.g. 28 days for concrete) with all holes/voids filled with a cement based patching mortar (e.g. [ARDEX A 46](#) or [ARDEX BR 345](#) system) and all surface protrusions ground flat. All internal corners are to be shaped with a cement based coving fillet (e.g. [ARDEX A 46](#) or [ARDEX BR 345](#) system minimum 50 x 50mm). Sheet substrates shall be fixed in accordance with the sheet manufacturers' instructions with all fixing screws finished recessed into the sheet surface. Remove any sharp edges and tape all sheet joints.

Contaminated surfaces are to be free of loose, flaky material with any soft and weak sections replaced.

Ensure all drainage wastes are the bowl type with clamp rings to secure the sheet membrane into the bowl.

Membrane Systems

The three layer membrane system is created with the following combination of membranes:

- Base layer [ARDEX WPM 116](#) with 2 layers of [ARDEX WPM 150](#)

Priming

The base membrane has a fibre fleece backing and is glued and/or mechanically fixed to the substrate. Thus priming is not required.

Membrane Installation

The [ARDEX WPM 116](#) Base sheet is applied by one of three methods. The adhesive fixed system is suitable on clean & dry prepared substrates while the mechanical fixing



method is suitable for use over contaminated surfaces, timber surfaces or damp substrates.

- Adhesive fixed to the clean dry prepared substrates using the [ARDEX WA 98](#) Solvent based adhesive
- Mechanically fixed (screwed) using the [ARDEX Fixing Washers](#)
- 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 body sections of the second layer sheet membrane. This off-set placement ensures the bottom overlaps are resealed with the molten bitumen of the top layer
- Once the second layer is fully bonded, the third layer is applied in a similar off-set manner so the sheet overlaps do not stack upon each other

Once all layers have been applied, the top free edge termination of the membrane shall be secured one of the following systems;

- [ARDEX Pressure Seal](#) mechanically fixed in position and sealed
- Liquid applied flashing such as the [ARDEX WPM 179](#) Bituminous latex where this over-flashing will be coated with [ARDEX WPM 310](#) or [ARDEX WPM 330](#) façade coatings

Protection

The bituminous sheet membranes must be protected from sunlight and from mechanical damage from the backfill of landscaping 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. Eg [ARDEX DRS 10/18 GC](#)
- Plastic sheet (approx. 300micron thick) in two layers under toppings.

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).