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# ARDEX WPM 1000

## **Weldtec™ Versatile Sheet Membrane**

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Compliant to AS4654 and AS4858

Compliant to AS2904 - Damp-proof Course and Flashings

Excellent resistance to tearing, cracking, bubbling, and absorption

Excellent flexibility & elongation - no requirement for fillet or bond breaker

Flood testing / tiling / screeding can begin 1 hour after membrane installation

Fully compatible with selected ARDEX Tiling systems and ARDEX Water-Based Liquid Applied Membranes

**WeldTec.**<sup>TM</sup>

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# ARDEX WPM 1000

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### PRODUCT DESCRIPTION

ARDEX WPM 1000 Weldable Waterproofing Membrane is a polypropylene-lined waterproofing sheet membrane specially formulated for the direct adhesion of tiled systems or for other non-exposed use. ARDEX WPM 1000 is heat-welded at laps and seams to create a superior sheet membrane with a consistent membrane thickness, that allows for quick installation.

### FEATURES

- Compliant to AS4654 and AS4858
- Complaint to AS2904 - Damp-proof Course and Flashings
- Compatible with ARDEX recommended tile adhesives
- Compatible with ARDEX water-based liquid applied membranes
- Commence flood testing, tiling or screed application 1 hour after installation completion
- Excellent flexibility & elongation - no fillet or bond breaker required

### USES

ARDEX WPM 1000 is specifically designed for use on both internal and external non-exposed waterproofing membrane installations, such as directly under adhered tiled surfaces, raised pavers, decking systems, and other non-exposed uses.

### SUBSTRATE PREPARATION

Suitable substrates include concrete, brick, plywood, CFC sheet, timber, and paper-faced plasterboard.

NOTE: The use of LOSP (Light Organic Solvent Preservative) treated plywood must NOT be used under ARDEX WPM 1000 in any circumstances.

By way of mechanical methods and vacuum cleaning as necessary, remove all dirt, dust, curing compounds, oils, grease, surface sealers, and any other contaminants prior to membrane installation. Prepare surface to leave sound, clean, dry, free from sharp edges, loose or other materials which may damage the membrane.

Damaged concrete between 2mm - 30mm can be treated with ARDEX A 46. Spalling concrete must be treated accordingly with the ARDEX Concrete Repair range such as ARDEX BR 345, please review the respective product data sheets on treating spalling concrete.

### DAMP OR GREEN CONCRETE

When masonry or concrete substrate moisture content is measured at greater than 80% relative humidity (ASTM F2170) or exceeds 15gm/m<sup>2</sup>/24hrs (ASTM F1869) when tested in accordance with AS 1884 or AS 3740, ARDEX WPM 300 (HydrEpoxy) shall be considered as the nominated primer prior to ARDEX WA 98 Adhesive. This is typically equivalent to 5% or greater moisture content from a digital non-destructive moisture meter, however Australian Standards must be followed.

Apply two coats of ARDEX WPM 300 (HydrEpoxy) at a rate of 3m<sup>2</sup>/litre (per coat) and allow to dry for a minimum of 24 hours. Drying times will vary depending on substrate temperatures and ambient air conditions. Once the ARDEX WPM 300 (HydrEpoxy) has cured, apply a neat primer coat of ARDEX WA 98 Adhesive and allow to totally dry. Apply another neat coat of ARDEX WA 98 Adhesive to the primed substrate and to the sheet underside, then bring together once tacky.

NOTE: If the ARDEX WPM 300 (HydrEpoxy) is not allowed to fully cure, the application of ARDEX WA 98 Adhesive will noticeably damage the uncured ARDEX WPM 300 (HydrEpoxy).

### COMPRESSED FIBRE CEMENT SHEETING

Compressed fibre cement sheet must be installed as per manufacturer's instructions. Substrate to be primed with ARDEX WA 98 Adhesive.

Application to James Hardie Scyon™ Secura™ External Flooring sheets, please refer to the ARDEX Technical Bulletin.

### DETAILING

The ARDEX Flashing Tape is to be used in all external corners, pipe penetrations, and drainage waste outlets. The ARDEX Flashing Tape is to be cut to size and adhered with ARDEX WA 98 Adhesive during installation. Once correctly installed, the ARDEX WPM 1000 shall be glued and heat-welded to the ARDEX Flashing Tape to create a seamless waterproofing membrane system within and around critical areas.

### SUBSTRATE ADHESIVE

ARDEX WA 98 Adhesive is a ready to use solvent-based external contact adhesive for bonding ARDEX Wedltec™ membranes.

With a brush or roller apply ARDEX WA 98 Adhesive to both the sheet underside and the substrate at a rate of 4m<sup>2</sup> - 8m<sup>2</sup>/litre, and allow approximately the same drying time. Drying times will vary depending on substrate temperatures and ambient air conditions. Once the applied ARDEX WA 98 Adhesive becomes tacky to touch then it is ready for bedding. The ARDEX WA 98 Adhesive can be reapplied if the drying time elapses.

To create optimum adhesion, apply a neat primer coat of ARDEX WA 98 Adhesive to the prepared substrate and allow to totally dry. Apply another neat coat of ARDEX WA 98 Adhesive to the primed substrate and underside of sheet, then bring together once tacky.

It is highly suggested to shake and stir the unopened ARDEX WA 98 Adhesive drum to thoroughly mix contents before use.

Ensure not to apply ARDEX WA 98 Adhesive over an area that will later be spliced or seamed to another sheet or flashing as you will not be able to weld glued laps and seams. ARDEX WA 98 Adhesive for external use only.

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### INSTALLATION

The application of ARDEX WPM 1000 must be carried out by an ARDEX Accredited Applicator. Installation shall be in strict accordance with the manufacturer's recommendations.

Roll out ARDEX WPM 1000 and cut to the measured length. Smooth ARDEX WPM 1000 on contact to minimise air entrapment beneath the membrane. To ensure proper adhesion, compress the bonded portion of the sheet to the substrate with a pressure roller. Do not use a medium/hard bristle broom as this may partially remove the polypropylene fleece.

Without over-stretching the membrane, ensure the ARDEX WPM 1000 is laid tightly into all corners and transitions, this can be greatly assisted with the use of the ARDEX Brass Roller and the ARDEX Small Hand Roller. All transition substrate gaps must be filled appropriately to adequately support the ARDEX WPM 1000. Membrane shall be installed with a minimum 40mm overlap (both side and end laps) and heat welded using an approved hot-air welding unit. Using a probe, ensure all seams and laps are welded properly; re-weld if necessary.

It is highly suggested to use either a weighted roller or large water filled heavy roller once the membrane is installed to ensure uniform substrate adhesion.

### PAVER PAD INSTALLATION

Paver pads (tiling pedestals) are to be installed as per manufactures recommendations. When placing the paver pads onto the waterproofing membrane it is highly recommended to place rubber matting under each paver pad to greatly reduce potential damage to the waterproofing membrane and prolong the service life of the waterproofing membrane.

BOSS Tiling Pedestals from DTA Australia are an approved system to be used with ARDEX Weldtec™ Membranes. Visit [www.dta-aus.com.au](http://www.dta-aus.com.au) for more information.

### LIQUID MEMBRANE TRANSITION

When transitioning from ARDEX WPM 1000 to an ARDEX Water-Based Liquid Applied Membrane, the ARDEX STB Tape must be installed prior. There are two application options to consider:

1. Prime the substrate above the upturned ARDEX WPM 1000 with the appropriate primer - please refer to the respective ARDEX water-based liquid membrane product data sheet for correct primer choice. Centrally place the ARDEX STB Tape along the top edge of the upturned ARDEX WPM 1000. The ARDEX STB Tape can be carefully heat welded directly to the ARDEX WPM 1000 membrane - the fleece on the ARDEX WPM 1000 will be removed during this type of application method. Use the ARDEX Brass Roller and ARDEX Small Hand Roller to ensure adhesion to

the ARDEX WPM 1000 and prepared substrate is smooth and all edges are removed.

2. Prime the substrate above the upturned ARDEX WPM 1000 with the appropriate primer - please refer to the respective ARDEX water-based liquid membrane product data sheet for correct primer choice. Carefully remove the fleece on the ARDEX WPM 1000 using the welding equipment and ensure all loose fleece is removed from the area before centrally placing the ARDEX STB Tape along the top edge of the upturned ARDEX WPM 1000. Use the ARDEX Brass Roller and ARDEX Small Hand Roller to ensure adhesion to the ARDEX WPM 1000 and prepared substrate is smooth and all edges are removed.

Once either method is correctly installed, apply the ARDEX water-based liquid membrane to encapsulate the ARDEX STB Tape and lapping onto the ARDEX WPM 1000. When overlapping of tape to tape (ARDEX STB Tape), the overlap should be a minimum of 25mm.

Approved ARDEX Water-Based Liquid Applied Membranes:

- ARDEX WPM 002
- ARDEX WPM 310
- ARDEX WPM 330
- ARDEX WPM 155 Rapid Plus
- ARDEX WPM 130 Builders Express

### TILING APPLICATION

The ARDEX WPM 1000 is specially designed for direct stick tile applications. With the ARDEX WPM 1000 surface being totally sound, dry, and clean, tiling may commence 1 hour after the membrane system has been fully installed. Recommended ARDEX Tile Adhesives include:

- ARDEX X 18
- ARDEX X 56
- ARDEX X 77
- ARDEX Optima

For other ARDEX Tile Adhesives please contact ARDEX Technical Services ([technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)).

### SCREED APPLICATION

The ARDEX WPM 1000 is suitable for screed applications. With the ARDEX WPM 1000 surface being totally sound, dry, and clean, the screed mix may commence 1 hour after the membrane system has been fully installed.

When directly bonding to the ARDEX WPM 1000, a minimum screed thickness of 15mm is recommended when using diluted ARDEX WPM 405 instead of water. For unbonded screeds or a screed thickness greater than 40mm, reinforcing mesh is required.

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Admix for slurry coat: 1 part ARDEX WPM 405: 1 part clean water: 4 parts cement (by volume).

Admix for screed: Mix 1 part ARDEX WPM 405 with 4 parts clean water and use as the guaging mix (mixing water) with a 3:1 or 4:1 sand/cement mix.

Mix a thin slurry and spread the mix over the surface with a brush, roller, or soft bristle broom (2mm maximum thickness). The screed mix must be applied whilst the slurry coat is still wet. A wood float finish is recommended to create a key for subsequent tiling and waterproofing. Do not lay the reinforcing mesh directly onto the membrane, the reinforcing mesh must be installed between the screed layers.

For epoxy-based screeds, the minimum thickness is 10mm. Please refer to the ARDEX EG 800 F product datasheet regarding mix ratios, and application recommendations.

### SEALANT & EPOXY ADHESIVE APPLICATION

Prior to use of the ARDEX products below, carefully remove the fleece on the ARDEX WPM 1000 using the welding equipment and ensure all loose fleece is totally removed from the area. The below products may be used in situations such as pipe penetration detailing, membrane termination applications, and more.

- ARDEX RA 040
- ARDEX CA 20 P
- ARDEX RA 88 PLUS

For other compatible ARDEX Products please contact ARDEX Technical Services ([technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)).

### MEMBRANE TERMINATION

Membrane termination detail to be in accordance with AS 4654 or ARDEX recommendation - please consult ARDEX Technical Department for further information ([technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)).

#### Vertical Termination Finishing

The ARDEX Weldtec™ membrane shall be terminated with one of the suggested options.

##### Option 1:

The termination with an ARDEX Pressure Seal Strip shall be attached onto the wall using appropriate mechanical fixings at maximum 150mm centres. An approved ARDEX sealant shall be used along the top edge of the ARDEX Pressure Seal Strip to the waterproof wall. Membrane termination height to be in accordance with AS 4654 Appendix A.

##### Option 2:

The termination of an Over-Flashing shall be sealed into the waterproof wall via a minimum 15mm x 15mm reglet. The Over-Flashing must be fixed in place with either ARDEX RA 88 PLUS or ARDEX CA 20 P. Membrane termination height to be in accordance with AS 4654 Appendix A.

##### Option 3:

Terminate the membrane directly into a minimum 15mm x 15mm reglet. Carefully remove the fleece on the upper face of ARDEX WPM 1000 using the hot air welding equipment and ensure all loose fleece is removed from the area that will be inserted into the 15mm x 15mm reglet. Once the ARDEX WPM 1000 has been appropriately installed, the termination (reglet) shall be filled with either ARDEX RA 88 PLUS or ARDEX CA 20 P, dependent on specific application. Membrane termination height to be in accordance with AS 4654 Appendix A.

#### Horizontal Termination Finishing

The termination of the ARDEX WPM 1000 shall be terminated into the concrete substrate via a minimum 15mm x 15mm reglet. Carefully remove the fleece on the upper face of ARDEX WPM 1000 using the hot air welding equipment and ensure all loose fleece is removed from the area that will be inserted into the 15mm x 15mm reglet. Once the ARDEX WPM 1000 has been appropriately installed, the termination (reglet) shall be filled with an ARDEX approved product such as:

- ARDEX RA 88 PLUS
- ARDEX RA 56
- ARDEX WA 100
- ARDEX EG 800 F
- ARDEX RA 142 / RA 144 / RA 146

Dependent on reglet size and length ARDEX suggest both products ARDEX RA 56 and ARDEX EG 800 F to be bulk filled with ARDEX Aggregate. All remaining termination details such as vertical downward, parapet capping, cavity flashing, external door opening etc refer to AS 4654.

#### STORAGE

ARDEX WPM 1000 has an indefinite shelf life when stored in good conditions, between 5°C and 30°C. Rolls must be stored horizontally, out of direct sunlight, away from sources of puncture and physical damage, away from ignition sources and open flame.

#### PACKAGING

ARDEX WPM 1000

Roll size: 1.4m wide x 20m long

Approximate weight per roll: 35kg

ARDEX WA 98 Adhesive - 20L pail

ARDEX WA 98 Solvent - 20L pail

ARDEX WPM 405 - 20L pail

ARDEX Flashing Tape - 100mm x 4.7m (roll)

ARDEX STA Tape - 40cm x 2.4m (sheet)

ARDEX STB Tape - 75mm x 15m (roll)

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### TECHNICAL DATA

CHARACTERISTICS	TEST METHOD	NOMINAL VALUES
Membrane Gauge		1.2mm
Service Temperature		-30°C - 80°C
Tensile Strength (Min)	AS 4654.1	4.74 MPa
Elongation at Break	AS 4654.1 Appendix A	>300%
Field Seam Strength	EN 12316.2 EN 12317.2	Shear: 278 N (end lap) 231 N (side lap) Peel: 87 N (end lap) 71 N (side lap)
Heat Ageing	AS 4654.1	Pass
Temperature Resistance	AS 4654.1 Clause 2.6	Pass
Durability	AS 4654.1 Table A4	Pass
Tear Die (kN/m)	ASTM D624	26.5 kN/m (min)
Tensile Retained	ASTM D412	70% (min)
Ultraviolet Resistance	AS 4654.1 Table A	No Visible Cracks
Water Vapour Transmission	ASTM E96	0.62 g/m <sup>2</sup> /24 hours

### LIMITATIONS

The application of ARDEX WPM 1000 must be carried out by an ARDEX Accredited Applicator. ARDEX WPM 1000 waterproofing membrane is not suitable as a trafficable surface or to be left UV exposed for long periods of time. Do not apply any ARDEX engineered screeds directly to ARDEX WPM 1000. It is the responsibility of the main building contractor to ensure all sub-trades likely to be working in the vicinity of the ARDEX WPM 1000 membrane are aware that a waterproofing membrane has been installed and all care must be taken to protect the membrane from damage. The tiler must lay tiles in accordance with Australian best practice guidelines.

Before any substrate preparation, installation or finishing methods relating to ARDEX product are undertaken, please be aware of any potential risks and use appropriate PPE (personal protective equipment). This may involve contacting substrate manufacturers for Safety Data Sheets.

### GUARANTEE

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 20 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 20 Powers Road Seven Hills NSW 2147; Toll Free: 1800 224 070; Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss of damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

### DISCLAIMER

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