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# ARDEX WPM 1500

## WeldTec Pre-Applied Tanking Membrane

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Proven butyl long term performance

Allows maximum use of confined space

Radon, hydrogen sulphide and methane gas barrier

Not reliant on confining pressures, hydration or tape systems

WeldTec technology to create very strong, watertight laps and detailing

Forms a unique, continuous waterproofing membrane

High elongation – excellent crack bridging capabilities

Excellent bond strength to concrete to ensure waterproofing

Excellent water migration resistance

**WeldTec.**<sup>™</sup>

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# ARDEX WPM 1500

## WeldTec Pre-Applied Tanking Membrane

### DESCRIPTION

ARDEX WPM 1500 is a pre-applied, fleece-lined, weldable waterproofing membrane for below ground tanking and gas barrier applications. ARDEX WPM 1500 is welded at laps and seams to create a strong, continuous waterproofing membrane.

Based on butyl technology, ARDEX WPM 1500 has excellent elongation, flexibility and water migration resistance. The fleece-lined surface allows a high bond strength to concrete, and provides excellent resistance to water migration.

### USE

ARDEX WPM 1500 is normally used as a single layer membrane in horizontal or vertical applications for waterproofing in below ground applications. It is primarily applied to the outside of a sub-structure of a building, such as a foundation or basement, to prevent water ingress or as a gas barrier to prevent the ingress of toxic gases.

ARDEX WPM 1500 can also be used in other applications including under floor slabs, behind masonry walls, the lining of substrates of in-situ or precast concrete; retaining walls, lift shafts and tunnels. ARDEX WPM 1500 can also be used in combination with other ARDEX WeldTec products.

ARDEX WPM 1500 may be used in various combinations to produce a variety of specifications tailored to suit the individual waterproofing needs.

The exact specification will depend on the functional and economic requirements. Advice should be sought for a suitable specification from ARDEX Technical Services.

### SURFACE PREPARATION

Substrates need to be clean, smooth, dry and free of sharp edges, loose or foreign materials, oil, grease and other materials that may damage the membrane.

Substrates must be sound and solid to properly lay ARDEX WPM 1500. All surface voids greater than 5mm wide shall be properly filled with an acceptable fill material.

For further specific surface preparation please see the Installation section.

### INSTALLATION

The application of ARDEX WPM 1500 should be carried out by an approved ARDEX Installer.

Installation shall be undertaken in accordance with all

relevant technical information related to the selected installation method, including information contained within the ARDEX specification.

Examine substrates, areas, and conditions, with the installer present, for compliance with requirements and other conditions affecting performance.

For applications over blinding, a concrete mud-slab, compacted subgrade or vertical soil retention system, verify that compacted sub-grade or concrete mud-slab is smooth and sound; and ready to receive the ARDEX WPM 1500 below grade membrane.

Verify that vertical soil retention systems are prepared using drainage composite, plywood, shotcrete or other approved means to achieve a uniform, sound and continuous substrate ready to receive the ARDEX WPM 1500 below grade membrane.

Proceed with installation only after unsatisfactory conditions have been corrected.

Work shall be completed in stages with laps and seams being welded at the end of each day.

### INSTALLATION HORIZONTAL

ARDEX WPM 1500 is normally loose laid to the prepared substrate with laps of 100mm. These shall be sealed by using a Leister Triac S Hot Air Gun hand welder, or Leister Twinny Combi-Welder. Roll with a rubber roller to ensure seams and laps are secure. A minimum weld width of 50mm is required. A 100mm X 100mm Patch shall be applied at all "T" intersections. Areas sectionally completed should be weighted down with sand bags until steel is placed and concrete slab poured.

Floor sheets of ARDEX WPM 1500 must extend up the wall at least 450mm. Make sure the ARDEX WPM 1500 is laid tightly into all corners.

Wall sheets of ARDEX WPM 1500 should overlap the 450mm upstand.

### INSTALLATION - VERTICAL

Apply the membrane with the black side towards the substrate. In the overlaps, mechanically fasten the membrane vertically using flat headed fixings appropriate to the substrate. The membrane may be installed in any convenient length. Secure the top of the membrane using a batten or fixing 50mm below the top edge. Use fixings at typically 600mm centres to secure the membrane flat against the substrate.

Fixings with plates can be made through the selvedge; this allows firmly welded and rolled overlaps, which are covered by the subsequent sheet of ARDEX WPM 1500.

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All laps Welded with the Leister Triac S Hot Air Gun or Leister Twinny Combi-Welder. Roll with a rubber roller to ensure seams and laps are secure. A minimum weld width of 50mm is required.

Any exposed fixings should be patched by heat welding a patch of ARDEX WPM 1500 with a Leister Triac S Hot Air Gun and rolling.

### MEMBRANE REPAIR

After installation of ARDEX WPM 1500 and before installation of reinforcement steel and concrete placement complete a final inspection of the membrane. Ensure that the membrane is clean so that a full bond can form to the concrete pour.

Repair damage by thoroughly cleaning the surrounding membrane area with water so that it is free of dust and dirt. Repair the are with the replacement of a full sheet of ARDEX WPM 1500 or a patch with a minimum of 50mm overlap of the welded area.

### REMOVAL OF FORMWORK

ARDEX WPM 1500 membranes can be applied to removable single and double sided formwork, slab perimeter formwork, pile caps, etc. Once concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond with ARDEX WPM 1500.

A minimum concrete compressive strength of 10 N/mm<sup>2</sup> is recommended prior to stripping formwork supporting ARDEX WPM 1500 membranes. Premature stripping may result in loss of adhesion between the membrane and concrete.

### PENETRATIONS

Provide a double layer of membrane around pipes and penetrations. Seal edges to ARDEX requirements dependant on the application. Form or mould by heating.

All penetrations to ARDEX details or as shown on the drawings.

Incorporate waterstops where indicated.

### PACKAGING

ARDEX WPM 1500 comes in rolls of nominal 1.4m x 20m with a gauge of 1.5mm.

### STORAGE

ARDEX WPM 1500 has an indefinite shelf life when stored in good conditions, between 5°C and 30°C. Store rolls horizontally in dry conditions out of direct sunlight. Store

away from sources of puncture and physical damage. Store away from ignition sources and open flame.

### PRECAUTIONS

ARDEX WPM 1500 is not classified as dangerous goods.

ARDEX WPM 1500 is not suitable as a trafficable surface. It is the responsibility of the main building contractor to ensure all sub-trades likely to be working in the vicinity of the membrane are aware that a waterproofing membrane has been installed and all care must be taken to protect the membrane from damage.

ARDEX WPM 1500 must be protected from UV once installed. Maximum exposure should not exceed 60 days.

Exercise caution when lifting, moving, transporting, storing or handling membrane rolls to avoid sources of punctures and possible physical damage.

Contact ARDEX Technical Services for specific recommendations regarding chemical or waste product compatibility with ARDEX WPM 1500.

For further information, please consult the latest Safety Data Sheet.

# ARDEX WPM 1500

## WeldTec Pre-Applied Tanking Membrane

Table 1 - Physical Properties

| Property  | ARDEX WPM 1500          | Test Method         |
|---|-------------------------|---------------------|
| Colour  | Grey/Black              |                     |
| Thickness                                       | 1.5 mm                  |                     |
| Width   | 1.40 m                  |                     |
| Roll Length                                     | 20 m                    |                     |
| Low Temperature Flexibility                     | Pass at -29°C           | ASTM D1970          |
| Joint Strength                                  | 380 N/50mm              | EN 12317-2          |
| Resistance to Hydrostatic Head                  | 69 kPa (no failure)     | ASTM D5385          |
| Elongation                                      | 500% typical            | ASTM D412           |
| Tensile Strength                                | 8 MPa                   | ASTM D412           |
| Puncture Resistance                             | 600 N                   | ASTM E96 B          |
| Peel Adhesion to Concrete                       | 0.60 N/mm               | ASTM D903 modified  |
| Lap Peel Adhesion                               | 7 N/mm                  | ASTM D1876          |
| Permeance to Water Vapour Transmission          | 0.04 g/d/m <sup>2</sup> | ASTM E96 B          |
| Radon Diffusion Coefficient                     | Pass                    | K124/02/95          |
| Water-Tightness to liquid water                 | Pass                    | EN 1928             |
| Durability of water-tightness against chemicals | Pass                    | EN 1847 and EN 1928 |
| Resistance to tear (nail shank)                 | 351 N                   | EN 12310-1          |
| Bitumen Compatability                           | Pass                    | EN 1548 and EN 1928 |
| Methane Permeability                            | Pass                    | ISO15105            |
| Hydrogen sulphide resistance                    | Pass                    | EN1847              |
| Hydrogen sulphide permeability                  | Pass                    | ASTM D1434          |

### ACCESSORIES USED WITH WPM 1500

#### ARDEX WA 98

Contact adhesive for temporary bonding

#### ARDEX WPM 299

Primer for use with Detail tape

#### ARDEX Flashing Tape

Under flashing penetrations

#### ARDEX Detail Tape

Over flashing penetrations

#### ARDEX Pressure Bar

For sealing along top edge

#### ARDEX Seam Plates and Fasteners

For fixing in overlaps to hold vertically against form work

#### ARDEX CA 20 P

General construction adhesive and sealant

**Toll Free Technical Services:**  
**1800 224 070 (Australia)**  
**0800 227 339 (New Zealand)**

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable New Zealand & Australian Standards, our instructions and recommendations and only for the uses they are intended. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may effect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

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