



ARDEX WPM 300

Water-Based Epoxy Moisture Barrier (HydrEpoxy)

Excellent water vapour transmission performance

Compliant to AS/NZS4020 - Potable Drinking Water

Excellent adhesion to most substrates including damp surfaces and green concrete

Can be used as a general purpose primer, as a moisture barrier, and within hydrostatic applications

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PRODUCT DESCRIPTION

ARDEX WPM 300 (HydrEpoxy) is a two component water-based epoxy primer/barrier coating. ARDEX WPM 300 (HydrEpoxy) is extremely versatile and can be used in a variety of applications.

FEATURES

- Compatible with damp surfaces and green concrete
- When applied to the substrate, can prevent rising damp and the formation of efflorescence
- Potable drinking water compliant - AS4020 and SS375
- Can withstand 250kPa of hydrostatic pressure - equivalent to 25 metre head of water

COMMON SUBSTRATES

- Brick
- Stone
- Screed
- Timber
- Masonry
- Concrete
- Concrete Block

For further substrate types please contact ARDEX Technical Services (technicalservices@ardexaustralia.com).

TYPICAL APPLICATIONS

- As a low water vapour transmission coating and as a barrier/seal coating over freshly laid or damp concrete.
- As a hydrostatic pressure resistant waterproofing coating to prevent water seepage or dampness penetration through to the interior of walls and floors.
- As a moisture barrier or barrier coating over freshly laid hardened (green) concrete, prior to the application of conventional levelling compounds, carpet and tile adhesives.
- As a coating in tanking applications, including potable water containment.
- As a barrier seal coating over damp, green or efflorescence producing concrete prior to overcoating with conventional building coatings.
- As a primer for ARDEX Liquid Applied Waterproofing Membranes and ARDEX Tile Adhesives in specific applications.
- When masonry or concrete substrate moisture content is measured at greater than 80% relative humidity (ASTM F2170) or exceeds 15g/m²/24hrs (ASTM F1869), a minimum single coat of ARDEX WPM 300 (HydrEpoxy) must be the nominated primer/coating. This is typically equivalent to 5% or greater moisture content from a digital non-destructive moisture meter, however Australian Standards must be followed.

SUBSTRATE PREPARATION

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 application. Prepare surface to leave sound, clean, free from sharp edges, loose or other materials which may damage the subsequent coating, membrane, or levelling compound.

All blockwork, brickwork, concrete or similar type substrates with surface imperfections such as divots, or other minor surface irregularities must be repaired accordingly with an ARDEX WPM 405 sand/cement mortar, ARDEX Render, or ARDEX WPM 300 epoxy mortar to create a uniform substrate prior to application of ARDEX WPM 300 (HydrEpoxy).

ARDEX WPM 300 epoxy mortar mix ratio:

- 1 x part mixed ARDEX WPM 300 (HydrEpoxy)
- 1 x part Portland cement
- 3 x part ARDEX Primer Sand

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.

MIXING

Each component must be individually mixed to form a homogenous state. Do not use the same mixing paddle for each component. Combine the two components and thoroughly mix in the ratio of 1:1 by volume until a homogeneous blend is obtained. Only mix as much as may be used within the pot life and avoid excessive aeration during mixing.

APPLICATION METHOD

When the product is to be applied to dry or highly porous surfaces, spray the surface with a fine mist of water prior to application. Any free standing water must be removed prior to application.

Floors – Spread the material using a squeegee or stiff nylon broom to ensure the material is worked into the prepared surface. Finish application using a medium to long nap roller to achieve required coverage.

Walls – Apply the product by roller ensuring the material is worked into the prepared surface and to achieve required coverage.

When spraying ARDEX WPM 300 (HydrEpoxy), the addition of 10% water during the first coat will assist surface penetration and spray application.

A one coat application is generally used as a primer for subsequent ARDEX Liquid Applied Membranes.

A two coat application is generally used for a moisture barrier (efflorescence and rising damp requirements) or negative side (hydrostatic pressure) applications.

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SCREED APPLICATIONS

Two coats are applied at 3.0m²/L per coat. Where cement screeds are to be installed, the second coat must be sand seeded. Whilst the second coat is wet, ARDEX Floor Leveller Primer Sand or clean dry sand of 0.5mm diameter shall be broadcast over the surface at a rate of 700g/m² or to achieve 100% coverage. After 24 hours minimum cure, the excess sand shall be swept and vacuumed from the surface prior to sub-flooring application. Curing times will vary depending on substrate temperatures and ambient air conditions.

TILING APPLICATIONS

Substrates such as screeds and renders should be normally allowed to dry for 7 days prior to the fixing of ceramic tiles. Alternatively, two coats of ARDEX WPM 300 (HydrEpoxy) are applied at 3.0m²/L per coat. Where ceramic tiles are to be installed, the second coat must be sand seeded. Whilst the second coat is wet, ARDEX Floor Leveller Primer Sand or clean dry sand of 0.5mm diameter shall be broadcast over the surface at a rate of 700g/m² or to achieve 100% coverage. After 24 hours minimum cure, the excess sand shall be swept and vacuumed from the surface prior to tiling application. Curing times will vary depending on substrate temperatures and ambient air conditions.

FLOORING APPLICATIONS

ARDEX WPM 300 (HydrEpoxy) is an effective moisture barrier for damp concrete subfloors prior to the installation of floor coverings or waterproof membranes. The relevant standards criteria which apply are;

- Where concrete surfaces are damp defined in AS1884 and also AS3740, as exceeding 80% relative humidity when measured using the ASTM F2170 methodology, or exceeds 15g/m²/24hrs when measured using the ASTM F1869 methodology. A two coat application of ARDEX WPM 300 (HydrEpoxy) with a dry film thickness of 0.3mm meets the AS1884 requirement for moisture barriers and has a WVTR of less than 10g/m²/24hrs when tested to ASTM E96.
- Where concrete surfaces are damp, defined in AS2455 as exceeding 75% relative humidity when measured using inslab testing methodology, or exceeds 70% relative humidity when measured on the slab surface.

Two coats are applied at 3.0m²/L per coat. Where smoothing cements are to be installed, the second coat must be sand seeded. Whilst the second coat is wet, ARDEX Floor Leveller Primer Sand or clean dry sand of 0.5mm diameter shall be broadcast over the surface at a rate of 700g/m² or to achieve 100% coverage. After 24 hours minimum cure, the excess sand shall be swept and vacuumed from the surface prior to sub-flooring application. Curing times will vary depending on substrate temperatures and ambient air conditions.

Alternatively the surface of ARDEX WPM 300 (HydrEpoxy) can be coated with ARDEX P82 or ARDEX P9 primers prior to the application of smoothing cements. A single coat of ARDEX WPM 300 (HydrEpoxy) applied at 3.0m²/L acts a moisture stop ('green slab seal') for 'green concrete' not subject to rising damp or permanent moisture.

CURING

Allow final coat to cure for 24 hours minimum before applying water based membranes, mortars, levelling compounds, decorative coatings or other surface treatments. Care is necessary to ensure the coating is not damaged in any way during subsequent treatments. Curing times will vary depending on substrate moisture content, substrate temperatures and ambient air conditions.

TECHNICAL DATA

CHARACTERISTICS	NOMINAL VALUE
Colour	Grey or black
Finish	Semi-gloss (matt with aging)
Volume solids	56% (approx.)
Mixing ratio	1:1 (Part A:Part B) by volume
Coverage	Must be applied at a rate of 1.5m ² /L in total (equivalent to two coats at 3.0m ² /L per coat) to achieve an effective moisture barrier
Wet film thickness	300 micrometers (0.3mm) per coat
Mixed SG	1.3kg/L
Mixed Viscosity	12,000 - 20,000 cps
Recoat time	4 hours @ 25°C & 50% R.H.
Full cure	7 days @ 25°C & 50% R.H.
Pot life	2 hours @ 25°C 1 hour @ 35°C
VOC content	26g/L
Moisture Vapour Transmission (@ 0.3mm DFT)	<10g/m ² /24hrs

COVERAGE

3.0m²/L per coat (undiluted).

The recommended wet film thickness specified produces a nominal dry film thickness of 150 microns per coat or 300 microns for two coats on the surface. The apparent dry film thickness may reduce depending on the porosity of the substrate, however the product absorbed by the substrate still forms part of the moisture barrier function.

PACKAGING

4L kit (2L Part A & 2L Part B)

20L kit (10L Part A & 10L Part B)

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PRODUCT THINNING

The first coat may be thinned with water as required depending on the porosity of the prepared surfaces to be coated to ensure optimum penetration. Up to 5% for dense surface, and up to 20% for more porous surfaces. Thinning of the second coat is to be avoided since this increases the difficulty in achieving the required dry film thickness. A third coat can be applied as required.

CLEANING

Wash all equipment in water or water/detergent immediately on completion.

SHELF LIFE

ARDEX WPM 300 (HydrEpoxy) has a shelf life of 24 months when stored in the original, unopened packaging in a dry place at 23°C and 50% relative humidity.

LIMITATIONS

Tiling can commence after 24 hours cure of ARDEX WPM 300 (HydrEpoxy) although should not exceed a maximum of five days. Installer is to ensure that there is no surface contamination during this period. Sand blinding of the wet ARDEX WPM 300 (HydrEpoxy) surface with ARDEX Floor Leveller Primer Sand eliminates these timing issues and is best practice for external tiling jobs.

The product should be applied whilst the surface temperature and ambient temperature is between 10°C–35°C. The product will cease to cure effectively below 10°C. Curing time will also be adversely affected in situations where relative humidity is >85%.

In enclosed areas, ventilation must be provided during curing cycle to enable adequate evaporation of the water. Care should be taken when sandwiching adhesives between ARDEX WPM 300 (HydrEpoxy) and floor coverings to ensure the water vapour transmission of the covering is sufficient to allow the solvent to escape from flooring adhesives.

ARDEX WPM 300 (HydrEpoxy 300) is not classified as a trafficable coating. 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.

SAFETY DATA

This product causes skin irritation and may cause an allergic skin reaction. It causes serious eye damage. This product is suspected of causing genetic defects and may cause cancer. This product is toxic to aquatic life with long lasting effects. In case of contact with the eyes rinse with running water until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Wear protective gloves, clothing, eye and face protection. Avoid inhaling mist/vapours/spray. Ensure adequate ventilation during mixing and application. Store locked up. Check with your local Council regarding the disposal of contents, dispose of packaging thoughtfully. Keep out of the reach of children.

Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. Additional information is in the Safety Data Sheet (SDS) at ardexaustralia.com.

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 10 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, 2 Buda Way Kempas Creek NSW 2178; Toll Free: 1800 224 070; Email: 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

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 Australian Standards. Our instructions and recommendations are only for the uses they are intended. Users are advised to confirm that this product is suitable for their application and conforms with the specifications of the system. 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 affect 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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