ARDEX WPM 002

(Superflex Bathroom and Balcony Two Part)

Rapid drying time

Two component undertile waterproofing membrane

Advanced acrylic – will not re-emulsify

Fibre reinforced – eliminates the need for reinforcing mat

Meets class III category for AS 4858 Wet Area Membranes

Low VOC content – meets Green Building Council of Australia Green Star IEQ-13 requirements

BRANZ Appraised
Appraisal No.473 [2022]

BRANZ Appraised
Appraisal No.472 [2022]

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ARDEX WPM 002

(Superflex Bathroom and Balcony Two Part)
Two Component Undertile Waterproofing Membrane

DESCRIPTION
ARDEX WPM 002 (Superflex Bathroom and Balcony Two Part) is a tough, fast drying two component waterproofing membrane specifically designed for use under tiles. The product has been uniquely formulated with synthetic microfibres to increase its strength and eliminate the need for a separate reinforcement mat. ARDEX WPM 002 is based on the most advanced acrylic polymer technology, and is totally resistant to re-emulsification.

ARDEX WPM 002 is flexible, low in odour, and is fully compatible with polymer modified tile adhesives. ARDEX WPM 002 is one of the fastest drying acrylic membranes on the market – normally ready to tile in 16–24 hours @ 23°C. ARDEX WPM 002 meets the Green Building Council of Australia Green Star IEQ-13 requirements for Architectural Sealant when tested in accordance with SCAQMD Method 304-91 Determination of Volatile Organic Compounds (VOC) in Various Materials as referenced by South Coast Air Quality Management Division (SCAQMD) Rule 1168.

FEATURES/BENEFITS
- Fast drying ARDEX WPM 002 can be tiled over in 16–24 hours, or 4 hours @ 23°C / 50% RH in non critical areas*.
- Fibre reinforced: Excellent strength, eliminates need for reinforcing mat.
- Flexible: Accommodates normal building movement.
- Advanced acrylic: Will not re-emulsify.
- Designed for tiling: Fully compatible with ARDEX tile system adhesives.
- Water based, low odour and easy cleaning for undertile waterproofing in shower recesses.
- Conforms to the requirements of AS/NZ 4858:2004 Wet Area Membranes.

*Critical areas include areas where the membrane is applied over impermeable substances such as bond breakers or incorporating reinforcement. Longer drying times are necessary in these areas.

APPLICATION RANGE
Performance levels
Commercial and residential.

Location
Internal and external wet areas, balconies, decks, and other areas that will be tiled or otherwise protected from regular foot traffic.

Surfaces
Walls and floors.

Substrates
Concrete
Cured for min. 28 days or sealed when set with one coat ARDEX HydrEpoxy WPM 300 at a coverage rate of 3.0m² per litre and allowed to cure overnight.

Wet concrete should be allowed to dry thoroughly or sealed with one coat of ARDEX HydrEpoxy WPM 300 as above.

Renders and screeds
Cured for min. 7 days or sealed when set with one coat ARDEX HydrEpoxy WPM 300 at a coverage rate of 3.0m² per litre and allowed to cure overnight. Wet render should be allowed to dry thoroughly or sealed with one coat of ARDEX HydrEpoxy WPM 300 as above.

Fibre cement
Wet area grade only.

Plasterboard
Wet area grade only.

Plywood
Structural plywood (PAA branded) or marine grade or other wet area grade only. Not recommended for external use (refer ARDEX).

Particleboard
Wet area grade, internal use only (special preparation is required – contact ARDEX). Not recommended for external use (refer ARDEX).

Permanent Immersion
It is recommended that ARDEX WPM 002 must be covered with tiles for permanent immersion applications. Contact ARDEX for use over existing membranes, covering materials, and any other substrates not listed.

SPECIFICATION CLAUSE
ARDEX WPM 002
The waterproofing membrane shall be ARDEX WPM 002, a two component cementitious acrylic modified fibre reinforced membrane formulated to provide a tough, long lasting water barrier under tiling systems.

PACKAGING
Two component: 20kg (approx 20 litres) liquid pail and 1x 20kg bag.

SHELF LIFE
12 months when stored in the original unopened packaging, in a dry place at 23°C. Do not store in direct sunlight. Replace lid tightly after use. Protect from frost. Use remaining contents from part used containers within 3 months.

MIXING
The mixing ratio of ARDEX WPM 002 is 1 part liquid (by weight) to 1 part powder (by weight). The unit is broken into equal components for accurate measurement. Stir the ARDEX WPM 002 liquid thoroughly and pour the accurate measure into a suitable clean plastic container. Add ARDEX WPM 002 powder to the liquid whilst stirring. Stir until a homogenous, lump free paste is achieved.

COVERAGE
Two coats are recommended for an effective waterproof membrane. Coverage will vary depending on the porosity of the surface. One 40kg kit will cover approximately 16–24m² (based on two coats) depending on area requirements between wall and floor surfaces to be treated.

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Table 1

	Thickness per coat		Total dry film thickness (2 coats)	Theoretical Coverage		Per Unit
	Dry film	Wet film		Per coat	For 2 coats	
Floors	0.6mm	0.9mm	1.2mm	32m²	16m²	40kg kit
Walls	0.4mm	0.6mm	0.8mm	48m²	24m²	40kg kit

DRYING TIMES
Curing time will vary depending on temperature and humidity.

Recoat time
1–2 hours (23°C / 50% RH) between first and second coats. Alternatively, if a woven cloth reinforcement mat is used in corners between coats then the second coat can be applied whilst the first coat is still wet.

Dry through
The slowest drying areas are those where the membrane has been applied over a silicone bond breaker, eg. wall and floor junctions. The membrane cannot be tiled over until these critical areas are completely dry.

ARDEX WPM 002 membrane is totally dry in 16 hours at 23°C / 50% RH but can take up to 24 hours at 10°C / 50% RH in corners or for thick films. In areas where bond breakers or additional reinforcement are not used, ARDEX WPM 002 can be tiled over after 4 hours at 23°C/ 50% RH.

Fully cured
The shower should not be used until the membrane has reached its full strength. Normally ARDEX WPM 002 membranes are fully cured after 3 days at 23°C, or after 5 days at 10°C. Drying times will vary depending on humidity, surface temperature and surface porosity. Do not apply on substrates where the surface temperature is below 10°C or above 35°C.

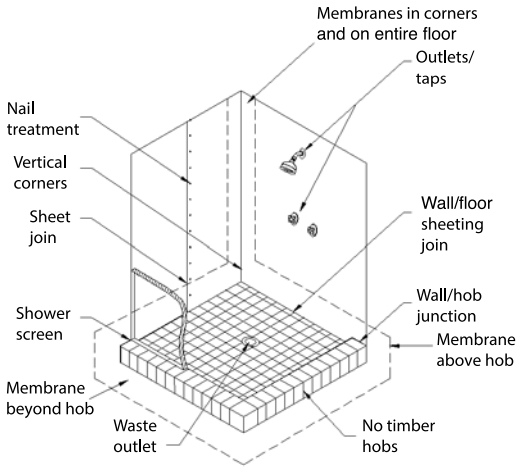
CLEANING
Wash hands, brushes, rollers, etc, with water while the membrane is still fresh. Remove cured material with mineral turpentine.

APPLICATION
Apply ARDEX WPM 002 by brush or roller. A medium nap (12–15mm pile) paint roller is recommended. New rollers should be dampened with water before being used for the first time. For best results with a paint brush use a good quality, 50mm long bristle variety.

To achieve the required dry film thickness per coat application must consist of laying the product onto the surface and light finish the surface. Do not try to apply in the same manner as a building paint. A conventional building paint is normally applied at 25–40 micrometers wet film thickness while ARDEX WPM 002 needs to be applied at between 0.6 and 0.9mm per coat depending on product and application (Refer to Table 1).

Critical areas:
INTERNAL WET AREAS

Fig.1 – Shower recess – Critical areas



1. Construction should be at a minimum in accordance with AS 3740-2004 which is pictured above. ARDEX however recommends waterproofing the entire walls to at least 80 mm above the shower rose.
2. All render and tile bed requirements should be completed before application of the membrane and tiles or other floor coverings should be direct bonded to the membrane.
3. Ensure wall and floor sheets are installed as per sheet manufacturer's recommendations.
4. Ensure suitable brick/concrete hobs are used (do not use timber), and that the top of the hob does not slope outwards.
5. Ensure that falls to the waste are min 1:60 (ie. approx. 30mm in 2m) before waterproofing. Ensure outlet pipes are fixed securely and that the waste or drainage flanges are recessed into the floor.
6. Avoid sheet joints in shower recess floor. Ensure that sheets are securely fixed to the wall at the bottom edge, and sheet joints are sealed with a neutral cure silicone sealant spread approximately 8mm on either side of the joint.
7. Treat nail and screw holes with neutral cure silicone sealant.
8. Seal the perimeters of taps, shower outlets and waste outlets with neutral cure silicone sealant.
9. Apply a bead of neutral cure silicone sealant to all horizontal and vertical corners.
10. Apply a bead of neutral cure silicone sealant to the junction of the hob or angle and walls.
11. Waste outlets shall incorporate a leak control flange or similar in accordance with AS 3740 and the top surface shall be set flush with the surface to which the membrane is to be applied. A bead of neutral cure silicone shall be applied across the intersection of the leak control flange and the screed/floor.

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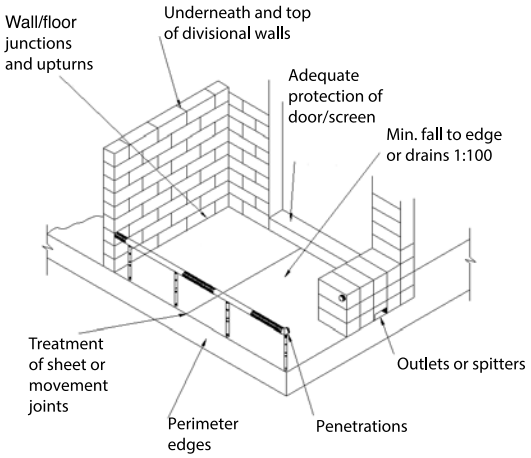
12. Apply the membrane to the entire shower recess floor and down into waste or drainage flange. Apply the membrane over the hob and at least 100mm beyond the outside edge of the hob (ideally to entire wet area floor).
13. Plastic (eg. PVC) fittings should be primed with a solvent based plumbers primer. Prime metal surfaces with a suitable metal primer.
14. Apply the membrane minimum 1800mm up the walls or 80mm above the height of the shower rose within the shower recess. In circumstances where the shower rose is positioned on the ceiling, ARDEX recommends the WPM 002 membrane be installed to the ceiling height.
15. Install the shower screen to inside edge of the hob.

BALCONIES AND DECKS

1. Ensure that the deck is constructed with falls to edge/

Fig.2 – Balcony – Critical areas



drains of min 1:100 (ie. 20mm in 2m) or else achieve the fall with a sand/cement screed.

2. Ensure suitable flashing is installed, ideally prior to the installation of the balcony screen/sliding door.
3. Treat any sheet joints with a neutral cure silicone prior to waterproofing.
4. Prepare and seal all wall/floor junctions with a bead of neutral cure silicone.
5. Apply the membrane as far up underneath the screen door flashing as possible (ideally waterproof prior to installing door).
6. Where possible, apply the membrane prior to building divisional walls.
7. Apply the membrane to the entire balcony floor and at least 100mm up the wall above the top surface of the finished tiles and finished below the wall drainage vents.
8. Apply the membrane to the top of the parapets and divisional walls, or else install suitable metal capping.
9. Apply the membrane down over the front edge of the balcony onto the drip rail.
10. Carefully seal any gaps around balcony penetrations prior to applying the membrane.
11. Apply the membrane down into outlets and drains, ensuring excess material is removed.
12. Ensure all weep holes are above the membrane application area.

APPLICATION NOTES

Surface preparation

Ensure all surfaces are structurally sound and totally dry. The pores of concrete surfaces should be open (absorbent surface). All sheet substrates must be securely fixed in accordance with the manufacturers instructions.

- Falls to outlets of at least 1:60 or approx. 30mm in 2m (wet areas) or 1:100 externally, must be achieved prior to tiling.
- The surface to be coated should be free from dust, oil, paint, curing compounds and any other contaminating materials.
- Damaged concrete should be repaired, levelled and surface defects including all cracks and sharp protrusions should be treated prior to the application of the membrane.
- Remove laitance on concrete or screeds by mechanical means.
- Highly dense (>40MPa) or steel trowelled concrete should be roughened by suitable mechanical means (shot blasting, grinding, etc).

Priming

The primer is a critical part of the waterproofing system. Apply one coat of ARDEX Multiprime water based primer by brush or roller to all areas to be waterproofed including the floor waste. Allow the primer to be completely dry prior to the application of the ARDEX WPM 002 membrane. This will take around 20–30 minutes depending upon weather conditions and porosity of the substrate. Coverage is approximately 6m² per litre. Plastic (e.g. PVC) pipes should be primed with a solvent based plumbers pink primer. Prime metal surfaces with a suitable metal primer such as epoxy polyamide primer.

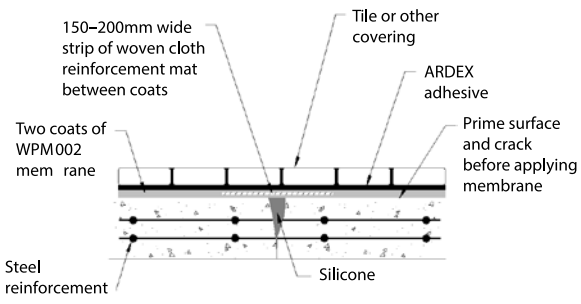
GENERAL APPLICATION

Crack preparation

Cracks <2mm:

Clean and remove any loose particles in the crack. Prime the

Fig.3 – Crack treatments



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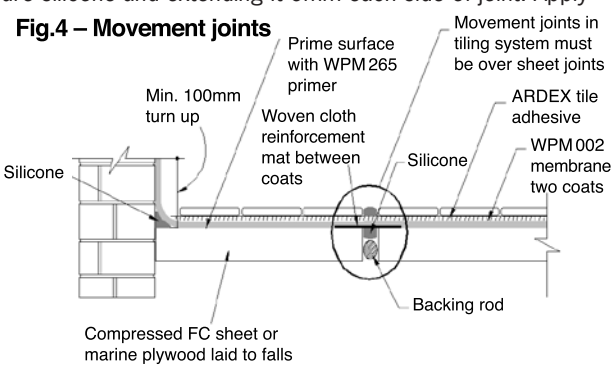
crack and adjacent area carefully with ARDEX Multiprime water based primer and allow to dry before applying two coats of ARDEX WPM 002 membrane, in a band at least 200mm wide equidistantly across the crack, along the length of the crack.

Cracks 2–6mm:
(Refer to Fig.3) prepare and prime the crack as above. Apply a bead of neutral cure silicone into the crack and extend it 6mm either side. Apply a 300mm wide band of ARDEX WPM 002 equidistantly across the crack along the entire length of the crack. Place a 190mm wide band of ARDEX Deckweb woven cloth reinforcement over the applied membrane. Thoroughly wet out the cloth and remove all creases in, or air pockets under the mat. Immediately apply a second coat to completely fill the mat.

Cracks >6mm:
Contact ARDEX Technical Services for specifics with this.

Movement/construction joints
Movement joints (<6mm)
Clean and prime the joint before filling it with a bead of neutral cure silicone and extending it 6mm each side of joint. Apply

Fig.4 – Movement joints



a 300mm wide band of ARDEX WPM 002 (Superflex Two Part) equidistantly across the crack along the entire length of the crack. Place a 190mm wide band of ARDEX Deckweb woven cloth reinforcement over the applied membrane. Thoroughly wet out the cloth and remove all creases in, or air pockets under the mat. Immediately apply a second coat to completely fill the mat.

Construction joints (>6mm)
Use the same procedure as above, but replace the reinforcing mat with 120mm of ARDEX Coving Bandage. Note: if tiling, movement joints should be taken to the surface of the tiles. Fill the joints between the tiles immediately above the movement joints with an appropriate joint sealant. (Refer to Fig.4).

Corners and coving areas
After priming with ARDEX Multiprime water based primer and allowing it to dry, apply a generous bead (16mm) of neutral cure silicone sealant in coving areas and corners. Smooth over the silicone so that it extends 8mm up the wall and 8mm over the floor and allow to touch dry. Apply a first coat of ARDEX WPM 002 to the area and allow the membrane to dry. Apply a second coat ensuring that excess product is removed from the junction (the final dry film thickness should be around 1.2mm) Alternatively, if a woven cloth reinforcement mat is used between coats then the second coat can be applied as soon as the mat is fully bedded into the first coat.

WALL/FLOOR JUNCTION
After priming with ARDEX Multiprime water based primer and allowing to dry, apply a generous bead (16mm) of neutral cure silicone sealant to seal all junctions between two substrates. Smooth over the silicone so that it extends 8mm up the wall and 8mm over the floor and allow to touch dry. Place a 190mm wide band of ARDEX Deckweb woven cloth reinforcement over the applied membrane. Thoroughly wet out the cloth and remove all creases in, or air pockets under the mat. Immediately apply a second coat to completely fill the mat. The ARDEX WPM 002 should be applied to at least 150mm up the wall surfaces as per the recommendations for the application of ARDEX WPM 002 to floors.

Walls
Two coats of ARDEX WPM 002 are required to achieve a minimum total dry film thickness of 0.8mm. After priming with ARDEX Multiprime water based primer and allowing to dry, apply two coats of ARDEX WPM 002 (to achieve a minimum dry film thickness of 0.8mm) in two opposite directions. Wall sheet joints should be treated with a neutral cure silicone, PVC duct tape or base jointing compound. In balcony situations take the membrane up underneath any existing cover flashing or install appropriate flashing. Allow the first coat to dry before applying the second coat.

Floors
Two coats of ARDEX WPM 002 are required to achieve a minimum total dry film thickness of 1.2mm. The membrane should be extended at least 100mm up all perimeter walls.

Prime the surface with ARDEX Multiprime water based primer and allow to dry. Apply the first coat over the primed surface and allow it to dry (1–2 hours at 23°C, 50% RH) before applying a second coat in an opposite direction. In shower recesses a drainage flange must be installed on all timber/sheeted floors, and are strongly recommended on all other substrates. Where possible rebate the flange into the floor. Seal the perimeter of the flange with neutral cure silicone sealant. If a flange is not installed the membrane must be applied down into the pipe. (Refer to Fig.5). Allow the membrane to dry completely before tiling.

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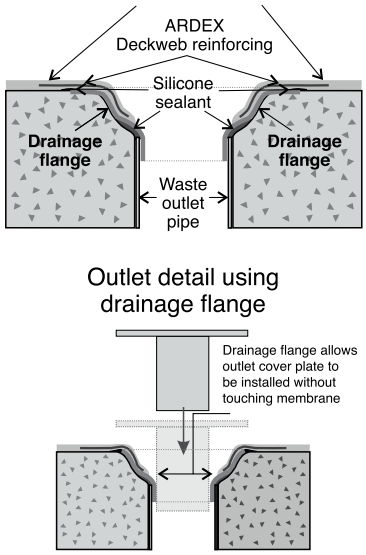
Waste outlet

Fig.5 – Waste outlet

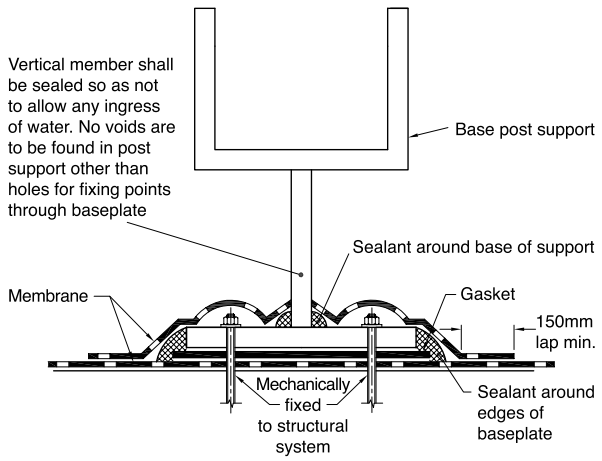


Prime the surface with ARDEX Multiprime water based primer and allow to dry. Surfaces of outlet flange must be primed with an appropriate primer.

Apply ARDEX WPM 002 over the adjacent floor surface extending down into the waste outlet pipe overlapping the pipe surfaces by at least 30mm. Place ARDEX Deckweb woven cloth reinforcement over the applied membrane. Thoroughly wet out the cloth and remove all creases in, or air pockets under the mat. Immediately apply a second coat to completely fill the mat. (Refer to Fig.5).

Balcony penetrations (Refer Fig.6)

Fig.6 – Post membrane installation



All upstands are to be mechanically fixed through the membrane, which must be fabricated with a base plate flange.

Prime the metal with an appropriate metal primer such as an epoxy polyamide primer and allow to dry. Apply a 10mm bead of neutral cure silicone around the perimeter of the penetration.

Apply the first coat of ARDEX WPM 002 on the substrate and the flanged metal.

Allow first coat to dry before applying a second coat ensuring a finished dry film thickness of no less than 1.2mm is achieved. Place a suitable flashing collar around the penetration sealing it with a suitable sealant.

ARDEX WPM 002 & STB TAPE INSTALLATION

1. Ensure area is free from contaminants and clean making sure to remove all dust and prime fibre cement sheet with an approved primer (listed in the primers section). Apply the tape and use a roller to ensure that a secure bond is made between the tape and substrate and carefully moulded into the corners.
2. Apply a first coat of ARDEX WPM 002 to the entire area to be waterproofed using a brush or roller, a medium nap (8–12mm pile) or 50mm long bristle paint brush is recommended. This first coat should be applied at 0.6mm (wet film thickness). Allow to dry. Dry time is approximately 1-2 hours.
3. Apply a second coat of the ARDEX WPM 002 membrane at a thickness of 0.6mm (wet film thickness). This will provide a total dry film thickness of 0.8mm over the ARDEX STB Tape. Care should be taken to ensure excessive build up of membrane is avoided over the ARDEX STB Tape. It is crucial that the dry film thickness at the edge of the tape of the ARDEX WPM 002 is at least 1.2mm so that stress and movements at this point are accommodated.The increase in film thickness is likely to slow down drying and curing in this area relative to the rest of the membrane areas. Final dry film thickness over floor and wall areas not covered by ARDEX STB Tape should be 1.2mm for floors and 0.8mm for walls.

Tiling systems

It is advisable to conduct a flood test of the waterproofed areas once the membrane has cured (after a minimum of 48 hours), and before the tiling commences. A broad range of ARDEX tile adhesives can be used over ARDEX Superflex membranes. Contact ARDEX or your nearest ARDEX stockist for advice on the most suitable system.

QUALITY PRODUCT

ARDEX WPM 002 is manufactured and tested to ARDEX procedures which are maintained in accordance with Quality System Standard ISO 9001.

PAY ATTENTION TO THE FOLLOWING

Do not use the product in the following situations:

- Areas subject to negative hydrostatic pressure or rising damp, unless treated with ARDEX HydrEpoxy WPM 300.
- Where the substrate is wet – wet surfaces can be sealed with one coat of ARDEX HydrEpoxy WPM 300 at a coverage rate of 3.0m^2 per litre and allowed to cure overnight.
- Where rain is imminent.
- Where the membrane will be left exposed and subjected to regular foot traffic.
- On glazed, glass or other totally impervious surfaces (eg. areas pre-treated with water repellants).

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- Where substrates have ponding water or fail to meet the required falls in the applicable standards. It is recomended a corrective screed be installed or falls be created, prior to the application of ARDEX WPM 002.

For substrates or situations other than those listed contact ARDEX Technical Services.

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

ARDEX WPM 002 Part A Liquid

This product may cause irritation and an allergic reaction to the skin. Avoid contact with skin and eyes. 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. If irritation continues, seek medical attention. Wear protective gloves, clothing, face and eye protection. Avoid inhaling dust/fumes/gas/mist/vapours/spray. This product is harmful to aquatic life with long lasting effects. Ensure adequate ventilation during mixing and application.

ARDEX WPM 002 Part B Powder

This product may cause irritation and an allergic reaction to the skin. It may cause serious eye injury and irritation to the respiratory system. May cause cancer. May cause damage to organs through prolonged or repeated exposure. 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 dust/fumes/gas/mist/vapours/spray. Ensure adequate ventilation during mixing and application. Store locked up. Check with your local Council regarding the disposal of contents. Keep out of the reach of children. Call the Poisons Information Centre on 0800 764 766 (NZ) or call a doctor if you feel unwell. At times updates can occur to data. For additional information and to ensure you have the most current technical and safety information please consult the latest Safety Data Sheet (SDS) and Technical Data Sheet found on the product page at ardex.co.nz

TECHNICAL DATA

CHARACTERISTICS OF COMPONENTS

Form and colour	
Liquid	White, medium viscosity
Powder	Off White

CHARACTERISTICS OF MIXED PRODUCT

Mixing ratio	1:1 by weight
SG of mixed product	1.4kg/litre
Colour	Light Grey/Green

CHARACTERISTICS OF CURED MEMBRANE

Shore A hardness ASTM D2240	
Dry film	85 – 90
Wet film	75 – 80
Tensile strength	
7 days dry AS 1145	1.7 MPa
Full cure 28 days	2.9 MPa
Elongation at break	
7 days dry AS1145	>300%
VOC content	25g/L

NOTE: Most of the tests have been carried out in the ARDEX laboratory under standard conditions (23±2°C, 50±5% RH).

DISCLAIMER

The technical details, recommendations and other information contained in this datasheet 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 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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