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# ARDEX WPM 405

## (Sheltercrete Additive)

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High performance polymer additive for cement and concrete mixes

Water resistant – used as a temporary waterproofing sealer on rooftops

High strength – ideal for patching, can be feathered out with minimal cracks

Non-toxic – does not cause Occupational Health and Safety concerns

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## (Sheltercrete Additive)

### High Performance Polymer Additive for Cement and Concrete Mixes

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#### PRODUCT DESCRIPTION

ARDEX WPM 405 (Sheltercrete Additive) is an SBR, multipurpose, concentrated, liquid polymer additive which greatly improves the bond strength, flexibility and workability of sand/cement mortars and screeds. Being water resistant, ARDEX WPM 405 mixed with cement can be used as a temporary waterproofing sealer.

When used as an admix for mortars and screeds ARDEX WPM 405 can be applied to damp surfaces (not wet) and can be painted over.

#### FEATURES/BENEFITS

- Water resistant: used as a temporary waterproofing sealer on rooftops when mixed with cement.
- High strength: ideal for use in patching mortars as it can be feathered out with minimal cracks, and also for use in coving areas.
- Non-toxic: does not cause Occupational Health and Safety concerns.
- Reduces the cement:water ratio, which results in a stronger mortar/screed.

#### TYPICAL APPLICATIONS

- As a temporary waterproofing sealer in high exposure areas such as rooftops, while new waterproofing membrane is being installed. When used under sheet membranes, it limits gassing.
- As a slurry coat prior to applying renders or toppings.
- As an admix for sand/cement mixes especially in repair mortars, fillets, covings, renders and screeds.
- As a bonding bridge for new to old concrete.

#### LIMITATIONS

- Do not use ARDEX WPM 405 mortar to concrete slabs subject to rising damp or hydrostatic pressure without first priming with ARDEX WPM 300 (HydrEpoxy 300) in two coats at a coverage rate of 3 square metres per litre per coat. Refer to the ARDEX WPM 300 (HydrEpoxy 300) data sheet for screed installation details.
- Protect ARDEX WPM 405 liquid from frost – do not allow to freeze.
- Do not apply ARDEX WPM 405 as a temporary waterproofing sealer if rain is imminent.
- Do not apply if the surface temperature is below 10°C or above 35°C.

#### BASIC APPLICATION INSTRUCTIONS

##### Surface preparation

The surface to be treated should be clean and sound, free from oil, grease, laitance etc. New concrete should be allowed to cure for at least 28 days prior to application of ARDEX WPM 405 temporary waterproofing or slurry coat. New brickwork walls, sand/cement render or screeds should be left for at least 7 days before application of the ARDEX WPM 405 temporary waterproofing or slurry coat.

##### Mixing

- Temporary waterproofing: 1 part ARDEX WPM 405: 2 parts cement, (by volume).
- Admix for render/screed/coving: Mix 1 Part ARDEX WPM 405 with 4 parts water and use as the gauging mix (mixing water) with a 3:1 or 4:1 sand/cement mix.
- Slurry coat: 1 part ARDEX WPM 405: 1 part water: 4 parts cement (by volume).

##### Application

###### • Temporary waterproofing:

Mix ARDEX WPM 405 with fine cement to a lump free consistency. Pre-moisten the concrete then apply a first coat using a brush or roller to achieve 1mm wet bed thickness. Allow first coat to set, then apply second coat at right angles to the first application to ensure no pin-holing occurs.

Liquid or sheet membranes can be applied directly over this temporary waterproofing.

###### • Slurry coat:

Mix to a thin slurry and spread the mix over the surface with brush or roller, or small broom. Maximum thickness recommended is 2mm. While the slurry coat is still wet, apply render or screed over it.

###### • Render/Coving:

Apply slurry coat on the prepared surface. While the slurry coat is wet apply the ARDEX WPM 405 mortar mix with a wood float trowel, ensuring firm pressure on the trowel to work the render into good contact with the surface.

###### • Screed:

A minimum thickness of 15mm is recommended when using diluted ARDEX WPM 405 instead of water. For a thickness greater than 40mm, reinforcing mesh is required.

Using a roller, brush or a flat trowel, coat the prepared area with a slurry coat of ARDEX WPM 405 to improve adhesion to the substrate.

Apply the screed mix whilst the slurry coat is still wet using a straight edge, trowel or timber batten to level the screed.

Achieve falls in shower recesses to a minimum 1:60; internal wet areas (eg bathrooms) to a minimum of 1:80; and external areas to a minimum of 1:100.

Screeds should be left with a wood float finish to create a key for tiling and waterproofing. When reinforcing the screed with mesh, apply first layer of screed, lay in the mesh and apply the second layer of the screed. Do not lay the mesh directly onto the substrate.

### DRYING TIME

Approximately 16 hours (overnight) at 23°C and 50% relative humidity when used for temporary waterproofing or render/screed.

### CLEANING

Clean tools with water before the mortar dries.

### COVERAGE

Temporary waterproofing 20L covers 12m<sup>2</sup>  
(2 coats at 1mm/coat)

Slurry coat 1 litre – 3m<sup>2</sup>

As a render (15mm thick) 1 litre covers 2m<sup>2</sup>

### TECHNICAL DATA

**Form** Thin, white liquid

**Specific gravity** 1.0kg/litre

**pH** 9 – 10

#### As a temporary waterproofing sealer

**Tensile adhesion over concrete (7 days)** 1.5 MPa

**Hydrostatic pressure resistance** 0.34MPa (50 psi)

#### As additive to screed

**Flexural strength** 3.3MPa

**VOC content** 32g/L

### SAFETY PRECAUTIONS

ARDEX WPM 405 is non-hazardous and non-dangerous goods. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin. Wear eye/face protection. In case of contact with eyes, rinse with plenty of water and seek medical advice. When used with mortar (which is alkaline) skin contact should be avoided. Wear gloves and protective clothing.

ADDITIONAL INFORMATION IS LISTED IN THE MATERIAL SAFETY DATA SHEET.

### STORAGE AND HANDLING

Shelf life is approx. 12 months when stored in the original unopened packaging in a dry place at 23°C and 50% relative humidity. Protect liquid from frost, do not allow to freeze.

## 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 Standard, 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.

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