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# ARDEX WPM 415

## Crystalline Waterproofing Slurry

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Easy to apply

No odour and no fumes

Fast setting

Not a vapour barrier - allows the substrate to 'breathe'

Resistant to strong hydrostatic pressure - Seals and post seals shrinkage cracks, up to 0.4mm



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# ARDEX WPM 415

## Crystalline Waterproofing Slurry

### DESCRIPTION

ARDEX WPM 415 is a one component, penetrating crystalline waterproofing powder formulated from Portland cement, it is used specially for treated quartz sand and active chemicals. ARDEX WPM 415 waterproofs and protect concrete or masonry render through the crystallization process.

The unique reactive chemicals penetrate and become an integral part of the concrete where the crystals reacts permanently in the presence of water. ARDEX WPM 415 is suitable for use in damp surface and high water pressure applications on both the positive and negative side.

### FEATURES / BENEFITS

No odor and no fumes - environmentally friendly

Easy to use - requires only water for mixing

Fast setting - two coats can be applied the same day

Not a vapour barrier - allows the substrate to 'breathe'

Seals and post seals shrinkage cracks, up to 0.4mm

Brush/spray applied in +ve/-ve pressure applications

Inorganic and non-toxic - Non-flammable

### APPLICATION RANGE

- Residential , commercial applications for floors & walls
- Waterproofing of below grade foundations,basements ,retaining walls,elevator pits,subway stations
- Marine structures such as docks, piers and aquariums
- Water tanks , tunnels , dams , sewerage plants , swimming pools , parking garages , decks , balconies and roofs

### SUBSTRATE

- New and old concrete of interior and exterior construction

### BASIC APPLICATION INSTRUCTION

#### SURFACE PREPARATION

Remove the remaining concrete fins and projections, general surface dirt, grease, oil and other contaminants. Use steam cleaning, high-pressure water blasting, wet or dry sand blasting, wire brush or other mechanical methods to produce surfaces suitable to allow ARDEX WPM 415 to penetrate.

Clean and prepare surfaces and seal cracks and joints.

Stable construction joints and visible cracks (> 0.4mm) should be raked out to 20mm width and 25mm depth. Before brushing the area with two coats of ARDEX WPM 415, use ARDEX Primer to fill up the joint.

Ensure that there are no water leakages, the surfaces must be strictly sound and clean from residue, oil, sealers, waxes, contaminants and laitance. Holes, cracks and deteriorated area are seal for maximum penetration

Saturate the surfaces with clean water to minimise surface suction and maximise crystal formation. Surface shall be moist but not wet when ARDEX WPM 415 is applied. Remove any surface water that is on the horizontal surfaces .

#### MIXING

Add 7.5 - 8L of water to 25kg bag of WPM 415 powder and mix thoroughly until the mixture is completely free of lumps. Re-mix the used ARDEX WPM 415 within 40 minutes. If the mixed material starts to "pseudo setting", re-stir to restore the workability.

#### APPLICATION OF ARDEX WPM 415

Apply 1<sup>st</sup> coat in a slurry consistency and evenly by a masonry brush. Work well into the prepared substrates. Apply 2<sup>nd</sup> coat within 30-60 minutes whilst the first coat is just touch dry.

ARDEX WPM 415 may be applied with appropriate compressed air spray equipment according to the specifications, in perpendicular movements.

Clean the tools and equipment immediately after use with water.

#### PROTECTION

Protect the freshly treated ARDEX WPM 415 surface from rain and traffic for 24 hours.

Ensure that the freshly treated ARDEX WPM 415 is moist cure for at least 48 hours.

Further cementation plaster, render finish or tiling system can be applied onto treated ARDEX WPM 415 at 48 hour after completion.

Coating or painting on ARDEX WPM 415 treated surface should be applied 2 weeks after completion. Recommend neutralizing the surface with water or an appropriate acid, e.g. diluted vinegar solution or diluted muriatic acid (1:8 to water) for better bonding

### PRODUCT LIMITATION

Do not apply ARDEX WPM 415 at temperatures below 5°C or onto dry substrates.

### COVERAGE

Application	Number of coats	Rate/coat(kg/m <sup>2</sup> )
Normal internal & external surface for waterproofing	1 - 2	0.7 - 0.8
Concrete for waterproofing & hydrostatic pressure resistance	2	0.8 - 1.0
Concrete slab, concrete component - by dry spreading	1	1.4 - 1.6

### PACKAGING

ARDEX WPM 415 is packed in paper sacks - net weight 25kg.

### STORAGE

ARDEX WPM 415 should be stored in the original unopened packaging in cool and dry warehouse at 23°C and 50% relative humidity. When stored under the correct conditions ARDEX WPM 415 will have a shelf life of 12 months.

### SAFETY PRECAUTIONS

ARDEX WPM 415 is non-toxic . However, the contents should not be swallowed or inhaled. Care should be taken at all times to avoid contact with eye, mouth, skin. Wear face mask to prevent dust inhalation. In the event of eye contact, wash immediately with water and seek medical treatment.

### TECHNICAL DATA

#### Product Properties

Type:	Single Part
Appearance:	Powder
Colour:	Grey
Bulk density:	Approx. 1.36 - 1.4 kg/litre
pH:	12± 1
Odour:	None
Pot Life: (28°C & 60% R.H.)	>40 mins

Setting time: (28°C & 60% R.H.)	Initial > 120 minutes Final < 180 minutes
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#### Testing Method

Water Permeability (JIS.A6101 / DIN 1048)	No measurable leakage up to 15kg/cm <sup>2</sup> for 48 hours after 28 days curing
Depth of Max Penetration (DIN 1048)	> 20mm after 28 days curing
Water Absorption (ASTM C642)	Up to 25% decrease the un-treated samples at 28 days curing.
Compressive Strength (ASTM C39)	+10% at 28 days over un-treated samples
Bonding Strength (ASTM D4541)	+10% increase in cementation adhesion
Flexural Strength (ASTM C348)	+10% at 28 days over un-treated samples
Efflorescence Resistance (ASTM C67)	No affected on treated surface
Freeze-Thaw Resistance (ASTM C67)	50 cycles ( -18°C ~ -23°C) - weight loss of less than 0.5%
Salt-attack Resistance (ASTM C67)	No affected on treated surface

## **DISCLAIMER:**

The technical datasheets are based on the latest information and given in good faith and represent the best of our knowledge and experience at the time of printing. They are primarily offered for user's consideration and evaluation. It is the responsibility of the user to conduct their own tests to validate the suitability of the products. It is also the responsibility of the user to ensure that the products are used and handled correctly and in accordance with any applicable standards, the product instructions and recommendations and only for the uses they are intended. As we have no control over site conditions and the execution of the work, we accept no liability for any loss or damage which may rise as a result thereof. We also reserve the right to update the information at any time without prior notice to you to reflect our ongoing research and development program.

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