ARDEX WPM 400

Pure Polyurea Waterproofing Membrane

Continuous, seamless waterproofing

Adapts to any substrate geometry

Very fast polymerisation

Rapid attainment of final physical and mechanical properties

High resistance to hydrolysis, puncture, abrasion & aging

Can be applied in temperatures as low as 5°C (where condensation absent)

Suitable for operating temperatures from -40°C to 180°C

Resistant to root formation

300% elongation

Accredited to ETA 14/0396

ARDEX Australia Pty Ltd
20 Powers Road
Seven Hills NSW 2147
Phone: 1300 788 780
technicalservices@ardexaustralia.com
www.ardexaustralia.com

ARDEX New Zealand Ltd
15 Alfred Street
Onehunga, Auckland 1061
Phone: 0800 227 339
info@ardexnz.com
www.ardex.co.nz

ARDEX WPM 400

Pure Polyurea Waterproofing Membrane

DESCRIPTION

ARDEX WPM 400 is a hot-applied, highly elastic 100% pure polyurea waterproofing membrane, with high mechanical and chemical resistance. Once dry, it forms a continuous waterproof membrane, without joints or need for overlap or reinforcement. It provides permanent elasticity, even at very low temperatures, and is able to absorb substrate movements.

The rapid polymerisation of ARDEX WPM 400 means it can adapt to any surface and attain waterproofing properties within three hours (optimal properties are achieved in 24 hours).

USES

- Waterproofing balconies, roofing, terraces
- Floors requiring both substrate waterproofing and high mechanical & chemical resistance
- Waterproofing metallic roofs
- Pool and pond waterproofing
- Waterproofing tanks & irrigation channels
- Encapsulation of fibre cement roofing

SURFACE PREPARATION

Ensure that the substrate to be coated is clean, sound and completely dry. Substrate moisture may affect adherence. Remove all residues of release agent, previous coatings, laitance and any other contaminants that might impair adhesion. Recommended methods are: high-pressure water blasting, milling, sand blasting to grade Sa 2½. On completion of the above treatment, the substrate should be thoroughly pressure washed with potable water to remove dust and loose particles. Remove standing and/or excess water from the substrate with suitable equipment and wait for it to dry completely.

Carry out repair work with a suitable ARDEX product. Any joint or crack in the concrete substrate where differential movement is anticipated (e.g. expansion joints) must be properly sealed (a reinforcement band may be applied); this is especially important in metallic substrates (consult ARDEX Technical Department).

PRIMING

Apply ARDEX WPM 400 PRIMER by roller with a consumption of 100-300 g/m². On very porous substrates, two layers of ARDEX WPM 400 PRIMER may be necessary. On irregular substrates, mix ARDEX WPM 400 PRIMER with 0.1-0.3 mm quartz aggregate (with a 1:0.3 ratio); apply by trowel to achieve a U3 constant finish.

One or two layers may be necessary. ARDEX WPM 400 PRIMER can be applied to substrates with maximum 8% existing moisture: for substrates with higher levels of humidity, consult the ARDEX Technical Department.

APPLICATION

ARDEX WPM 400 is supplied as two separate parts with predetermined weight (A+B). The temperature of the material must be at least 5°C before mixing.

Connect the drums containing components A and B to the spray equipment. Better use of high pressure airless bi-mixer equipment is attained where dosing functions are controlled with PLC. Best performance is achieved with a temperature of 75-80° C (product) and 180-190 bar pressure. In bi-mixer airless equipment, preheating tanks (30°-65°) and line heaters are required. Due to the rapid polymerisation of ARDEX WPM 400, the product's two components must be immediately mixed during spraying from the application equipment. Therefore the outlet nozzle must include a dynamic and/or static mixer suitable for this use.

The nozzle, the nozzle mixer and form of application are decisive factors in attaining the desired final result in terms of the coating's technical characteristics and finishing. The product must be sprayed at a 90° angle to the surface to be coated at a distance of about 80 cm to prevent irregularities occurring in the membrane.

LIMITATIONS

ARDEX WPM 400 is not stable when exposed to UV rays, resulting in a major change in colour: to protect ARDEX WPM 400 from UV, use ARDEX WPM 400 FINISH aliphatic polyurethane coating. An anti-slip finish can be given to the protective layer of ARDEX WPM 400 FINISH by mixing in micronized plastic particles or glass beads (up to 8%).

Do not use ARDEX WPM 400 where ambient and/or substrate temperatures are less than 5°C or less than 3°C above the dew point.

CLEAN UP

Clean tools and equipment immediately after use with a solvent. Hardened product will need to be removed mechanically.

Any spillage from any of the products must be removed immediately with sand, vermiculite or other inert material and collected in a suitable container for proper handling and treatment. Residues from spillage and empty containers must be dealt with in accordance with local regulations.

See product safety sheet for further information.

STORAGE

ARDEX WPM 400 can be stored for up to 6 months in its original unopened packaging, between 5°C - 25°C. Store protected from frost, direct sunlight, and heat.

COVERAGE

Approx. 2-3kg/m² depending on substrate and application process.

PRECAUTIONS

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects. Do not breathe dust, fume, gas, mist, spray, vapours. Wear protective gloves, protective clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection. Dispose of contents/container to hazardous or special waste collection point, in accordance with local regulation. Contains isocyanites. May produce an allergic reaction. Additional information is in the Safety Data Sheet at www.ardex.co.nz

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

TECHNICAL DATA

Characteristics	Test Method	Result
Density	BS 4370 p1 m4	1.1kg/L
Dry extract	EN 1768	>99%
Ashes	EN 1879	≤1%
Application temperature (substrate)		5 - 35°C
Polymerisation time		Approx. 2 - 4 seconds
Full cure time		±12 hours
Shore A hardness	DIN 53505	>90
Shore D hardness	DIN 53505	>50
Tensile strength (23°C)	UNE EN ISO 527-3	23MPa
Elongation (23°C)	ISO 527	>400%
Fatigue (1000 cycles)		Appropriate
Diffusion of water vapour		0.58g/m²*hour