KingProof® PUC100

Cold-applied, two-component pure polyurea membrane for waterproofing and protection.

DESCRIPTION

KingProof PUC100 is a two-component, high-solids, fast-curing, aromatic pure-polyurea coating that cures to form an elastomeric, watertight and waterproof polyurea membrane with high mechanical properties and strong adhesion to many types of surface. Its adaptability and drying time make it suitable for application on uneven surfaces and areas of any shape, whether curved or squared.

APPLICATIONS

Waterproofing and protection of:

- Wet areas, bathrooms and kitchens
- Balconies and roof decks
- Under-tile applications
- Concrete structures
- Floors, parking lots and garages
- Over asphalt membranes and polyurethane insulation foams
- Light roofing of metal or fibre-cement
- Green roofs and planters

ADVANTAGES

- Excellent mechanical properties – high tensile and tear strength, high abrasion resistance
- Excellent adhesion to most common substrates
- Strong, flexible and hard-wearing membrane
- Cold-applied by roller, brush, trowel, squeegee or spray
- Excellent stability and durability; fast curing
- Environmentally friendly, low-VOC
- Good breathability, minimising humidity build-up under the coat
- Resistant to root penetration

TECHNICAL PROPERTIES

Colour	Grey, white, as requested
Density	1.30 ± 0.05 g/cm³
Solid content	91 ± 2%
Pot life	70 min @ 25°C; 50 min @ 40°C
Tack-free time	3:30 – 4:30 hr
Minimum recoating time	4 hr
Maximum recoating time	7 days
Full cure	7 days
Application temperature	5 to 35°C
Service temperature	-30 to 80°C
Shore A hardness (ASTM D2240)	60 ± 5 @ 7 days
Taber abrasion, CS17 (ASTM D4060, 1000 g/1000 cycles)	≤ 50 mg
Tensile strength (ASTM D412)	≥ 3.5 MPa
Elongation (ASTM D412)	≥ 450%
Bond strength to concrete (ASTM D4541)	≥ 1.5 MPa
Tear strength (ASTM D624)	≥ 20 N/mm
Crack bridging (ASTM C1305 @ 23°C & -20°C)	No cracks after 10 cycles @ 1.5 mm
Water-vapour diffusion resistance (EN 1931)	μ = 1,700
Water-vapour transmission (ASTM E96)	Medium; 0.6 – 6.0 g/(m²·hr)
Water permeability (DIN 1048 @ 5 bar)	Nil (Pass)
VOC	≤ 130 g/ltr

METHOD OF USE

Surface Preparation

The surface should be clean, dry, sound and free from oil, grease and wax. Remove cement laitance, loose particles, mould-release agents and curing membranes. The substrate must have a minimum compressive strength of 25 MPa and a minimum adhesion strength of 1.5 MPa. Fill surface irregularities with a suitable epoxy resin mortar. Atmospheric relative humidity should not exceed 85%, and new concrete must be cured for at least 28 days. Do not apply in the presence of moisture.

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Priming

Absorbent surfaces such as concrete, cement or screed should be primed with a suitable KingKrete polyurethane primer; for damp surfaces (screed RH above 85%), apply a suitable damp-proof primer by brush or short-hair roller. Non-porous substrates (steel, aluminium, ceramic and porcelain tiles) should be primed with a suitable polyurethane primer. Avoid primer ponding; highly porous surfaces may require two coats. Consult the KingKrete Technical Department for specific primer recommendations.

Mixing

Stir the individual components for 2 – 3 minutes with a low-speed mixer, ensuring the bottom and sides are thoroughly scraped. Transfer the entire contents of component B into component A and mix slowly for at least 3 minutes until a homogeneous mix is achieved.

Application

Apply the mixed KingProof PUC100 to the prepared, primed surface by brush, squeegee, lambswool roller or airless spray. If required, apply a second coat at right angles to the first after 4 hours to 7 days.

CONSUMPTION

Apply KingProof PUC100 in one or two coats with a minimum total consumption of 1.8 – 2.0 kg/m² to provide 1.5 mm total dry film thickness.

UV PROTECTION

As with all aromatic coatings, KingProof PUC100 should be sealed with a suitable polyurethane (aliphatic) protection coat to prevent yellowing on UV exposure; this does not affect the physical properties of the product. Consult the KingKrete Technical Department for a suitable aliphatic topcoat.

CLEANING

Clean all tools with a suitable polyurethane solvent immediately after use.

PACKAGING

KingProof PUC100 is available in 23 kg packs (component A: 21 kg; component B: 1.85 kg).

STORAGE

Store in unopened original packaging in cool, dry conditions, protected from frost and direct sunlight. At low temperatures store above 15°C before mixing, as low temperatures increase viscosity and can impair mixing and application. For specific storage advice, consult the KingKrete Technical Services Department.

HEALTH AND SAFETY

Apply in well-ventilated areas. Do not smoke and do not apply near naked flames; in enclosed areas use forced ventilation and active-carbon masks. Avoid contact with the eyes and skin. For further information, refer to the Safety Data Sheet.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative. KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products originating from KingKrete's Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

* Properties listed are based on laboratory-controlled tests.

® = Registered trademark of the KingKrete-Group in many countries.

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