KingProof® PU200

Polyurethane liquid membrane for waterproofing and protection.

DESCRIPTION

Single component high-quality polyurethane coating that cures by reacting with the humidity in the atmosphere to form a strong elastic film with excellent adhesion to different substrates. Can be applied by brush, roller or airless spray machine.

The product is based on pure elastomeric hydrophobic polyurethane resin with special inorganic filler that provides the material with excellent weathering resistance properties.

KingProof PU100 is designed to have excellent adhesion on all common construction substrates such as dry concrete, fibrous cement, ceramic tiles, wood, and galvanized steel when used in conjunction with KingProofPrimer Range.

APPLICATIONS

Waterproofing and protection of:

- Roofs.
- Light roofing made of metal or fibrous cement.
- Bathrooms.
- Gypsum and cement boards.
- Polyurethane insulation foams.

ADVANTAGES

- Excellent adhesion to all common primed substrates.
- Excellent water and UV resistance. The white colour reflects much of the solar energy reducing the internal temperature of the building.
- Excellent thermal resistance. Max service temperature 80ºC.
- Cold Resistance: the film remains elastic down to minus 20ºC.
- Excellent mechanical properties, high tensile and tear strength, high abrasion resistance.
- Good breathability characteristics which minimize the accumulation of humidity under the coat.

TECHNICAL PROPERTIES @ 25ºC & 55% RH

Colour	Variable
Specific gravity	1.35 ± 0.05
Skin over time	5 - 6 hr
Tack free time:	7 - 8 hr
Recoatable time:	8 - 24 hr
Light pedestrian traffic time	24 - 48 hr
Final curing time	7 days
Service temperature	-20 to 80ºC
Nonvolatile (solid) content: ASTM D2369	≥ 82% (pass)
Shore Hardness: ASTM D2240	
Shore A	40 ± 5
Shore 00	80 ± 5 (pass)
Adhesion in peel after water immersion:* ASTM C794	≥ 35 N (Pass)
Film thickness: ASTM C836	Pass
Bond Strength:* ASTM D4541 BS EN ISO 4624	≥ 1.5 MPa @ 7 days
Tensile strength: ASTM D412	≥ 1.8 MPa @ 7 days
Elongation: ASTM D412	≥ 400% @ 7 days
Tear strength: ASTM D624	≥ 8.0 kN/m
QUV accelerated weathering: ISO 4582	Pass @ 2000 hr
Hydrolysis (8% KOH, 15 days @ 50ºC):	Pass
Water vapour transmission: ASTM E96	20 ± 2 g/m^2.day

LIMITATIONS

- Only white and light grey colours can be used for exposed areas.
- Do not use on an unsound substrate.
- Not recommended for waterproofing of swimming pool surfaces in contact with chemically treated water.
- Since KingProof PU100 cures with moisture, low humidity conditions will extend the tack-free time and recoat time.

STANDARDS

KingProof® PU200

KingProof PU100 complies with ASTM C836 (see technical properties table).

METHOD OF USE

Surface Preparation

The surface should be clean, dry, sound and free from oil, grease and wax contamination. Cement laitance, loose particles, mould release agent or curing membranes must be removed.

Fill surfaces irregularities with a suitable product. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days.

PRIMING

It is recommended to prime all kinds of substrates using solvent-based polyurethane primer KingProofPrimer PU or water-based epoxy primer KingProofPrimer PW.

KingProofPrimer PU can be used over porous and non- porous surfaces before the application of KingProof PU100. KingProofPrimer PU should be applied using a brush or roller at a rate of 0.1 - 0.2 litre/m2 (depending on the substrate porosity) to achieve 40 - 80 microns DFT. Leave the primer to cure for 4 - 24 hours before the application of KingProof PU100.

Alternatively, KingProofPrimer PW is designed to significantly improve the adhesion between KingProof PU100 and all kinds of non-porous substrates such as steel, glass tiles, and aluminium. It will also stabilize and fortify weak and porous substrates before the application of KingProof PU100. KingProofPrimer PW should be applied using a brush or roller at a rate of 0.16 ltr/m2 to achieve around 70 - 75 micron DFT.

APPLICATION

For spraying with airless spray machine, KingProof PU100 can be diluted by 5 - 10% using KINGKRETE Solvent PU (consult KINGKRETE's technical department for further details). For any mixing done on-site, low speed (300 rpm) mixer or electric drill should be used.

Apply the material with roller or brush. Apply at least two coats. Do not leave more than 24 hours between coats.

CLEANING

Clean all tools after finishing with paper towels and then wipe by using KINGKRETE Solvent PU. Do not try to clean rollers.

PACKAGING

KingProof PU100 is available in 20 kg and 25 kg packs.

CONSUMPTION

- First coat: 0.7 - 0.8 kg/m².
- Second coat: 0.7 - 0.8 kg/m².
- Total consumption: 1.4 - 1.6 kg/m² to give 1 mm dry film thickness.

STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

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HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

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 manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

* Properties listed are based on laboratory-controlled tests.

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KingKrete South Asia
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