KingProof® PU100

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 KingProof Primer Range.

APPLICATIONS

Waterproofing and protection of:

- Roofs.
- Light roofing made of metal or fibrous cement.
- Wet areas, bathrooms and kitchens.
- Verandas and balconies.
- Gypsum and cement boards.

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, max shock temperature 200oC.
- Cold Resistance: the film remains elastic down to minus 40oC.
- Excellent mechanical properties.
- Good breathability characteristics which minimize the accumulation of humidity under the coat.

TECHNICAL PROPERTIES @ 25ºC & 55% RH

Colour	Variable
Specific gravity	1.4 ± 0.5
Tack free time:	4 - 8 hr
Recoatable time:	6 - 24 hr
Light pedestrian traffic time	24 - 48 hr
Final curing time	7 days
Service temperature	-40 to 80ºC
Nonvolatile (solid) content: ASTM D2369	≥ 87%
Shore A Hardness: ASTM D2240	70 ± 5
Tensile strength: ASTM D412	≥ 5 MPa
Bond strength: ASTM D4541	≥ 2 MPa
Elongation: ASTM D412	≥ 500%
Water vapour transmission: ASTM E96	0.8 g/m².day
QUV accelerated weathering: ASTM G53	Pass (2000 hr)
Hydrolysis (8% KOH, 15 days @ 50ºC):	Pass

LIMITATIONS

- Only white and light grey colours can be used for exposed areas.
- Do not use on unsound substrates.
- Not recommended for waterproofing of swimming pools surfaces in contact with chemically treated water.
- Since KingProof PU100cures with moisture, low humidity conditions will extend the tack free time and recoat time

STANDARDS

KingProof PU100 complies with ASTM C836.

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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 water-based epoxy primer KingProof Primer W or solvent-based polyurethane primer KingProof Primer PU.

KingProof Primer 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. KingProof Primer PW should be applied using a brush or roller at a rate of 0.16 ltr/m2 to achieve around 70 - 75 micron DFT.

Alternatively, KingProof PU Primer can also be used over porous and non-porous surfaces before the application of KingProof PU100. KingProof Primer PU should be applied 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 8 - 24 hours before the application of KingProof PU100.

APPLICATION

For spraying with airless spray machine, KingProof PU100can 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

All tools should be cleaned 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 25 kg packs.

CONSUMPTION

- First coat: 0.75 - 0.90 kg/m².
- Second coat: 0.75 - 0.90 kg/m².
- Total consumption: 1.5 - 1.8 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.

HEALTH AND SAFETY

KingProof® PU100

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.

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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QUALITY AND CARE

KK-NA-03.1-PF-PU100-R3-2601

KingKrete North America
www.kingkrete.com

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