KingProof ® PVPE

Flexible PVC roof waterproofing membrane (Formerly known as KingProof PVC).

DESCRIPTION

KingProof PVPE is polyvinylchloride (PVC), polyester reinforced roof waterproofing membrane, which can be used for waterproofing all types of new and old roofs, whether flat, sloping or vertical. The KingProof PVPE membrane consists of three basic components, which together create a strong, resistant and homogeneous material:

The front layer is a high quality PVC mixture with UV protection and anti-slip effect. The special modifiers make the material resistant to extreme weather temperature variations.

The middle layer is a special polyester mesh that provides for membrane strength and dimensional stability.

The lower layer is made of a black PVC mix with high flexibility and tensile strength.

APPLICATIONS

KingProof PVPE membranes are suitable for new roofs and for repairing all kind of existing roofs based on concrete, metal, wood, that can be flat, vaulted or gabble. It can be applied in public, industrial and residential construction.

ADVANTAGES

- Long service life.
- Easy adaptability to most profiles.
- Can be applied to new roofs as well as for renovation of old roofs.
- Can be installed under all types of weather conditions.
- Self extinguishing if exposed to open flame.
- Anti-slip surface providing for more safety during application and use.
- Very firm and elastic material.
- Recyclable.
- Easy to apply.
- Lightweight (1.4 kg/ m²) adding minimal weight to the roof system.
- High resistance against UV, VI and IR-rays.
- Excellent welding capabilities.

TECHNICAL PROPERTIES

Roll length:	20 ± 0.2 m
Width: ISO EN1849-2	2.1 m - 10/ +20
Thickness:	1.2 - 5%/ + 10% 1.5 - 5%/ + 10%
Tensile strength of tearing in each direction: Lengthwise Crosswise	 > 800 N/ 50 mm > 800 N/ 50 mm
Elongation: ISO EN12311-2 Lengthwise Crosswise	 > 10% > 10%
Strength at tearing: ISO EN12310-2 Lengthwise Crosswise	 > 180 N > 180 N
Unstitching strength of the joints: ISO EN12316-2	> 200 N
Shear strength of the joints: BDS EN12317-2	800 N
Water permeability: ISO EN1928	Waterproof
Cold resistance: ISO EN495-5	Down to -30ºC
Exfoliation strength in each direction:	Does not exfoliate
Stability of the sizes: ISO EN1107-2 Lengthwise Crosswise	 ± 1% ± 1%
Vapour permeability: diffusion resistance to the vapour permeability, μ; density of the vapour stream:	15000 ± 2500 (2.4 – 3.28) 10 -8 kg/ m².s
Flammability: ISO EN60695-11-10	Class V0 – hard - flammable

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METHOD OF USE

KingProof PVPE membrane is installed by laying down the rolls on a continuous surface, overlapping each roll with the adjacent roll with 70 mm.
Thickness: 12, 18, 25 mm.

The overlap of the installed sheets must be welded using hot air at a temperature higher than 500ºC. Automatic welding equipment is recommended for use where large areas are to be covered.

The welding parameters should be adapted to the site conditions, allowing for high humidity, cold weather conditions, machine speed, air flow and pressure.

The effective width of the overlap used should be a minimum of 20 mm. Seams must be mechanically tested with a screw driver or steel needle to ensure the integrity of the weld. Any imperfections must be rectified by hot air welding. Due to the energy consumption required for welding, power supply on site must be checked for adequacy before welding is started.

Notes:

- The presence of sharp elements (ridges, shutter, leakers, or other sharp parts) can damage PVC membrane. It is necessary to cover such sharp protrusions with non woven polyester fabric.
- KingProof PVPE membranes should not come into contact with bitumen, tar, grease and solvents.
- When laying KingProof PVPE on concrete, a protective layer of non-woven fabric should be placed under the PVC membrane.
- Where KingProof PVPE is layed over thermal insulation, a partitioning veil and vapour barrier should be placed below the thermal insulation.

NEW ROOFS

Substrate preparation:

- Steel or galvanized sheet profiles should be of a minimum thickness of 0.9 mm.
- Concrete should be smooth and clean. Any cracks or holes should be filled with sand/cement mortar.
- When layed directly on concrete, it is necessary to cover the concrete surface with a pad or an insulation layer.
- Where thermal insulation is required, it is recommended to use polyurethane, rock wool, foamed plastics and glass wool.

Reconstruction of old roofs:
When repairing old roofs, the surface should be even and undamaged. Where bitumen based products are used for the old roof waterproofing, it is necessary to use a partitioning layer such as PVC, geo fabric or glass fabric.

ADDITIONAL PROPERTIES

- Service life of KingProof PVPE membranes exceeds 30 years for all types of weather conditions.
- The light color decreases surface temperatures slowing down the ageing process of the membrane. In addition this helps reduce indoor temperature in summer.
- KingProof PVPE membranes are welded with hot air. Proper application guarantees homogeneous surface and maximum bond strength at the joints.

PACKAGING

Thickness :	1.20 mm - 5% + 10%	1.5 mm - 5% + 10%
Length:	20 m ± 0.2	20 m ± 0.2
Width:	2.1 m - 0.01/ + 0.02	2.1 m - 0.01/ + 0.02
Weight:	1.45 kg/ m² - 5% + 10%	1.85 kg/ m² - 5% + 10%

STORAGE

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

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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

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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KK-SAS-03.1-PF-PVPE-R3-2601

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