KINGKRETE®
We Create Future

KingProof® PVFS

High-performance, fully bonded PVC membrane co-extruded with a swelling non-woven for below-grade waterproofing.

DESCRIPTION

KingProof PVFS is a high-performance, pre-applied waterproofing membrane composed of a PVC sealing layer co-extruded with an advanced swelling non-woven geotextile. This non-woven layer incorporates water-reactive polymers that swell on contact with moisture, providing self-sealing and self-healing capabilities.

KingProof PVFS is installed before the steel reinforcement is fixed and the concrete is poured. The unique configuration of the membrane enables a full mechanical bond with freshly poured concrete, eliminating water migration between the membrane and the structure. It offers superior resistance to water, gases (e.g. radon), salts and chemical exposure.

APPLICATIONS

KingProof PVFS can be used in both pre-applied and post-applied configurations and is particularly suited to:

- Underground waterproofing – foundations, basements, retaining walls, floor slabs, car parks and garages
- Sealing of precast concrete elements to enhance joint tightness and durability
- Protection of concrete exposed to aggressive groundwater or chemically active environments
- Marine and salt-contaminated environments

ADVANTAGES

- Fully bonded system – permanent mechanical bond with freshly poured concrete
- Can be used both pre- and post-applied
- Swelling fleece offers self-healing properties, maintaining integrity after minor damage or movement
- Excellent mechanical properties; tough and durable
- Excellent chemical resistance; suitable for saline environments
- Effective barrier against radon-gas infiltration
- High flexibility and crack-bridging capacity
- Compatible with bitumen

STANDARDS

KingProof PVFS complies with DIN EN 13967 Type A and Type T (waterproofing membrane with moisture barrier and groundwater barrier) and BS 8102, combining Type A (barrier protection) and Type B (integral protection) systems, as per the technical properties table.

TECHNICAL PROPERTIES

Material	PVC-P membrane + PP swelling non-woven
Visible defects (EN 1850-2)	No visible defects (Pass)
Straightness (EN 1848-2)	75 mm/10 m (Pass)
Working temperature	-5 to 50°C
Thickness (EN 1849-2)	1.6 mm ± 10%
Weight (EN 1849-2)	1.6 kg/m² ± 10%
Tensile strength MD/CMD (EN ISO 12311-2 A)	≥ 980 N/50 mm
Elongation MD/CMD (EN ISO 12311-2 A)	≥ 240%
Water tightness (ASTM D 5385)	≥ 690 kPa
Water tightness (EN 1928 B)	≥ 60 kPa @ 24 hr; ≥ 500 kPa @ 72 hr
Watertightness after cracking (ASTM D 5385)	Mechanical bond with concrete; 6.9 bar / ≥ 3.2 mm
Impact resistance (EN 12691 A)	≥ 600 mm
Static load resistance (EN 12730 A/B)	≥ 20 kg/24 hr (Pass)
Tear resistance MD/CMD (EN 12310-1)	≥ 500 N (nail shank)
Joint shear resistance (EN 12317-2)	≥ 300 N/50 mm
Crack-bridging ability (ASTM D 5385)	≥ 3.2 mm (Pass)
Durability against artificial ageing (EN 1928 B)	12 weeks @ 70°C, 60 kPa/ 24 hr (Pass)
Durability against chemicals (EN 1847 / EN 1928 B)	28 days @ 23°C; 60 kPa @ 24 hr; 500 kPa @ 72 hr (Pass)
Compatible with bitumen (EN 1548 / EN 1928 B)	60 kPa @ 24 hr; 500 kPa @ 72 hr (Pass)
Root resistance (DIN CEN/TS 14416)	Membrane and overlapping (Passed)
Reaction to fire (EN 13501-1)	Class E

METHOD OF USE

KingProof PVFS must be installed by experienced and qualified personnel.

Surface Preparation

KingProof® PVFS

High-performance, fully bonded PVC membrane co-extruded with a swelling non-woven for below-grade waterproofing.

Ensure all substrates are solid, clean and free of debris, sharp edges or voids greater than 12 mm. Lean-mix concrete or compacted sands are suitable base substrates. Detail all upstands, corners, penetrations and interfaces before installing the membrane, forming a 20 mm fillet at the base of retaining walls, stop-ends and upstands with a modified cementitious mortar. Install a geotextile cushion layer over the blinding concrete as part of the preparation.

Application

Position each roll so the edge selvedge of the previous roll is overlapped by a minimum of 50 mm, and stagger roll ends by at least 300 mm. Seal all overlaps using heat-welding equipment and compress with a wooden roller. Place a 150 mm wide strip of KingProof PVFS over the centre of each butt joint. Inspect the installed membrane for damage before placing concrete and repair any damage by heat-welding a patch over the affected area.

PACKAGING

Thickness	1.6 mm
Width	2.2 m (+1%)
Length	25 m
Roll	85.5 kg
Pallet	7 rolls/pallet

STORAGE

KingProof PVFS has a shelf life of 12 months from the date of manufacture when stored in the original packaging at temperatures between 5°C and 30°C, kept dry and protected from direct sunlight, snow, ice, water and heat sources. Do not stack sharp items or additional pallets on top of the membrane during transport and storage.

HEALTH AND SAFETY

KingProof PVFS is not directly associated with any known hazard during normal use. As with all construction products, avoid contact with the eyes and skin and use in well-ventilated areas. 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.
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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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