KingProof® PVL

High-performance, pre-applied, loose-laid PVC membrane for below-grade waterproofing.

DESCRIPTION

KingProof PVL is a high-quality, homogeneous, flexible PVC waterproofing membrane manufactured from plasticised PVC. It features a light-coloured signal layer on the top surface and is specifically developed for use in underground structures. The membrane is installed loose-laid and welded with hot air to create a watertight, continuous system.

APPLICATIONS

KingProof PVL is designed for the waterproofing of a wide range of elements, including:

- Tunnels
- Foundations and retaining walls
- Vertical and horizontal sealing of below-grade structures
- Terraces
- Covered or protected roof applications

ADVANTAGES

- Excellent mechanical properties
- High resistance to micro-organisms and root penetration
- Light-coloured top layer allows quick, reliable visual inspection during installation
- Flexible at cold temperatures
- Strong joints achieved through hot-air welding
- Recyclable, with a low carbon footprint
- No open-flame welding, enhancing safety during installation

STANDARDS

KingProof PVL complies with EN 13967 and EN 13491, as per the technical properties table.

METHOD OF USE

KingProof PVL must be installed by experienced and qualified personnel.

Surface Preparation

Ensure all substrates are solid, clean and free of debris, sharp edges or voids. The blinding concrete should be finished with a steel trowel to achieve a smooth surface, and all corners and edges shall be rounded to a minimum radius of 50 mm. Any protrusions shall be removed by chiselling and grinding; nails, wires, loose stones and other obstructions shall be cleared, and all voids, service openings and holes filled to match the surrounding substrate level.

Separation / Protection Layers

A geotextile cushion layer weighing no less than 350 g/m² shall be installed directly over the blinding concrete. The geotextile is laid loosely and positioned to provide a minimum overlap of 100 mm between adjacent sheets, ensuring full coverage of the underlying blinding concrete.

KINGKRETE®
We Create Future

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TECHNICAL PROPERTIES

	PVL-1.5	PVL-2.0	PVL-2.5	PVL-3.0
Thickness (EN 1849-2)	1.5 ±5% mm	2.00 ±5% mm	2.50 ±5% mm	3.00 ±5% mm
Signal-layer thickness (EN 1849-2)	0.2 mm			
Visible defects (EN 1850-2)	No visible defects (Pass)			
Dimensional stability (EN 1107-2)	≤ 2%			
Resistance to static load (EN 12730)	20 kg			
Tensile strength L/T (EN 12311-2 B)	15 / 15 N/mm²	17 / 16 N/mm²	16 / 16 N/mm²	16 / 16 N/mm²
Elongation at break L/T (EN 12311-2 B)	250 / 250%	300 / 300%	300 / 300%	300 / 300%
Tear resistance, nail shank (EN 12310-1)	250 N	360 N	360 N	500 N
Joint shear resistance (EN 12317-2)	800 N/50 mm			
Joint peel resistance (EN 12316-2)	180 N/50 mm	200 N/50 mm	200 N/50 mm	250 N/50 mm
Resistance to impact (EN 12691)	800 mm	1000 mm	1000 mm	1000 mm
Foldability at low temperature (EN 495-5)	-25°C	-25°C	-25°C	-30°C
Water permeability / tightness (EN 1296 / EN 1928, 7 bar)	Waterproof			
Water tightness under pressure (DIN 16726)	Impermeable			

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APPLICATION

The layout and direction of membrane installation should take into account the irregular shape and geometry of the slabs to ensure proper coverage and continuity. Cut the PVC membrane to the required lengths, maintaining a minimum overlap of 80 mm between sheets, then unroll and position it carefully so it can connect properly with the vertical waterproofing. Where applicable, weld the membrane to the pile-head PVC waterstop by at least 30 – 40 mm, leaving 10 – 15 mm of the waterbar exposed above the weld.

Overlap seams must be no less than 80 mm, with the final welded seam width exceeding 30 mm for single-seam welds. Before welding, all surfaces must be thoroughly cleaned and confirmed dry and free from dust, oil, grease or contaminants. Once welding is complete, inspect and test all joints to confirm their integrity and proper adhesion.

PACKAGING

	PVL-1.5	PVL-2.0	PVL-2.5	PVL-3.0
Thickness	1.5 mm	2.0 mm	2.5 mm	3.0 mm
Width	2.2 m (+1%)			
Length	20 m			

REMARKS

KingProof PVL is not compatible with bitumen and must be protected against UV.

STORAGE

KingProof PVL has a shelf life of 18 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 PVL 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 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.

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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

Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.

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