

AquaArm Power Prufe 800

(Formerly known as MYK POWERPRUFE 800)

1.2 mm HDPE waterproofing membrane with pressure sensitive adhesive designed for below grade application



TECHNICAL DATA SHEET

Product Description

AquaArm Power Prufe 800 is a 3 layer pre-applied HDPE Membrane, composed of one thick HDPE backing layer, an aggressive pressure sensitive adhesive and trafficable weather resistant protective granular coating. AquaArm Power Prufe 800 provides a firm bonding to poured concrete, which prevents water ingress or migration.

Confirms for basement grades 2,3 & 4 to BS 8102:2009. Confirms for basement grades 2,3 & 4 to IS 16471: 2017. Complies BRE 211 guidelines.

Uses

Below grade water proofing for:

- Below Grade
- Basement Raft
- Diaphragm walls
- Tunnel
- Subway

Features and Benefits

- High Puncture resistance
- Weather & UV resistance
- Superior Resistance to water migration: Eliminates water and vapour migration by forming a strong chemical bond to the concrete.
- Superior Adhesive bond: Creates a strong adhesive bond when the static load of the concrete slab causes sealant/ adhesive compound to cold flow through out all remaining voids
- Superior Adaptability: Flexible material that adapts to jobsite irregularities ease of installation
- Superior Joints: Fully-adhering, watertight laps
- Superior Crack Protection: Stress-absorbing and elongation properties to maintain a watertight seal to the structure if cracks develop in the base material or the slab
- Superior adaptability to settlement and distortion
- Superior Barrier: Acts as a barrier against toxic contaminants, including methane and radon gas, which may attempt to enter the structure through in the concrete
- Eco-friendly material
- Loosely-laid onto slabs: Requiring no priming or fillets
- Trafficable weather resistant Layer: Can receive pedestrian or traffic immediately after application and makes convenient for subsequent placing of reinforcement, site contamination is easy to be removed.
- No butt joints: All joints have bonded seldedge for accurate and easy overlap, to increase leak protection.

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Application Methodology

Step No 1: Substrate Preparation:

Substrate must be smooth, sound and no voids or gaps more than 10mm. Proper filling with self-flowing grout recommended around all penetrations for stability.

Horizontal surface- PCC / monolithic concrete binding is preferred. Angular profile is recommended. Remove all protrusions and clean up the substrate. There should not be any standing water on surface during application.

Step No 2 :Membrane Installation:

Horizontal surface

- Place the membrane HDPE film side to the substrate with granular layer facing towards the concrete pour. End laps should be staggered to avoid a build-up of layers.
- Accurately position succeeding sheets to overlap the previous sheet 75 mm along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap.
- Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller.
- At the end laps, remove all floating granules from the waterproofing membrane by brush or granule removing gun, apply the twin sided tape PowerPrufe DST Tape by peeling off the release film and fix the tape complete without creases.
- Ensure a continuous bond is achieved without creases and roll firmly with a roller. Any initial tack will quickly disappear.

Vertical Application

- Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the granule surface facing towards the concrete pour in the event of negative side and one-sided single shutter system. The membrane may be installed in any convenient length.

- Fastening through the selvedge using a small and low profile head fastener so that membrane lays flat and allows firmly rolled overlaps.
- Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap.
- Roll firmly to ensure a watertight seal.
- Overlap all roll ends and cut edges by a minimum 75 mm and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary.
- Allow to dry and apply AquaArm PowerPrufe 800 centered over the lap edges and roll firmly.

Penetration sealing- Grout around penetration to hold tight to the penetration and seal around pipe with PowerPrufe DST Tape and WPU liquid PU membrane.

Pile Head Sealing – Prepare a smooth Pile head with Non-Shrink cementitious grout. Once grout dried up fully, seal top of pile head with ArmGrout EP78 up to 8-10mm thickness.

Membrane Repair:

A thorough investigation to be conducted during installation to avoid a crease at selvedge and proper bonding at joints and besides that Inspection to be carried out before laying of reinforcement steel and further another inspection to be carried out before final placement of concrete. Any concrete fall by accident on to membrane where reinforcement is not laid and concrete is not yet planned; need to be cleaned as soon as possible. PowerPrufe membrane can be cleaned by damp cloth or, water jetting.

Identify damage area and mark it with a marker during installation. Clean the area identified for repair and remove granular around it and apply it with PowerPrufe DST Tape and remove the release liner.

Concrete Pouring

It is recommended to pour concrete within 45 days of application of membrane and concrete to be compacted carefully so that membrane won't get damaged.

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Technical Data

Properties	Test Method	Unit	PowerPrufe 800
Total Thickness	ASTM D3767	mm	1.2 mm ($\pm 10\%$)
HDPE film Thickness	ASTM D3767	mm	≥ 0.8
Elongation	ASTM D412	%	≥ 400
Tensile	ASTM D412	Mpa	21 ± 3
Puncture Resistance	ASTM E 154	N	800 ± 100
Resistance to Hydrostatic Head	ASTM D 5385	Mtr	60 ± 6
Peel Adhesion to concrete	ASTM D 903	N/M	880 ± 100
Low temperature flexibility	ASTM D1970	Deg C	$\leq -25^{\circ}\text{C}$
Dimension Stability	ASTM D 1204	%	≤ 1

Packaging

- Width : 1 M
- Length : 20M
- Available in 1.2 mm thickness

Note

It is recommended that concrete be poured within 45 days of application of the membrane.

If the membrane is to be left exposed for longer than 45 days, opaque white polyethylene sheeting should be used as temporary protection.

Concrete must be placed and compacted carefully to avoid damage to the membrane.

Never use a sharp object to consolidate the concrete.

Where grout splashes occur on the AquaArm PowerPrufe 800 these should be immediately removed before curing begins and the surface cleaned with damp cloths. If grout splashes have occurred and bonded on to the AquaArm PowerPrufe 800 a DST Tape should be applied to the cleaned and dried underside of the membrane to enable an underlap to be made ensuring membrane continuity.

Alternatively grout may be removed with a metal scraper together with the top adhesive layer to expose the white HDPE before joining or lapping adjacent sheet

Formwork Removal

AquaArm PowerPrufe 800 membrane can be applied to removable shuttering, such as slab perimeters, lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. AquaArm PowerPrufe 800 is not recommended for twin sided wall shutters.

A minimum concrete compressive strength of 10 N/mm² is recommended prior to stripping formwork supporting PowerPrufe membrane. Premature stripping may result in loss of adhesion between the membrane and concrete. As a guide, to reach the minimum compressive strength a structural concrete mix with an ultimate strength of 40 N/mm² will typically require a cure time of approximately 2 days at an average ambient temperature of 21°C.

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Product Categories Available



Legal Note

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