

AquaArm WPU 1K

(Formerly known as MYK Coat WPU-1K)

Single Component Polyurethane Waterproof Coating



TECHNICAL DATA SHEET

Product Description

AquaArm WPU 1K is a single-component, liquid applied, elastomeric polyurethane coating for waterproofing of concrete and masonry surfaces. AquaArm WPU 1K provides excellent resistance to moisture, water, and salts penetration into concrete and masonry surfaces.

Uses

AquaArm WPU 1K is used to protect and prevent water leakage and penetration of moisture into the Concrete and other masonry surfaces. AquaArm WPU 1K is ideal for:

- Waterproofing Retaining Walls, Podiums, Sunken Slabs, Terraces & Swimming pools.
- AquaArm WPU 1K has the ability to uniformly and completely cover the surface, forming a continuous membrane.

Features and Benefits

- Liquid applied membrane, can be applied with roller, brush or spray.
- Non-toxic, Provides a seamless coating.
- Flexible, has crack bridging ability.
- High bond strength to a variety of substrates and building materials.
- Resists positive water pressure.
- Resistant to chemicals.
- Excellent resistance to humidity and temperature.
- Excellent resistance to Chlorides and Alkalies.
- Very high tensile strength.
- UV stable.

Application Methodology

Step no 1: Surface Preparation:

Surface need to be cleaned by wire brushing followed by vacuum cleaning so that surface is free of any loose particles, dust, laitance, mould release agents and curing compounds. Water jetting is not recommended. All cracks to be treated with Rearm SBR modified mortar. Surface is allowed to self cure for 24 hours. Ensure the moisture content of the surface is below 5% before Priming.

Step no. 2: Fillet preparation:

Horizontal and vertical angle joints need to be prepared with 50x50mm concave fillet using concrete admixed with AquaArm Proof WP10 @ 150 g/50 Kg bag of cement. Fillet should be cured to gain strength and completely dry before Primer application.

Pipe penetration sealing

Clean around Pipe penetrations and seal the junction with low viscous solvent free epoxy ArmGrout Inject EP-LV admixed with Silica sand. Alternate to the above conventional methods, AquaArm Aso Joint Tape system can be opted for Fillet and Pipe penetration sealings. For details, please contact MYK Arment technical team.

Step no 3: Priming:

Epoxy based FloArm Primer EPW-44; a two component primer is recommended before application of AquaArm WPU 1K. Mix both the components of Primer and apply by brush on cleaned concrete. Pot life of the mixed primer is only 30 minutes. Allow the primer to dry for 4-5 hours. Apply the water proofing coating AquaArm WPU 1K when the Primer is tacky.

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Step no 4: Product Application:

Prior to application, thoroughly mix the contents of the container using a slow speed stirrer at 300 rpm. Care should be taken to scrape the sides and bottom of the container with the mixer. Do not add solvent, thinners, water at any time.

After mixing, immediately apply AquaArm WPU-1K over the tacky primer while ensuring a continuous coating of uniform thickness. A Lambswool roller is recommended for such application. A brush may be used for touch-up and edging work or for areas unsuitable for roller application.

AquaArm WPU-1K must be applied all along the angle fillets, corners, joints around the pipes, conduits etc. Apply AquaArm WPU-1K on surrounding walls up to a height of minimum 300 mm from FFL. Always apply in two coats in order to avoid pinholes. The second coat can be applied after the first coat has dried (12 - 16 hours @ 25°C) depending on the ambient and surface temperature.

WPU1K can be spray applied with airless spray machine.

Step no.5: Protection with Screed:

Prior to laying of protection screed, use a separation barrier of 160 gsm Geo Textile. Screed to be applied as per slope requirement. For vertical application 15-20 mm plaster is recommended.

For protection during backfill and where hydrostatic pressure is expected such as retaining wall application, use the appropriate drain board system i.e EPS Board or dimple sheet

Technical Data

Property	AquaArm WPU 1K
Density @ 27°C	Approx. 1.25
Solid content, %	57%
Colour of dry film	White
Tack free time @ 25°C	12 – 16 hrs
Time to full cure @ 25°C	72 hrs @ 1.2 mm thickness
Typical cured membrane properties (@ 28 days)	
Elongation (ASTM D412)	620%
Tensile strength, N/mm ² (ASTM D 412)	>1.4
Recovery from 200% elongation (ASTM D 412)	>80%
100% Modulus Elongation (ASTM D 412)	0.6 MPa
Shore Hardness (ASTM C 836)	80
Crack Bridging (ASTM C 836)	Up to 1.5 mm
Extensibility after heat ageing (ASTM C 836)	No cracks at 6.4 mm extension
Moisture Vapor permeability (ASTM E 96), dry perms	<0.25
Tear Resistance (ASTM D 624)	~10 N
Service Temperature	5°C to 45°C
Peel adhesion to primed concrete surface (ASTM C 836)	1.5 MPa
Application Temperature	+10°C to 40°C

Waterproofing Systems

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Consumption

2 Kg/m² for 1mm DFT.
Recommended minimum DFT is 1 mm.

Packaging

12 and 24 kg pails.

Storage and Shelf Life

Shelf life is 6 months, store in unopened containers in clear, dry conditions at 4 to 27°C.

During storage, an easily removed skin of AquaArm WPU1K may form, which does not affect the performance of the product.

Limitations

- New concrete surfaces should be completely cured for min 28 days before applying AquaArm WPU 1K.
- Do not apply if the temperature is in excess of 40°C or less than 5°C.
- Do not apply on wet or damp surfaces.
- Do not apply if rain is occurring or expected to start in the proceeding 24 hours.
- If applied on horizontal surfaces, proper slope has to be maintained. Stagnated water will cause a problem of coating film delamination, Screed is required for horizontal surfaces as protection.

Health & Safety

Use PPE such as coveralls, goggles and respiratory mask. If spilled into eyes, wash with plenty of water immediately and if irritation persists, seek medical treatment.

Non-flammable material:

Keep away from children. The application of material should be under good ventilation. Avoid inhalation of the vapours. Always wear protective clothing, goggles, vinyl gloves, and vapour mask.

Do not take internally, may be fatal if swallowed.

First aid: Eyes – flush with water and seek medical attention immediately. Do not use any solvents. Ingestions – give several glasses of water or milk and seek medical attention immediately. Contact with skin – wash affected area immediately. Inhalation – move to fresh air.

Product Categories Available



Legal Note

The information, and, in particular, the recommendations relating to the application and end-use of MYK Arment products, are given in good faith based on MYK Arment current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with MYK Arment's recommendations. In practice, the difference in materials, substrates and actual site conditions are such that no warranty in respect of merchant ability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application & purpose. MYK Arment reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local product data sheet for the product concerned, copies of which will be supplied on request.

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