

AquaArm UM

(Formerly known as MYK AQUAFIN – UM)

Two component highly flexible cementitious waterproofing coating



TECHNICAL DATA SHEET

Product Description

Two component polymer modified flexible cementitious waterproofing coating.

AquaArm UM is a economic cementitious, polymer dispersion based highly flexible protective coating and waterproof barrier. This product is two-component and resistant to water, moisture and abrasion. Its liquid mixing component is solvent free. AquaArm UM is a stand-alone product. It can be top or over coated with flexible or rigid mortars, stuccos or coatings for uniform appearance. It bridges shrinkage cracks. Larger cracks, static (Non moving) or dynamic (moving), can be sealed with SealArmTape2000 or SealArmTape2000S.

Uses

- Exterior waterproofing of old and new buildings
- Waterproofing of water tanks
- Waterproofing systems for high water heads
- Horizontal waterproofing below masonry
- Interior waterproofing against humidity from outside
- Waterproofing of underground basements, precast garages, ducts, areas of high humidity, terraces, balconies, planters and swimming pools
- For fixing of SealArm Joint Tapes.
- AquaArm UM is an waterproofing underneath tiles in wet rooms.

Features and Benefits

- Applied above or below grade
- Elongation > 30%
- Crack bridging up to 1mm
- Exterior (positive side) or interior (negative side) waterproofing of new or old structure.
- Balconies, plaza decks, in combination with a UV protection
- Underneath tile mortars (showers, sanitary rooms, kitchens, pools, etc.)
- Water, wastewater, sea water and marine aquarium tanks and other reinforced concrete structures
- Solvent free - Environmentally friendly
- No priming necessary in most cases
- Breathable (not a vapor barrier)
- Applied to moist/damp substrates
- Resists abrasion, mechanical wear & deicing salts
- Stands up to pedestrian and light traffic
- Permanently flexible
- Resists strong hydrostatic pressure (tested up to 50 water head, positive side)
- Self curing
- Active barrier to carbon dioxide (CO₂)

Application Methodology

Step No 1: Surface preparation:

The substrate must be sound, clean, and free from voids, gaping cracks or ridges and open pored (like fine sand paper). Remove bond breakers, such as oil, grease, dirt, loose particles, remains of form oils, water repellents, rust or other coatings by water jetting or wet or dry sandblasting. Repair holes, defects, irregular surfaces, weak mortar joints, etc. with a patching mortar. Round edges at vertical external joints.

Repair large open pores and joint recesses of CMU blocks and joint unevenness in brick walls with sand/cement mortar before applying AquaArm UM.

Pre-water substrate (excluding drywall or similar) with clean water to saturated surface dry (SSD) condition, with no standing surface water.

Seal dry, dusty or very absorptive surfaces (i.e. drywall, gypsum) with one coat Liquid component, diluted with water 1:4 to 1:5.

Repair static cracks >1.0mm width by opening in "V" groove and seal it with SBR modified mortar

Alternatively Dynamic cracks and joints: Seal dynamic cracks and joints with SealArm Joint Tapes

Horizontal and vertical joints:

Seal horizontal wall floor joints and internal vertical corners with SealArm Joint Tape. Alternative from cove (minimum 40 × 40mm) with cement mortar.

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Step no 2: Mixing of material:

A. Mixing ratio by weight:

25kg powder to 8.33kg liquid

B. Mixing ratio by volume: approximately

2 parts powders to 1 part liquid. Pour AquaArm UM liquid (Approx. 2/3) into a clean container. Add AquaArm UM powder and stir to a lump free creamy consistency with a strong, slow speed (300 rpm) mechanical mixer. Add remaining liquid & mix properly.

Step no 3: AquaArm UM application

Apply material in 2 (two) coats minimum. AquaArm UM may be applied by brush, trowel or appropriate compressed-air spray equipment. Surface can be left brushed or smooth troweled, depending on type of application and project specifications. Do not pre-dampen brush or roller with water. Quantities are dependent on the amount of protection desired.

Positive side waterproofing 1.5 -2.5 mm:

Apply AquaArm UM in two coats as specified. Apply the second coat (or multiple coats) as soon as the first coat has sufficiently hardened or wait until next day.

Negative side waterproofing 2.5 mm:

Apply 1st coat with AquaArm 1K at 2 Kg/sqm. Apply 2nd coat with AquaArm UM at 3 Kg/sq. mt

At high temperatures, i.e. 30°C and above, protect application from direct sun and wind to prevent premature surface drying and shrinkage cracks.

Note: Do not apply AquaArm UM at temperatures below 5°C.

Precautions:

AquaArm UM applied on vertical surfaces shall not be to rain exposed within 3 hours

AquaArm UM applied on horizontal surfaces shall not be exposed to rain within 6 hours

Foot traffic to be allowed after approx. 1-day

Fixing of Tiles with mortar etc to be done after approx. 1-day

Water ponding/Hydrostatic pressure shall be done between 3 - 7 days (i.e., after reaching Shore A Hardness >85

Back filling to be done after approx. 3 days at 20°C and 60% humidity.

Clean tools and equipment with water immediately after use. Cured material can only be removed mechanically.

Self- curing under normal conditions. Provide suitable protection against extreme weather conditions while setting

Step no 4: Protection

It is recommended to protect the coating with 12-15mm plaster. For vertical application, suggest to sprinkle graded coarse sand on AquaArm UM coating while 2nd coat is tacky, to provide mechanical key to hold plaster.

Annotation

- Attach drainage and protection boards after full curing of application (after 3 days).
- The cured application can be troweled over with purging! The cured application can be troweled over with purging (rendering/ plaster) after 1 day or painted with a vapor open ("breathable"), solvent free paint (non-silicate) after 3 days (at 20° C).
- Do not expose the application to water during the setting time.
- Expect prolonged setting and hardening time in room with high humidity, poorly ventilated areas and corners (i.e. water tanks).
- Negative water pressure, if exposed to freezing, can create spalling of the application.
- If application is exposed to intense sunlight work against movement of sun.
- Carbonation protection and carbon dioxide-screen: 1 mm AquaArm UM thickness warrants the same protection as 30 cm of concrete.

Limitations:

- Do not use in contact with alkali sensitive metals, such as copper, aluminum, galvanized or zinc treated metal. Protect and seal metal first with a primer
- AquaArm UM has a limited UV stability. Long term exposure to direct sunlight may lead to decomposition of the polymer.

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Technical Data

All data are averages of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity, and porosity of substrate may affect these values.

Mixing Ratio	Comp I (25 Kg Powder) to Comp II (8.33 Kg Liquid)
Permeability	50 Mtr Head pressure positive side
Tensile Elongation, 28 days @ 27°C	30%
Tensile strength, 28 days	0.6 N/mm ² 3.0 N/mm ² (with Fibre reinforcement)
Pull out bonding strength	1.0 N/mm ²
Water vapor Diffusion μ - value	2000
Adhesion to Concrete strength @ 28 days	1.0 N/mm ²

Packaging

Available in 33.33 kg Composite Pack

Storage and Shelf Life

AquaArm UM can be kept for 12 months in original unopened packaging when stored indoors. Do not store in direct sunlight and avoid allowing the material to freeze which will render the material unusable.

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.

Product Categories Available

