

# AquaArm C-35

(Formerly known as MYK Betocrete C-35)

Powder Crystalline Waterproofing Concrete Admixture



## TECHNICAL DATA SHEET

### Product Description

AquaArm C-35 is a powder based integral crystalline water proofing system. It consists of Cement and various active chemicals. These active chemicals react with water and by products of cement hydration which cause a catalytic reaction to form non soluble crystals. These crystals block the pore and capillaries of the concrete and thus concrete becomes permanently sealed from penetration of water.

It conforms to ACI-212 3R-10 PRAH Category, BS 8102, IS 16471 Type-B Water Proofing System.

### Uses

- Below grade structures; piles foundations, basements.
- Reservoirs, Water retaining structures; potable water tanks, sewage treatment plants, swimming pools, septic tanks.
- Tunnels and sub way systems
- Pre-cast, cast-in-situ, shotcrete
- Parking structures

### Features and Benefits

- Fast application & no protection required
- Permanently active; will self heal future static cracks up to 500 microns
- Provides additional protection to reinforcement steel by reducing chloride ion diffusion
- Even can be used in high w/c ratio (up to 0.55) concretes
- Withstands high water pressures (up to 14 bars) both positive and negative
- Compatible with most types of concrete admixtures

### Application Methodology

#### Dosage Range:

The recommended dosage rate is 0.8 - 1.5% by weight of Cement.

The dosage amount depends on the concrete/mortar mix design and the reactivity of the cement. Trial applications must be conducted to find out the suitable amount.

#### Instructions for use:

##### Dosage in ready-mix factory:

Add AquaArm C-35 to the aggregate and sand and mix at least for 30s before adding water and cement. Continue mixing for at least 45s until the concrete mix has reached its working properties.

##### Dosage in Batch Truck:

The addition of AquaArm C-35 on the job site (batch truck) happens in slurry form. Mix the required amount of AquaArm C-35 to water in the ratio of 1:1.25 by weight in a suitable vessel and add this slurry completely into the mix drum. The required mixing time can be estimated as 1 minute per m<sup>3</sup> drum content, however min. 5 minutes is required.

**Note:** It is important to obtain homogeneous mix hence do not add dry powder to wet concrete. It may cause lumping and through dispersion will not occur.

#### Dosage in Pre-cast Batch Plant:

Add AquaArm C-35 to the aggregate and sand and mix at least for 2-3 mins before adding water and cement. Continue mixing for at least 1 min until the concrete mix has reached its working properties.

#### Setting Time:

Setting time of concrete is affected by mix design, ambient temp of concrete and climatic condition. Concrete containing AquaArm C-35 may develop higher ultimate strength. The working time after addition of AquaArm C-35 depends on the reactivity of the used cement.

The addition of a concrete retarder may be required when using Portland Cement Type I, II or III. Suitability tests according to valid standards and norms have to be carried out prior to application.

**Note:-** Please refer Protocol for how to conduct the Concrete Trial.

#### Cleaning & Equipment Maintenance:

Regular water flushing of dispensing equipment is advised to prolong service life and reduce equipment breakdowns.

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### Technical Data

Colour	Grey
Form:	Powder
Bulk density:	1.04 g/cm <sup>3</sup>
Processing temp:	+19°C to +30°C
Water Bar pressure (DIN 1048-5)	14 Bar (136.5 mtr)
Water Penetration (DIN 1048-5)	Up to 12 mm
Crack Healing	0.5 mm

### Packaging

5 and 25 kgs bags

### Storage and Shelf Life

AquaArm C-35 has a shelf-life of 12 months when stored at +20° C in original, unopened bags

### Health & Safety

- During application wear protective clothing, gloves and eye goggles during application. Avoid product to contact eyes and skin.
- Skin Contact: Wash immediately with plenty of clean water, use kerosene or mineral turpentine when the product has dried.

### Annotation

Concrete modified with AquaArm C-35 may tend to effloresce depending on the composition.

- Aggregates must have a continuous sieve-line.
- It is recommended to perform compatibility tests with other admixtures, as required.
- AquaArm C-35 is non corrosive and has no adverse effects on the re-inforcement.
- It is rarely possible that AquaArm C-35 influences the setting of the concrete. MYK Arment concrete admixture range Armix are proven as effective retarders.

### 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.