

# ReArm Crete MC(G)

General purpose, non-shrink, cementitious micro concrete Grout



## TECHNICAL DATA SHEET

### Product Description

ReArm Crete MC(G) is a single component ready to use preblended pourable polymer modified non shrink Cementitious, repair concrete with selected cement, aggregate and other chemicals.

Recommended water and coarse aggregate to be added at site as per requirement.

### Uses

ReArm Crete MC(G) is recommended for Structural strengthening measures

- Columns
- Beams
- Slabs
- Foundations
- Grouting of large gaps.

### Features and Benefits

- Can be pumped or poured into restricted locations.
- Highly fluid to allow for placement without vibration.
- Pre-packed for better result and consistency.
- Expansion system compensates for shrinkage settlement in plastic stage.
- Low permeability
- Bonds well with receiving substrate
- Contains no chlorides.
- High early & ultimate strength

### Application Methodology

#### Step No 1: Surface Preparation:

The unrestrained surface area of the repair must be kept to a minimum. The formwork should include drainage outlets for pre-soaking water to drain out, in places like soffit, provision for air release venting is a must. Provision must also be made for suitable access points to pour or pump the mixed micro concrete. Defective concrete surfaces must be chipped off to a sound base. Smooth surfaces should be mechanically abraded.

Corroded reinforcing steel should be exposed around its full circumference and cleaned to remove all scale. One coat of zinc rich epoxy Primer (FloArm Coat ZP) should be applied on the reinforcing steel. If any discontinuity in the applied film is noticed, ensure a fresh recoating.

Prior to placing of Micro concrete, the concrete substrates should be saturated with clean water and the standing water on the surface if any shall be removed.

For better results long pot life old to new concrete Bonding Agent ReArm Bond EBA may be used on old prepared dry surface

**Note:** For Gaps of more than 40 mm, 6mm to 10 mm down washed and SSD aggregates can be added. For better flow 25% are generally recommended, however for large pour up to 50% aggregates can be added.

#### Step No 2: Product Mixing:

W/P Ratio: 0.15 (4 .5 liters per 30 Kgs bag)

For better results mix the material mechanically using paddle stirrer as per the design recommended by MYK Arment

Mix continuously for 5 minutes, to ensure a smooth even consistency of the mix is obtained. To enable the grouting operation continuously it is essential that sufficient man power and mixing capacity are available at the site.

#### Form Work:

The form work should be constructed to be leak proof. This can be achieved by using suitable material or by using foam rubber strip or mastic sealant beneath the constructed form work and between joints

#### Placing:

The mixed material should be placed immediately. If placed by pump, standard concrete pumping practice should be followed including the priming of pump pipes.

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## Low temperature working:

If the temperature is low  $>15^{\circ}\text{C}$ , the use of warm water is advised to accelerate strength hydration. Other precautions for working with cementitious materials in low temperature should be practiced.

## High temperature working:

If the ambient temperature is above  $35^{\circ}\text{C}$  the material should be stored in the shade and recommended to use cold water mixing.

## Yield:

ReArm Crete MC(G): Approximately 15 liters for 30kg bag.

## Annotation

## Curing:

As ReArm Crete MC(G) is a cement based repair material, it must be cured immediately after stripping the formwork in accordance with good concrete practice. In harsh drying condition, the use of Curing Compound sprayed on the surface of the ReArm Crete MC(G) in a continuous film is recommended soon after stripping the form work. Supplementary curing such as wet hessian and/or polythene sheeting must be used.

## Specification clauses:

ReArm Crete MC(G) is a single component, cement-based material to which only the addition of clean water at the site (and approved graded coarse aggregates where specified) shall be added. The repair grout in the flowable consistency should achieve a compressive strength of not less than  $20\text{N/mm}^2$  after 24 hours at  $30^{\circ}\text{C}$ . Most importantly, the cured micro concrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state. The micro concrete shall have a coefficient of thermal expansion similar to that of the host concrete.



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## Design Criteria

ReArm Crete MC(G) can be applied in sections up to 100mm depth. For larger sections, the addition of approved aggregates may be required. This will depend on the specific configuration of the repair location. Consult MYK Technical Cell for support and information.

## Technical Data

Fresh wet density 2150 - 2250  $\text{kg/m}^3$   
(Mixed density @  $27^{\circ}\text{C}$ )

## Compressive strength:

Age Days	Compressive Strength: (ASTM C 109)
Flowable W/P 0.15	
1 Day	$>21\text{N/mm}^2$
3 Days	$>35\text{N/mm}^2$
7 Days	$>45\text{N/mm}^2$
28 Days	$>65\text{N/mm}^2$

Note: Size of the cubes used  
70.6mm\*70.6mm\*70.6mm, tested at  $30^{\circ}\text{C}$ .

Flexural Strength (ASTM C 348)	9 - 11 $\text{N/mm}^2$
Tensile Strength @ 28 days $30^{\circ}\text{C}$ (ASTM C 307)	3 - 3.5 $\text{N/mm}^2$
Controlled Expansion: ( in the plastic state) (ASTM C 827)	0 - 4.0%

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### Packaging

ReArm Crete MC (G) is available in 30 kg bags.

### Storage and Shelf Life

ReArm Crete MC (G) has a shelf life of 6 months if kept in a dry store in the original, unopened bags. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

### Health & Safety

ReArm Crete MC(G) contains cement powders which, during normal use, have no harmful effect on dry skin. However, when ReArm Crete MC(G) is mixed, or becomes damp, alkali is released which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable gloves, eye protection and dust masks. The use of barrier creams is recommended. In case of contact with skin, wash with clean water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately – do not induce vomiting. ReArm Crete MC(G) is non-flammable.



## TECHNICAL DATA SHEET

### 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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