

ReArm Micro Concrete

(Formerly known as Re Arm Crete MC -M)

Economical, General purpose, non-shrink, cementitious micro concrete Grout



TECHNICAL DATA SHEET

Product Description

ReArm Micro Concrete is ready to use single component dry powder cementitious material. It is supplied as a pre blended polymer modified dry powder the addition of recommended water at the site to produce non-shrink free flowing high strength micro concrete. This is specially designed for repair to damaged reinforced concrete. It is suitable for use in wide range of repairs, pavements, ramps etc.

Uses

- Structural strengthening measures such as filling honeycombs and cracks.
- Strengthening of vertical columns
- It is mainly recommended for the repair of damaged concrete structures, columns beams, slabs etc. it is also recommended for 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 on site.
- Low permeability
- Economical
- Contains no chloride.
- Ease of use

Application Methodology

Preparation:

The unrestrained surface area of the repair must be kept to a minimum. The formwork should include drainage outlets for pre-soaking and, if beneath a soffit, provision for air venting. Provision must also be made for suitable access points to pour or pump the mixed micro- concrete in place. Defective concrete surfaces must be cut back to a sound base. Smooth surfaces should be mechanically roughened. Corroded reinforcing steel should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits. It is important to clean the steel to a bright condition. One coat of zinc rich epoxy Primer (ReArm Coat ZP) should be applied on the reinforcing steel. If any discontinuity in the applied film is noticed, one more coat has to be applied. Several hours prior to placing, the concrete substrates should be saturated with clean water. Immediately prior to placing, any free water should be removed. Alternatively, all prepared concrete substrates should be primed using ReArm Super Bond, a slow - setting epoxy bond aid ReArm Super Bond shall be applied only on dry substrate.

Note: For repair sections generally deeper than 100mm it may be necessary to mix the ReArm Micro Concrete with properly graded 5mm to 12mm silt free aggregate (water washed) to minimize temperature rise. The quantity of aggregate required is 50% by weight of ReArm Micro Concrete depending on the nature and configuration of the repair location.

Curing:

As ReArm Micro Concrete is a cement-based repair material, it must be cured immediately after stripping the formwork in accordance with good concrete practice. The use of AquaArm Multicrete sprayed on the surface of the ReArm Micro Concrete in a continuous film is recommended soon after stripping the form work. In harsh drying condition, supplementary curing such as wet hessian and/or polythene sheeting must be used.

Mixing:

For better results mix the material mechanically using paddle stirrer as per the design recommended by MYK Arment. Mix continuously for 5 minutes, ensuring a smooth even consistency of the mix. To enable the grouting operation continuously 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

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Placing:

The mixed material should be placed immediately. If placed by pump, standard concrete pumping practice should be followed. The pump and pipeline must be primed with cement slurry. Pumping should be commenced immediately after priming. Also pumping / pouring operation to be carried out continuously. If poured in the form work, avoid air entrapment by pouring from one side only.

Low temperature working:

In cold conditions down to 15°C, the use of warm water (up to 30°C) is advisable to accelerate strength development. Normal precautions for working with cementitious materials in winter should be adopted.

High temperature working:

At ambient temperature above 35°C the material should be stored in the shade and cold water used for mixing.

Specification clauses:

ReArm Micro Concrete, 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 8N/mm² after 24 hours at 30°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.

Technical support

MYK Arment offers a technical support package to specifiers, end users and contractors as well as technical on-site assistance in locations all over the country.

Design criteria

ReArm Micro Concrete can be applied in sections upto 100mm deep. For larger sections, the addition of approved aggregates may be required. This will depend on the specific configuration of the repair location. Consult the local MYK Arment office for further information.

Technical Data

Fresh wet density @27°C	2150 - 2250 kg/m ³
Expansion characteristics Unrestrained expansion	1 to 4%
Compressive strength (in N/mm ²) (The following results were obtained at water Powder ratio of 0.18 @ 30°C). (Tested on 70.6mm cubes as per BS 4551-80)	
1 Day	10 N/mm ²
3 Days	20 N/mm ²
7 Days	30 N/mm ²
28 Days	40 N/mm ²
Flexural strength @ 28 days	3.5 N/mm ²
Tensile strength @ 28 days	3 N/mm ²

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Yield

ReArm Micro Concrete: Approximately 13 liters per 25 kg bag.

Packaging

ReArm Micro Concrete is available in 25 kg bags

Storage and Shelf Life

ReArm Micro Concrete 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 Micro Concrete contains cement powders which, during normal use, have no harmful effect on dry skin. However, when ReArm Micro Concrete 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 Micro Concrete is non-flammable



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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.