

Betonfix AQM GG

ST5-0319

Bicomponent cementitious mortar to be used with Kimitech meshes for concrete skimming coats useful to connect non-structural parts to the structural elements .



DESCRIPTION

Betonfix AQM GG is a bi-component fiber-reinforced mortar with high pozzolanic action and high ductility. It is based on pozzolanic and sulphate-resistant cement hydraulic binders, selected aggregates with a maximum granulometry of 1 mm, chemical additives and polymers in water dispersion which give excellent characteristics of impermeability and adhesion to the support. It is CE marked as an R2 mortar according to EN 1504-3 and as a masonry mortar according to 998-2.

ADVANTAGES

- **Performing:** resists to differential deformations without cracking.
- **Versatile:** if reinforced with Kimitech meshes, the product creates a system for the connection of infill brick walls to the RC structure
- **Easy to apply:** by trowel or spray machine

USES

Betonfix AQM GG is used in the regularization of the supports for subsequent application of FRCM systems (Fiber Reinforced Cementitious Matrix) as well as matrix of these latter systems (the product is used with Kimitech meshes).

FRCM reinforcement systems are used in accordance with the guidelines of the Italian Civil Protection of August 2009 for:

- Reparation of through-cracks (applied on both sides) and non-through-cracks (applied on one side) of masonry structures;
- Interventions of infill brick walls to RC framed structures .

WORKS

- Non-structural reinforcement with FRCM systems for the consolidation of infill brick walls to the RC structure ([SA59](#))

APPLICATION

	Manual application		Curing Time: Normal
	Mechanical devices application		
	Max layer per coat: 2-30 mm horizontal application 2-30 mm vertical application 2-20 mm overhead application		

Betonfix AQM GG shall be applied on clean and consistent surfaces, free of grease or any other substance that may affect the adhesion to the substrate. The support, before the application, has to be wet until SSD conditions. Pour the liquid component (5,5 kg) in a clean container and add gradually the powder (25 kg) with a low-speed stirrer (200-300 rpm) until you get a perfect mixture. In case of partial mixtures respect the weight ratios between the components.

AQM Betonfix GG can be applied by spatula, trowel or spray machine.

Reinforcements with fabrics from Kimitech range may be applied after the adequate curing time of the regularization layer (18-24 hours).

For small surfaces it is possible to arm the **Betonfix AQM GG** itself with the same Kimitech fabrics without waiting the curing time above-mentioned.

In the case of thick layers of plaster we recommend performing a preliminary rough coat by adding to mortar **Kimitech EP-RG** in the amount of 10% by weight of the binder, in order to create a bridge of bonding of the underlying substrate.

CONSUMPTION

1,8 Kg/m²/mm.

PACKAGING

Part A:
Multilayer polythene bag 25 Kg.
Pallet 60x25 - 1500 Kg.

Part B:
5.5 Kg tanks.
Box with 4 tanks - Pallets 528 Kg.

STORAGE

- Part A: Protect from humidity. Store in a dry, sheltered place. Under these conditions and in unopened containers, the product remains stable for 12 months.
- Part B: Protect from frost. Store the product in sheltered and dry place at a temperature not lower than + 5 ° C. In these conditions and in unopened containers, the product remains stable for 24 months.

Characteristics	Value
Colour	Gray / White
Apparent density of fresh mortar EN 1015-6	1850 Kg/m ³
Pot life of mix EN 1015-9	60 min
Compressive strength after 28 days EN 12190	> 25 MPa
Flexural strength after 28 days EN 196-1	> 7 MPa
Modulus of elasticity	8 GPa
Adhesion to wall	Cohesive failure in the substrate

Characteristics	EN 1504-3 limits for R2 mortars	Typical value
Compressive strength after 28 days EN 12190 [MPa]	≥ 15	> 25
Chloride content [%]	≤ 0,05	NPD
Adhesion to concrete EN 1542 [MPa]	≥ 0,8	≥ 0,8
Adhesion to concrete (EN 1542) after dry cycles EN 13687-4 [MPa]	≥ 0,8	NPD
Adhesion to concrete (EN 1542) after storm cycles EN 13687-2 [MPa]	≥ 0,8	NPD
Adhesion to concrete (EN 1542) after freeze-thaw cycles EN 13687-1 [MPa]	≥ 0,8	NPD
Impermeability to water (capillary absorption coefficient, EN 13057) [Kg/m ² ·h ^{1/2}]	≤ 0,5	≤ 0,5

Characteristics	998-2 EN limits	Typical Value
Components in proportion by weight [%]	Declared value	Binder: 25-35 Aggregates: 65-75 Additives: < 1
Chloride content [%] EN 1015-17		NPD
Compressive strength after 28 days EN 1015-11 [MPa]		> 25
Strengthen to first cut [MPa] Along with masonry elements in compliance with the EN 771		0,15 [Table value]
Absorption of water for capillarity EN 1015-18		0,1
Reaction-to-fire class		E

WARNING

Product intended for professional use.
Before using, check bags have not been damaged, and do not use the product if there are lumps.
If the already mixed product started its setting phase, do not add water trying to make more workable the mortar.
In case of plasters applications of recent realization, wait at least 3 weeks before applying the product.
Betonfix AQM GG is a cementitious product and due to that precautions are taken in order to get a correct hardening.
Avoid to apply the product at temperatures below +5 ° C.
Keep the castings moistened to avoid a too fast evaporation of the liquid from the mixture.
Used tools should be washed with water before the product hardens.
The technical specifications and application methods recommended here are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product.
It is the customer's responsibility to check that this data sheet is still effective and it has not been replaced by a more updated version, and that the product is suitable for the intended use.

TECHNICAL SPECIFICATIONS

SK59 - Non-structural reinforcement with FRCM systems for the consolidation of infill brick walls to the RC structure.

Remove of detached parts and plasters. In case the reinforcement is applied to strengthen the connection of the infills and partitions inside the skeleton of the reinforced concrete structure, remove the existing plaster between the infill wall and the RC element for a width of 50 cm, dust off the carving surfaces and wash them with low pressure water. Proceed with drilling the infill wall for the entire thickness in correspondence of the connection between infill and beam, with a center-to-center distance no higher than 150 cm and sealing temporarily the holes with removable devices to prevent mortar from filling the holes.

On a wet surface with SSD conditions, apply a first uniform layer of Betonfix AQM GG mortar with a spatula, trowel or spray machine, respecting a consumption of 1.8 kg /m²/mm. On the still fresh mortar layer, apply the fiberglass reinforcing mesh Kimitech 550, pre-treated with anti-alkaline primer, exerting a slight pressure with a flat metal spatula so that it adheres perfectly to the applied mortar. Fresh-on-fresh, we proceed with the application of a second layer of mortar after completely covering the mesh. If connection systems have been provided, leave a 20x20 cm net surface centered with respect to each of the previously made holes.

Cut to size of a strip of unidirectional fabric consisting of steel filaments of Kimisteel type INOX or similar of length equal to 30 cm + thickness tompagno + 30 cm, bending at the foot of work and rolling of the central part of the mesh to form a sort of rod with improved adherence. Insertion of the bow and grouting. Grouting of the end parts (after radial opening of the wires) with the same mortar used as the matrix of the FRCM system.

The two-component fiber-reinforced cement mortar will be prepared and applied scrupulously following the instructions on the technical data sheets provided by the manufacturer and will have the following characteristics:

- Compressive strength after 28 days EN 12190:> 25 Mpa;
- Flexural strength in 28 days EN 196-1:> 7 Mpa;
- Secant compressive modulus UNI 6556: 8000 ± 1000 MPa;
- Adhesion on concrete EN 1542 ≥ 0.8 MPa.

The product will be CE marked according to EN 1504-3 as R2 and as masonry mortars according to EN 998-2.