FRCM SYSTEM FOR MASONRY

MX-C 25 MASONRY

Inorganic matrix for FRCM strengthening of masonry structures

FIELDS OF APPLICATION

- Adapting and upgrading the static and anti-seismic behaviour of masonry buildings.
- Structural strengthening of loadbearing walls (piers) and perimeter strips (spandrels) of masonry buildings.
- Structural strengthening of masonry corners and horizontal bandaging at floor levels.
- Structural strengthening of eaves ring beams in masonry walls.
- Structural strengthening of masonry arches, vaults, and domes.
- Structural strengthening of masonry infrastructure.
- Anti-overturn protection for internal partitions.
- Anti-overturn protection for external infill walls.
- Connecting non-structural elements with the reinforced concrete structure of beams and columns.
- Non-structural works to public buildings.
- For protecting and securing r.c. + hollow clay composite slabs and arched or vaulted slabs.

ADVANTAGES AND PROPERTIES OF THE SYSTEM

- The inorganic matrix has very good ability to adhere to the support and very good chemical and physical compatibility with masonry.
- The inorganic matrix is easy and reliable to apply, in the same way as a traditional bagged premixed cementitious mortar.
- The system can also be applied to damp supports without any need for special protection.

METHOD OF USE

PREPARATION OF THE MX-C 25 MASONRY MATRIX

- A planetary mixer can be used but should not be loaded to more than 60% of its nominal capacity for the indicated mixing times.
- A rotary mixer can be used but should not be loaded to more than 60% of its nominal capacity for the indicated mixing times.
- If mixing manually, pour part of the bag contents into a bucket and use a drill fitted with a paddle mixer, adding water as required.
- Once a bag of pre-mixed **MX-C25 Masonry** has been opened, all of its contents must be used.

➢ Preparation using a **planetary** mixer (or a **rotary mixer**, or a **drill fitted with a mixer**):

1. Open the 25 kg bag of mortar.
2. Pour the premixed **MX-C 25 Masonry** into the mixer and add about 90% of the prescribed amount (6.0-6.5 litres) of clean water.
3. Mix continuously (without stopping, to prevent clumping) for 2-3 minutes (3-4 minutes if using a rotary mixer). Then add the remaining 10% of clean water and finish by mixing continuously for about one more minute.
4. Leave the mix to stand for about 1-2 minutes before use.
5. Before applying the material give it a final mix if necessary.

TECHNICAL CHARACTERISTICS

PROPERTIES OF MX-C 25 MASONRY INORGANIC MATRIX	
Density	approx. 1500 kg/m^3
Application time	After 10-15 minutes densification begins. Mix again and use within a maximum of approx. 45 minutes
Application temperature	from +5°C to +35°C
Compressive strength at 28 days	≥ 20 MPa
Flexural strength at 28 days	≥ 3.5 MPa
Young's modulus of elasticity at 28 days	≥ 7000 MPa
Consumption	1.2 kg/m^2 per mm of application thickness 4.8 kg/m^2 per 4 mm of application thickness
Reaction to fire (EN 13501-1)	Euroclass A2
Packaging	Disposable wooden pallets each with 40 no. 25 Kg bags, equivalent to 1000 kg of the loose product
Storage conditions	In original packaging, under cover, in a cool, dry, unventilated place
Shelf life (European Directive 2003/53/EC)	Not more than twenty-four (24) months from packing date
Safety data sheet	Available from **www.ruregold.com**
CE marking	EN 998 – 2

GENERAL NOTES/GUIDANCE

Apply the **MX-C25 Masonry** inorganic matrix following the methods indicated by the Designer. Any support preparation work, if required, should be carried out with particular care.
Store the material under cover in a dry place well away from substances that could compromise the integrity and adhesion of the matrix. Appropriate site PPE must be worn during installation.
For further technical information contact Ruregold Technical Support on +39 02.48011962 – info@ruregold.it.

SPECIFICATION ITEM

Supply and apply Ruregold **MX-C25 Masonry** inorganic matrix specific for use on masonry supports, of compressive strength ≥ 20 MPa, bending strength ≥ 3.5 MPa and Young's modulus of elasticity ≥ 7.0 GPa. The FRCM uses this matrix in combination with carbon meshes to increase the resistance to pressure bending and shear in load-bearing walls (piers) and perimeter strips (spandrels) for in-plane and out-of-plane actions. It can also be used to strengthen masonry corners and ring beams at intermediate floors and eaves; to strengthen the extrados and intrados of arched and vaulted structures; to confine masonry columns; and increase ductility. The FRCM system is suitable for load conditions caused by seismic action. The system meets the requirements of CNR-DT 215/2018 (Guide for the Design and Construction of Externally Bonded Fibre Reinforced Inorganic Matrix Systems for Strengthening Existing Structures, issued by Italian national research council CNR - Advisory committee on technical recommendations for construction). The reaction to fire classification of the system meets the requirements of EN 13501-1: A2-s1, d0. Preparation of the surfaces and installation of the system must follow the manufacturer's instructions.

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RUREGOLD
INNOVATION & SAFETY FOR BUILDING

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