

MX-JOINT

Inorganic matrix for fibre anchors type JOINT



FIELDS OF APPLICATION

Inorganic matrix to be used in combination with Ruregold anchors for FRCM systems in order to create the connection and increase the adhesion of the reinforcement system to the existing support, in the following cases (see Chapter 6 CNR DT215/2018):

- Strengthening on one face of a masonry wall (for all types of masonry).
- Strengthening on two sides of unconnected cavity walls.
- Strengthening reinforced concrete columns against combined axial and flexural forces to ensure that the action of the strengthening system is transferred to the structure continuously.
- Shear strengthening reinforced concrete beams when it is not possible to guarantee an anchoring length of at least 300 mm (11.81 in).
in absence of experimental evidence, you provide adequate development length determined per ICC-ES AC 434.
- Structural strengthening of reinforced concrete walls.
- Connecting non-structural elements to structural support elements in reinforced concrete, such as beams and columns, etc.

Other applications:

Inorganic matrix to be used in combination with:

- Connection system G-MESH CONNECTOR of the RureGold CRM system (See technical data sheet on Ruregold.com).
- Pultruded bars with improved adhesion in CFRP type C-BAR RureGold or in GFRP type G-BAR RureGold (see technical data sheets on Ruregold.com).

METHOD OF USE

Preparing the inorganic matrix

MX-JOINT does not require any additional materials and may be prepared using a low-speed paddle mixer.

Preparing the inorganic matrix for anchoring the anchor in the hole.

- Open the pack of **MX-JOINT** and add approx. 1.0 litre (0.26 gal) of clean water for every 5 kg (11 lb) of powder used (approx. 5.0 litres (1.32 gal) of clean water for every 25 kg (55 lb) of powder).
- Mix continuously for about 3 minutes, without interrupting, to obtain a smooth, homogeneous mix.
- **When anchoring in the hole:** Transfer the entire contents to the Ruregold **Applicator Gun**, complete with rigid nozzle extension and flexible coupling.

Preparing the inorganic matrix for impregnating the fibre connector

- Open the pack of **MX-JOINT** and add approx. 1.0 litres (0.26 gal) of clean water for every 5 kg (11 lb) of powder used (approx. 5.0 litres (1.32 gal) of clean water for every 25 kg (55 lb) of powder).
- Mix continuously for about 3 minutes, without interrupting, to obtain a smooth, homogeneous mix.
- Add another 1.75 litres (0.46 gal) of clean water for every 5 kg (11 lb) of powder used and mix to obtain a "fluid consistency" (approx. 8.75 litres (2.31 gal) of clean water for every 25 kg (55 lb) of powder). Impregnate the part of the fibre connector that was prepared earlier.

IDENTIFICATION DATA

EN 998-2 classification	G - Guaranteed performance masonry mortar for general use on elements subject to structural requirements
Grain size of aggregates	0 - 1 mm (0.04 in)
Density of fresh mortar (EN 1015-6)	Approx. 2000 kg/m ³ (125 lb/ft ³)
Certification	CVT n. 285 del 28/06/2023 according to the “Guidelines for the identification, qualification and acceptance control of fibre-reinforced inorganic matrix composites (FRCM) to be used for the structural consolidation of existing buildings” in combination with the anchor PBO-JOINT .

TECHNICAL SPECIFICATIONS

PERFORMANCE SPECIFICATIONS	REQUIREMENTS IN ACCORDANCE WITH EN 998-2	PRODUCT PERFORMANCE SPECIFICATIONS
Compressive strength after 28 days	Between class M1 (≥ 1 MPa) (≥ 145 psi) and class Md ($d > 20$ MPa (2900.7 psi) as a multiple of 5)	≥ 25 MPa (3625.9 psi) M25
Modulus of elasticity in compression after 28 days	Not requested	≥ 9.5 GPa (1378 ksi)
Reaction to fire (Italian Ministerial Decree 1003-2005)	-	Euroclass A1

APPLICATION DATA

Mixing water per 5 kg of powder	approx. 1.0 litres (0.26 gal) for anchoring the connector in the hole
	approx. 2.75 litres (0.73 gal) for impregnating the fibre connector
Mixing water per 25 kg of powder	approx. 5.0 litres (1.32 gal) for anchoring the connector in the hole
	approx. 13.75 litres (3.63 gal) for impregnating the fibre connector
Mix consistency	Dense when anchoring in the hole
	Fluid when impregnating the fibre connector
Application time at 20°C	Densification begins after approx. 10-15 minutes. Mix again and use within a maximum of about 45 minutes
Application temperature	From +5°C (41°F) up to +35°C (95°F)
Coverage	approx. 0.8 - 1 kg/m (0.54 – 0.67 lb/ft)
Packaging	Disposable wooden pallet laden with 60 x 25 kg (55 lb) bags – total weight 1500 kg (3300 lb)
Storage conditions (Regulation (CE) No. 1907/2006 – Annex XVII point 47)	In original packaging, indoors, in a cool, dry, unventilated place.
Durability (Regulation (CE) No. 1907/2006 – Annex XVII point 47)	Not more than 12 months from packing date.

SPECIFICATION ITEM

Supply and application of Ruregold **MX-JOINT** matrix for anchors, compressive strength ≥ 25 MPa (3625.9 psi). The connection system in unidirectional PBO fibres, e.g. Ruregold **PBO-JOINT**, and carbon fibres, e.g. Ruregold **C-JOINT** may be used to create a connection between the existing structures and the structural strengthening system and, where necessary, guarantee the continuity of the strengthening effect. C Implementing connection systems, including overturn protection solutions with Ruregold type **A-JOINT** aramid fibre anchors, Ruregold type **B-JOINT** basalt anchors or Ruregold type **G-JOINT** fibreglass anchors.

The connection system meets the requirements of the FRM Guidelines issued in March 2022. The substrate must be prepared and the system applied in accordance with the manufacturer's instructions.

This technical data sheet is not a specification. The provided figures, and content thereof, are based on our best knowledge and experience, and are purely indicative in nature. The user is responsible for determining whether or not the product is suitable for the intended use, assuming all responsibility for its use and application. Laterlite reserves the right to change the packaging and the contained quantity without prior notice. Laterlite products are intended for professional use only. This Technical Data Sheet cancels and replaces previous editions, which are no longer in force. Check the latest revision on the RureGold.com website

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