

# MX-JOINT

## Inorganic matrix for PBO/C-JOINT fibre anchors



### FIELDS OF APPLICATION

Inorganic matrix for use with Ruregold fibre anchors for connecting FRCM strengthening systems and enhancing their adhesion to the existing substrate, in the following cases:

- 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.

### 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

<b>EN 998-2 classification</b>	G - Guaranteed performance masonry mortar for general use on elements subject to structural requirements
<b>Grain size of aggregates</b>	0 - 1 mm (0.04 in)
<b>Density of fresh mortar (EN 1015-6)</b>	Approx. 2000 kg/m <sup>3</sup> (125 lb/ft <sup>3</sup> )

## TECHNICAL SPECIFICATIONS

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

## APPLICATION DATA

<b>Mixing water per 5 kg of powder</b>	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
<b>Mixing water per 25 kg of powder</b>	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
<b>Mix consistency</b>	Dense when anchoring in the hole Fluid when impregnating the fibre connector
<b>Application time at 20°C</b>	Densification begins after approx. 10-15 minutes. Mix again and use within a maximum of about 45 minutes
<b>Application temperature</b>	From +5°C (41°F) up to +35°C (95°F)
<b>Coverage</b>	approx. 0.8 - 1 kg/m (0.54 – 0.67 lb/ft)
<b>Packaging</b>	Disposable wooden pallet laden with 60 x 25 kg (55 lb) bags – total weight 1500 kg (3300 lb)
<b>Storage conditions (Italian Ministerial Decree 10/05/2004)</b>	In original packaging, indoors, in a cool, dry, unventilated place.
<b>Durability (Italian Ministerial Decree 10/05/2004)</b>	Not more than 12 months from packing date.

## SPECIFICATION ITEM

Supply and application of Ruregold **MX-JOINT** matrix for anchors, compressive strength  $\geq 25$  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. Implementing connection systems, including overturn protection solutions, using basalt fibre anchors, e.g. Ruregold **B-JOINT**, or glass fibre anchors, e.g. Ruregold **G-JOINT**. The connection system meets the requirements of the FRCM Guidelines issued in March 2022. The substrate must be prepared and the system applied in accordance with the manufacturer's instructions.

### **Edition 01/2025\_Revision 02**

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