



Very  
High  
Durability  
Repair &  
Prevention  
Systems



Certified Quality System since **FEBRUARY 1993**

*From Project to Jobsite*

## BS 28 / POZ MuCis®

**FIBRE REINFORCED TWO-COMPONENT THIXOTROPIC MORTAR WITH REACTIVE POZZOLANE, SUPER-ADHESIVE WITH LOW MODULUS OF ELASTICITY, WITH FIBRES FIB-energy® MC 40/8 FOR DUCTILE REPAIRS AND RESTORATION**

**CE** approved EN 998-2

**Description** BS 28/POZ MuCis® is a cement-based mortar modified with micro-silica with very high pozzolanic reactivity, composed out of a powder and a liquid component RMB (dispersion in water of special polymers). The product is fibre-reinforced with FIB-energy® MC 40/8 with a very high tensile strength and elastic modulus (42 GPa) and contains MuCis® - Migrating and Contact Corrosion Inhibitors.

After mixing the two components, the mortar has perfect workability by trowel and with normal tools for the application of renders. The applied and hardened material will have high adhesion and durability. The product has high ductility and low modulus of elasticity, is recommended for repairs and reinforcement in seismic zones.

**Advantages and characteristics**

- The thixotropic character of the product allows for excellent adhesion, easiness to apply on vertical masonry or concrete surfaces, and overhead on beams or ceilings.
- The low elasticity modulus, high flexural-tensile strength and high ductility allow applications for reinforcements in areas by distribution of seismic stresses and deformation capacity without collapsing.
- It solves the problems of difficult reconstruction or repairs, even on surfaces with low grip and application of thickness from minimum of 1-2 mm (to apply by trowel and finish with float finish) to a maximum of 30-40 mm and more.
- The installation of a contrasting net is often recommended.
- The formulation BS 28/POZ MuCis® allows maximum protection of reinforcement steel inside, even when not directly reached by the repair.

**Indicated use**

- Repairs or restorations in general, both on concrete as on masonry, when high adhesion and ductility are required. Recommended for ductile reinforcements and repairs on masonry in seismic areas, often with interposition of a glass fibre, polymer or steel mesh.
- BS 28/POZ MuCis® is part of our systems VHDRS® - Very High Durability Repair & Prevention Systems, suitable for seismic zones.



Very  
High  
Durability  
Repair &  
Prevention  
Systems



Certified Quality System since **FEBRUARY 1993**

## *From Project to Jobsite*

**Method of use** Note: the adhesion on the support is a fundamental characteristic for the durability and structural properties of a repair mortar.

It is therefore recommended to consult our documents: "Assessment and preparation of substrates for optimal adhesion and structuration with a repair mortar – recommendations for a good finish"

- A decent substrate preparation by scabbling, sandblasting is essential to achieve maximum adhesion to the substrate.
- Pour the powder during mixing, into the liquid and mix till a smooth mortar is obtained. Do not add the liquid to the powder for mixing, as this can cause already hardening of the mortar and incorrect consistency.

The proportions of packaging (bag of 25 kg powder and liquid can 5 Kg) provide a medium consistency and workability of the mortar. If the application requires very consistent and cohesive mortar, slightly reduce the amount of the liquid component. In the case it is useful to have a more fluid mortar, a slight addition of water is allowed after the complete use of the liquid component RMB.

- Prepare amount of mortar that can be used within about 30 minutes of the mixing. Do not reuse or diluted with liquid when the mortar already has started to harden.
- Apply the mortar directly onto the substrate that shall have sufficient firmness and consistency or by the interposition of a suitable mesh, according the foreseen stresses.
- In the case of partially inconsistent substrates, before proceeding with the application of the complete thickness, apply on the previously wetted surface, a key-coat by 'brushing' with a hard brush of a slightly more fluid mortar. This will allow for better adhesion.
- The applied product hardens well in cold weather and therefore can be finished with a float in a relatively short time.
- Application at too low temperatures and certainly below 0°C is dis-advised.

**Remarks** Information according 2003/53/CE:

**Storage:** can be stored for 12 months in the original unopened packaging, in dry and protected area, at a temperature between + 5 to 35°C. Do not use the contents of opened sacks if the powder has gone into lumps. Avoid freezing of the B component.

**Packaging** **Powder Component :** bag of Kg. 25 BS 28 /POZ MuCis®  
**Liquid component :** can of Kg. 5 RMB



Very  
High  
Durability  
Repair &  
Prevention  
Systems



Certified Quality System since **FEBRUARY 1993**

## From Project to Jobsite

### Technical characteristics (typical values)

Initial setting time: about. 45' at 25°C

Short term resistances (typical 1 day at 20°C):  
Compression = 10 N/mm<sup>2</sup>  
Flexural = 4,4 N/mm<sup>2</sup>

		<b>BS 28/POZ MuCis®</b>
• Compressive strength	N/mm <sup>2</sup>	30 (28 d.)
• Flexural strength	N/mm <sup>2</sup>	9 (28 d.)
• MODULUS OF ELASTICITY	N/mm <sup>2</sup>	9.000 (28 d.)
• Adhesion to concrete	N/mm <sup>2</sup>	≥ 2,6 (28 d.)
• Pull-out	N/mm <sup>2</sup>	> 10 (28 d.)
<b>Carbonation in time</b>		
	8 years mm	5,5
	18 years mm	15
	25 years mm	20
• Resist. To penetration CO <sub>2</sub>	μ	400
• Resist. To vapour diffusion	μ	25
<b>Type of mortar</b>		
• Type of mortar		Ductile thixotropic mortar
• N. components		2
• Advised mm thickness	mm	3÷30
• Application		hand/spray
• Humid curing		NO
• Protected curing		SE
• Typical application		VHDRS/masonry/seismic zones
<b>Setting and Hardening</b>		
• Setting time		Normal
• Hardening time		normal
• Compensation shrinkage		SI++
• Consumption	Kg/m <sup>2</sup> /mm	1,8

\* some products can also be produced with addition of corrosion inhibitor MuCis®

1) resistance against frost/thaw in presence of salts according to SIA 162/1/91 g/m<sup>3</sup> (<600 g/m<sup>3</sup> = high resistance = required for motorway boards)

2) chloride permeability –Coulomb –FHWA/RD/81) (100-1000 Coulomb = very low)  
Ⓢ according ASTM C 88

SE in function of the conditions during application (rain, sun, temperature, humidity, etc)



Very High Durability Repair and Prevention Systems.  
Very durable repair and protection Systems



Very High Durability Reinforced Concretes  
Very durable and anti-corrosion reinforced concretes

AED High Deformation Energy



Multiple Corrosion Inhibiting Synergies for the inhibition of the steel corrosion in reinforced concrete

1N/mm<sup>2</sup> = 1MPa = 10,19 Kg/cm<sup>2</sup>

**Safety indications** Read carefully the safety indications on the packaging, or consult the relevant Material Safety Datasheet of this product.

The above data are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product or for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically. The revision dates and number of revision of the datasheets are listed in the table below. Eventual variations are traceable on our website [www.tecnochem.it](http://www.tecnochem.it) where the most updated datasheets can be retrieved.

Edition: 06/2009  
Revision: 09/2013

Rev.N.: 1

BS 28/POZ MuCis®  
pag. 3/3