la scelta giusta
per grandi progetti.

SCHEDA TECNICA

MX 300
Tixotropico Plus

THIXOTROPIC MORTAR IN
R4 CLASS

PRODUCT
Special single-component, fibre-reinforced, thixotropic mortar with pozzolanic reaction and controlled shrinkage for restoration of concrete structures.

CHARACTERISTICS
MX 300 Tixotropic Plus is a powder product composed of special cements, selected aggregates, additives and synthetic fibers, which mixed only with water, has an excellent workability and high thixotropy.
When cured, the product has high mechanical strengths, waterproofing properties, excellent adhesion to new or old concrete (not smooth one and soaked with water beforehand) and to reinforcing rods (previously treated with KF 380).

APPLICATION FIELD
Recovery of concrete coverings damaged by corroded reinforcing bars.
Repair of precast structures.
Filling of rigid joints.

SUBSTRATES
Reinforced concrete structures.

CONSUMPTION
18,0 - 19,0 kg/sqm per cm of thickness.

PACKAGING
25 kg bags on pallets of 1500 kg.

STORAGE
It can be stored 12 months in a dry place in its original packaging.

ITEM SPECIFICATIONS
The repair and the reinforcement of concrete structures must be made by applying a thixotropic mortar with pozzolanic reactivity, such as Edilcol Italia MX 300 Tixotropic Plus, in several coats, wet on wet. The product must meet the minimum requirements defined by EN 1504-3 for structural mortars of class R4; mixed only with water, it must have, after 28 days, a compressive strength >60 N/sqmm.

PREPARATION of the substrate and the mortar

- Remove the degraded and loose concrete until the substrate is solid, resistant and rough.
- Clean the concrete and reinforcing rods until they are free of dust, rust, oils, greases, efflorescences, paint, etc, by sand-blasting.
- Soak the substrate with water, so remove the excess of water or wait for its evaporation.
- Apply with a brush a first coat of passivating mortar for irons, KF 380, on the exposed metallic reinforcement; then apply a second coat also on the concrete to repair.
- **In the concrete mixer**: Pour into the mixer approximately 4,0-4,5 liters of water, for each bag, to obtain the required consistency (application with a trowel or spray) and slowly add MX 300 Tixotropic Plus in a continuous flow. Mix for 1 to 2 minutes, then make sure the mix is well blended. Scrape any unblended powder from the sides of the mixer. Mix again for another 2 to 3 minutes.
- **Manually:** it is recommended to mix small quantities each time, pouring in a bucket the amount of required water, about 18% in weight of the dust; slowly add MX 300 Tixotropic Plus in a continuous flow. Mix for 5 to 6 minutes until obtaining a homogeneous mixture. The manually mix may require a greater amount of water that would alter the mechanical properties of the product.

APPLICATION

- Apply the product by hand (pressing well on support) or by a suitable plastering machine in thickness of about 2 cm, making sure that the substrate has been substantially roughened. For greater thicknesses use rebars (making a bar cover at least 2 cm thick) or proceed to apply another coat wet on wet.
- In the event that the first layer is already dry, make sure it is rough and dampen it before applying second coat.
- As an alternative, apply on dry and clean: special finishing products for concrete (Monocem o Monocem Pozzolanic) or cement-based sheaths (Elastocem).

RECOMMENDATIONS

Do not add other products to the mixture of the MX 300 Tixotropic Plus and do not mix or add water once the mix has begun to set. Do not use MX 300 Tixotropic Plus on gypsum-based, painted surfaces or on friable, smooth and not absorbent substrates.
Avoid outdoor application in very hot or windy days, on ice substrates, during the thaw or with risk of frost for the 24 hours following the application and at temperatures lower than +5°C or higher than +35°C.
Protect MX 300 Tixotropic Plus wetting the treated surfaces, in order to avoid the water evaporating too quickly and causing the formation of surface cracks. Wash working tools after use.

DATI TECNICI

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Appearance:	grey powder	
Composition:	special cements, selected aggregates, synthetic fibers, additives	
Particle size:	≤ 3,0 mm	
Application temperature:	+ 5°C / + 35°C	
Mixing water:	≈ 17%	
Density of fresh mortar:	≈ 2200 Kg/m^3	(EN 1015-6)
Density of hardened mortar:	≈ 1900 Kg/m^3	(EN 1015-10)
Pot life:	< 2 hours	
Setting time (start / end), by Vicat needle:	2 hours /5 hours	
Thickness of each layer:	1,0 - 3,0 cm	
Minimum feasible thickness:	> 1,0 cm	
Maximum thickness achieved in the absence of reinforcement:	≤ 2 cm per coat	
Waiting time between two coats:	≈ 2 hours	
Waiting time for smoothing:	> 48 hours (completely dry support)	
Chloride ions content:	≤ 0,05%	(EN 1015-17)
Compressive strength (1 day/7 days/28 days):	> 20,0 / > 45,0 / > 60,0 N/sqmm - Classe R4	(EN 12190)
Flexural strength (1days / 7days / 28days):	> 5,0 / > 7,0 / > 8,0 N/sqmm	(EN 12190)
Elastic module (28 days):	> 20 GPa	(EN 13412)
Adhesion to the substrate (28 days):	≥ 2,5 N/sqmm	(EN 1542)
Thermal compatibility after freeze-thaw cycles:	≥ 2,0 N/sqmm	(EN 13687-1)
Slip resistance:	Class II	(EN 13036-4)
Resistance to carbonation:	Depth of carbonation (dk) ≤ Depth of carbonation reference of concrete [MC(0,45)]	(EN 13295)
Capillary absorption:	≤ 0,3 Kgm^{-2}h$^{-0,5}$	(EN 13057)
Resistance to fire:	Class A1	
Contribution of smoking:	none	
Hazard classification:	none	(EC 99/45)

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