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SCHEDA TECNICA

MX 300
Tixotropico Rapid

QUICK-SETTING THIXOTROPIC MORTAR IN R3 CLASS

PRODUCT
Single-component, fibre-reinforced, quick-setting thixotropic mortar with controlled shrinkage for restoration of concrete structures.

CHARACTERISTICS
MX 300 Tixotropic Rapid 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.
Once hardened, MX 300 Tixotropic has moderate mechanical strength, waterproofing, 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
Repair of concrete and reinforced concrete. Repair of pillars, beams, ledges, edges of balconies damaged by rusted reinforcing bars. Repair of surfaces irregularities including joints between new and old concrete, exposed aggregate, protruding steel, etc. Sealing of surface cracks into concrete or cement-based plaster. Installation and repair of concrete pipes . Repair of industrial floors.

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
MX 300 Tixotropic Rapid 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 fast-setting and quick hardening thixotropic mortar with pozzolanic reactivity, such as Edilcol Italia MX 300 Tixotropic Rapid, in several coats, wet on wet. The product must meet the minimum requirements defined by EN 1504-3 for structural mortars of class R3; to be mixed only with water, it must have, after 28 days, a compressive strength > 25 N/sqmm.

PREPARATION of the substrate (Concrete repair)

- 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.
- Wet the substrate with water, so remove the excess of water or wait for its evaporation.
- Apply with a brush a first layer of passivating mortar for anti-rust treatment of reinforcement irons, KF 380, on the exposed metallic reinforcement, then apply a second layer also on the concrete to recover.

PREPARATION of the substrate (Floors repair)

- Remove the degraded and loose concrete. Chipping the edges of the area to be repaired at right angles and remove any residue.
- Wet the substrate with water, avoiding the stagnation (in which case wait until the excess water has evaporated) and apply a grout consisting of MX 300 Thixotropic Rapid and 30% water with a brush .

PREPARATION of mortar

- It is recommended to mix small quantities each time, pouring in a bucket the amount of required water, about 16% in weight of the dust; slowly add MX 300 Tixotropic Rapid in a continuous flow. Mix with a drill at a low numbers of turns, until obtaining a homogeneous mixture.

APPLICATION (Concrete repair)

- Apply the product by trowel or by spray (pressing well on the support) in maximum thickness of 2,5 cm. For greater thicknesses proceed to apply another coat wet on wet (about 20 minutes).
- When done, keep moist the recovered parts for at least 24 hours.
- As an alternative, apply on dry and clean substrate: special finishing products for concrete (Monocem RS or Monocem RS Pozzolanic) or cement based sheaths (Elastocem).

APPLICATION (Concrete floors repair)

- Apply the product on the fresh mortar with a trowel and finish with a trowel. After the application, protected from evaporation by a sheet of polyethylene.
- The product is ready for foot traffic (light traffic) already after 4-5 hours.

RECOMMENDATIONS

Do not add other products to the mixture of MX 300 Tixotropic Rapid and not mix or add water once the mix has begun to set. Do not use MX 300 Tixotropic Rapid on gypsum-based, painted surfaces or on friable, smooth and not absorbent substrates. Avoid the 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 Rapid wetting the treated surfaces, in order to avoid a too quickly water evaporating 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:	≈ 16%	
Density of fresh mortar:	≈ 2200 Kg/m^3	(EN 1015-6)
Density of hardened mortar:	≈ 1900 Kg/m^3	(EN 1015-10)
Pot life:	< 20 minutes	
Setting time (start/end) by Vicat needle:	30 minutes/1 hour	
Thickness of each layer:	1,0 - 3,0 cm	
Minimum feasible thickness:	> 1,0 cm	
Maximum thickness achieved in the absence of reinforcement:	≤ 2,5 cm per coat.	
Set to light foot traffic:	after 4 hours (light traffic)	
Waiting time between two coats:	≈ 20 minutes	
Waiting time for smoothing:	> 24 hours (completely dry support)	
Chloride ions content:	≤ 0,05%	(EN 1015-17)
Compressive strength (1 day/7 days/28 days):	> 20,0 / > 26,0 / > 40,0 N/sqmm - Class R3	(EN 12190)
Flexural strength (1 day/7 days/28 days):	> 4,5 / > 6,0 / > 8,0 N/sqmm	(EN 12190)
Modulus of elasticity (28 days):	> 15 GPa	(EN 13412)
Bonding strength to concrete (28 days):	≥ 2,0 N/sqmm	(EN 1542)
Thermal compatibility after freeze-thaw cycles:	≥ 1,5 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:	≤ 0,25 Kgm^{-2}h$^{-0,5}$	(EN 13057)
Resistance to fire:	Class A1	
Contribution of smoking:	none	
Hazard:	none	(EC 99/45)

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