

From Project to Jobsite

RAPI-tec® restauro THIXO 10

SPECIAL CEMENT BASED MORTAR WITH VERY FAST FINISHING AND HARDENING FOR THE STRUCTURAL REPAIR OF DETERIORATED REINFORCED CONCRETE

RHSFCNC – *R*apid *H*ardening *S*hrinkage *F*ree *C*ementitious *N*ano *C*omposite
Fast hardening : RAPI-tec® - Anti-corrosion: MuCis® - Anti-cracking: SHRINKO-tec®



CE approved – Certificate n. 1305 - CPD - 0808 EN 1504-3 Class R3

Description RAPI-tec® restauro THIXO is based on special cements, with multifunctional synergy additives, nano-reactive minerals, corrosion inhibitors and molecular anti-shrinkage tensio-actives.

Advantages and characteristics Fast and easy to apply by trowel to a thickness of 0,2 to 10 cm and more.

Product	Workability time	Finishing and initial hardening time
RAPI-tec® restauro THIXO 10	10 minutes	30 minutes

Volumetric stability, anti-shrinkage, anti-cracking, anti-corrosion. Very high mechanical resistance. Durability and resistance to meteorological and environmental attacks, sulphate resistant.

- Method of use**
- Application from a thickness of 2 mm up to 10 cm, with finishing about 30 minutes after application on reinforced concrete and masonry
 - Balcony borders, stairs
 - Pillars, beams, roofs, ceilings
 - On decorative elements to repair or re-shape
 - Also for thin fairing (2-3mm)

- Method of use**
- Scarify, clean the surface, remove the rust from the reinforcement bars. If the steel is exposed without mortar, treat them with MuCis® PROTEZIONE FERRO.
 - Water dosage: 4 to 4.25 litres per 25 kg bag.

Instructions for mixing 1 bag in a pail:

- Pour 4 ÷ 4.25 l of water in a pail and add the powder to water while mixing with suitable drill whisk until a smooth paste is obtained. Mix for about 3 minutes.
- Prepare only the amount of mortar that can be used in about 10 minutes.
- Do not re-use the mortar or dilute with water when already started to set.
- Use of the product in very cold temperatures, especially below 0°C is not recommended.

- Do not use the content of the bags if there are lumps.
- Information according to 2003/53/CE: store in a cool dry place at temperatures between +5°C and +35°C keeping the packaging intact. Date of packaging and shelf life: see listed on the side of the bag
- Consult our technical service for special applications.
- Read the safety datasheet of the product before use.

Remark Information according to 2003/53/CE:
Storage: 12 months in original packaging, unopened, in dry and protected area, at temperatures between +5°C and +35°C.
 Do not use the contents of open bags if you notice agglomeration of the powder.

Packaging Bag of 25 Kg on pallet.

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Technical characteristics (typical values)

Performance	Test Method	Requirements EN 1504-3 class R3 "structural repairs"	Requirements RAPI-tec® Restauro THIXO 10 (20°C)
1) Compressive strength	EN 12190	≥ 25 MPa (28 d.)	14 MPa (4 h) 22 MPa (24 h) 40 MPa (28 d.)
Flexural tensile strength	EN 196/1	none	4 MPa (4 h) 5,5 MPa (24 h) 9 MPa (28 d.)
Linear shrinkage	EN 12671-1	≤ 0,3 %	< 0,02%
2) Chloride ion content	EN 1015-17	≤ 0,05 %	< 0,05 %
3) Bonding strength	EN 1542	≥ 1,5 MPa (28 d.)	> 2 MPa (28 d.)
4) Restrained expansion/shrinkage	EN 12617-4	Bond strength after test ≥ 1,5 MPa	>2 MPa
5) Carbonation resistance	EN 13295	Depth of carbonation ≤ reference concrete [MC(0,45)]	Depth of carbonation ≤ reference concrete [MC(0,45)]
6) Modulus of elasticity by compression	EN 13412	≥ 15 GPa (28 d.)	> 15 GPa (28 d.)
7) Thermal compatibility. Part 1 : frost/thaw cycling	EN 13687-1	Bond strength after 50 cycles : ≥ 1,5 MPa	Bond strength after 50 cycles : > 2 MPa
8) Thermal compatibility. Part 2 : weathering	EN 13687-2	Bonding strength after 30 cycles: ≥ 1,5 MPa	Bonding strength after 30 cycles: > 2 MPa
9) Thermal compatibility. Part 4, Dry cycle	EN 13687-4	Bonding strength after 30 cycles: ≥ 1,5 MPa	Bonding strength after 30 cycles: > 2 MPa
10) Thermal expansion coefficient	EN 1770	OK when exceeding test 7), 8) and 9)	Exceeded the tests 7), 8) and 9)
Capillary absorption	EN 13057	≤ 0,5 Kg · m ⁻² · h ^{0,5}	< 0,5 Kg · m ⁻² · h ^{0,5}
Reaction to fire	EN 13501-1	Euro-class	A1

OTHER REQUIREMENTS OF THE PRODUCT

Performance	Test Method	Requirements RAPI-tec® Restauro THIXO 10 (20°C)
Protection against corrosion	ASTM C876 ASTM G109	corrosion ZERO after 2 years: < 100 mV corrosion ZERO after 2 years: < 10 µA
Resistance to impact	CSTB 3232	No cracking after 25 impacts
Wear resistance	(XP P 11-101)	Δv _r ≤ 2 cm ³
Consumption		1,9 Kg/m ² /mm

Safety indications Read carefully the information on the packaging or eventually demand the specific Material Safety Datasheet for this product.

This information is based on our experiences and latest laboratory testing. The above information may be subject to modifications, which will be announced in the updated technical datasheets. Eventual changes to the information on top will be announced on www.tecnocem.it in which the technical datasheets are updated regularly and always the most updated can be found. Tecnochem Italiana cannot held responsible for poor results that are due to causes unconnected to the quality if the product or for defects deriving from factors different than the quality of the product including the wrong storage.