

Torggler

RINNOVA

Quick-setting, single-component premixed mortar. Thixotropic, non-shrink, fibre-reinforced. Type PCC and class R2 as per 1504-3 and type C, MC and IR principles, as per UNI EN 1504-2. For smoothing and repairing concrete.



- Excellent workability
- Excellent finish
- Quick setting
- Non-shrink
- Applicable in thicknesses up to 40 mm

IN COMPLIANCE WITH
C MC IR
EN 1504-2

IN COMPLIANCE WITH
R2 PCC
EN 1504-3

APPLICATION AREAS

- Reconstruction of corners and edges of concrete structures.
- Rapid smoothing of cast concrete surfaces.
- Repair and smoothing of concrete floorings.
- Repair and smoothing of string courses, fronts of balconies and terraces.
- Smoothing and finishing of surface defects of concrete casting (concrete segregation, formwork spacer holes, etc.).

TYPES OF SUBSTRATE

- Concrete, reinforced concrete.
- Cement mortars, screeds and/or plaster with good mechanical strength.

MAXIMUM ATTAINABLE THICKNESSES

- From approx. 1 mm min. to approx. 40 mm max.

FEATURES

Rinnova is a single-component thixotropic, cement mortar, ready for use. It is fast setting, non-shrink and fibre-reinforced, based on a mix of special cements, selected fine aggregates, synthetic resins, fibres and specific additives. The mix obtained after mixing with water is characterised by an excellent thixotropic nature and workability, which is very easy to use both for smoothing and for repairs and applications with thicknesses of up to 40 mm. A slight expansion during both the plastic and the post-hardening phases compensates for hydraulic shrinkage, with a considerable improvement of the final adhesion characteristics, and at the same time preventing fracturing. The optimum water retention reduces the risk of "burning" in the case of applications such as smoothing and, if suitable care is taken, even during critical weather conditions (summer temperatures and windy); however, in this case it is necessary to adopt suitable precautions (do not expose to direct sunlight, mix with cold water, apply the product preferably at coolest times of the day and in the shade, etc). The quick setting enables repairs and smoothing to be performed quickly. Rinnova is a product for the non-structural repair of concrete structures using hydraulic mortar type CC and class R2 in accordance with UNI EN 1504-3, and for the protective coating of concrete surfaces type C, MC and IR principles in accordance with UNI EN 1504-2.

WARNINGS

- Do not mix with other binders such as cement, hydraulic lime, gypsum, etc.
- Do not add water once the mix has started to set.
- Do not use the mixed product when it has already started to set. Therefore, always prepare quantities of mix which can be used within the workability time.
- Do not use in temperatures which are too high or when it is very windy. Protect from direct sunlight. During the summer months wait for the coolest hours of the day before application, mix with cool water and protect the surface against strong winds, spraying the surface with water or covering it with polyethylene sheets.
- Do not apply the product when the temperature is less than +5°C or more than +30°C.

INSTRUCTIONS FOR USE

Preparation

The substrate must be clean and sound, free of dust, loose material and dirt of any kind, and it must also be carefully roughened. Any residue of formwork removal products must be carefully removed. In the case of worn concrete, remove all crumbling and loose parts from the substrate by careful hammering and chiselling, until a sound and strong substrate is reached. Any exposed reinforcement steel must be completely freed from the concrete, wet or dry sandblasted down to bare metal and protected with Restauero Ferri. Cavities and irregularities with a thickness of more than 4 cm must be reconstructed with Restauero R2.

Mixing the product

Mix Rinnova with approx. 18- 20% of water (which is equal to approx. 4.5-5.0 litres for a 25 kg bag), possibly using a low-speed drill with mixer attachment; mix until the mix is homogeneous and free from lumps, with a thixotropic consistency and good workability. Whether it is applied for smoothing, reconstruction of edges or filling of cavities of not more than 4 cm, the recommended percentage of mixing water is always the same. The mix prepared in this way has a Pot Life of approx. 20 minutes under normal conditions (+20 °C), so only prepare the quantity of mix which can be applied in this time; higher temperatures shorten the Pot Life, whilst lower temperatures increase it.

Application

Wet the substrate until saturated and leave the excess water to evaporate or remove with a sponge. Apply the product with a palette knife for smoothing and with a trowel for filling or reconstructions. After letting the product set well (between 20 and 30 minutes under normal conditions) finish with a sponge float. In the case of horizontal applications (e.g. smoothing of cast concrete, repairing and smoothing old cement paving), prepare a bonding slurry with Rinnova mixed to a fluid consistency with a 1:2 solution of Neoplast Latex and water and then apply this to the prepared substrate as described above. When the bonding slurry is stiff, but not completely hardened, apply Rinnova as described above. After application and finishing, the repairs and smoothing carried out with Rinnova must be suitably protected for at least 24 hours especially during the summer months and in the presence of strong winds by spraying the surface with water or covering with polyethylene sheets, in order to avoid the formation of cracks in the mortar when it is still in the plastic state due to too fast an evaporation of the mixing water. Before laying wooden or resilient flooring it is necessary to wait at least 14 days (at 23°C and 50% R.H.). In the presence of lower temperatures and/or higher relative humidity, the delay time increases and it is recommended that a control be carried out on the residual humidity of the coating to check that this is below 2%.

Cleaning

The tools used can be cleaned with water before the mortar hardens. Once hardened, the mortar must be scraped off.

WAITING TIMES

Delay between one coat and the next: approx. 45-60 minutes. Delay before use: approx. 2 hours. Under normal conditions (20°C) Rinnova can be painted with paints and water-based paints, such as Pittura after approx. 6 hours from placing.

TECHNICAL SPECIFICATIONS

PARAMETER AND METHOD	VALUE	EN 1504-2 REQUIREMENT	EN 1504-3 REQUIREMENT
MEASURED ON POWDER PRODUCT			
Consistency	powder		
Apparent density (MIT 13*)	1,350 kg/l		
Granulometry (EN 12192-1)	0 – 0,5mm		0 – 0,5mm
Content of chlorine ions (EN 1015-17)	< 0,01 %		≤ 0,05 %
Hazardous substances (EN 1504-3)	compliant with point 5,4		
MEASURED ON FRESH MIX			
Mixing water	18-20% (4,5-5,0 litres per 25 kg bag or 0,90-1,00 litres per 5 kg bag)		
Mix consistency (visual)	thixotropic		
Mix pH	> 12		
Mix density (EN 1015-6)	2,000 kg/l		Range of declared values
Mix pot life (EN 13395)	approx. 20 min.	approx. 60 min	
Setting times: start of setting (EN 196-3)	25 min.		
Setting times: end of setting (EN 196-3)	40 min.		
Application temperature	from +5 °C to +30 °C		
Consumption	approx. 18 kg/m ² per cm of thickness		
MEASURED ON HARDENED PRODUCT			
Operating temperature	from -20 °C to +90 °C		
Flexing strength at 1 day (EN 12190)	3,0 MPa		
Flexing strength at 7 days (EN 12190)	4,0 MPa		
Flexing strength at 28 days (EN 12190)	6,0 MPa		
Compressive strength at 1 day(EN 12190)	10,0 MPa		
Compressive strength at 7 days (EN 12190)	15,0 MPa		

Compressive strength at 28 days (EN 12190)	25,0 MPa		≥ 15,0 MPa (after 28 days)
Compression modulus of elasticity (EN 13412)	10,0 GPa		
Adherence on concrete (EN 1542)	≥ 1,2 MPa	For rigid systems without traffic: ≥ 1 MPa	≥ 0,8 MPa
Thermal compatibility (EN 13687-4)	≥ 1,0 MPa		≥ 0,8 MPa
Capillary absorption (EN 13057)	0,1 kg/(m ² •h ^{0,5})		≤ 0,5 kg/(m ² •h ^{0,5})
Impermeability coefficient (EN 1062-3)	w < 0,1 Class III		w < 0,1 kg/(m ² •h ^{0,5})
Permeability to water vapour (Equivalent air thickness SD) (EN ISO 7783-1)	Class I S _D < 5 m	Class I S _D < 5 m Class II 5 m ≤ S _D ≤ 50 m Class III S _D > 50 m	
Fire reaction (EN 13501-1)	Class A1		Value declared by manufacturer
Product classification (EN 1504-3)	R2 PCC		
Packaging	bag		
Pallet	40 cardboards, 50 bags		
Packaging size	4x5 kg, 25 kg		
Color	Grey		

CONSUMPTION

The coverage of Rinnova varies according to the type of use; in the case of smoothing it is approx. 1.8 kg/m² per mm of thickness, in the case of repairs and reconstructions it is approx. 1.8 kg/litre.

STORAGE

Store Rinnova in a dry, protected place. Unopened in its original bags, the product can be stored for at least 12 months.

CERTIFICATIONS

Product classified R2 PCC according to UNI EN 1504-3 and Coating type C according to UNI EN 1504-2. The performance declarations are available on www.torggler.com.

The information contained in this document is reported on the basis of our experience and knowledge; therefore, any recommendations and suggestions made are without any guarantee and must be verified before using the product by those who intend to use it, who assume all responsibility that may result from its use since the conditions of use are not under our direct control. In case of doubt, it is always advisable to make preliminary tests and/or ask for the intervention of our technicians. Torggler reserves the right to modify, replace and/or delete the items, as well as to change the product data in this document without prior notice; in this case the indications given here may no longer be valid. Always refer to the latest version of the data sheet, available at www.torggler.com. Version 03.11.2021.