

ZERO REPAIR MORTARS

Building a sustainable future together

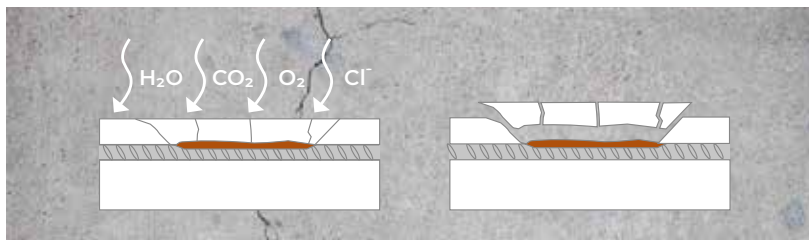




ZERO repair mortars

Crack resistance for higher durability

Every day, buildings are subjected to dynamic stresses that lead, in the long term, to the opening of cracks into concrete elements. These cracks not only cause structural damage but also represent a way for aggressive agents to enter such as **carbon dioxide** and **chlorides** which, combined with water and oxygen action, generate the beginning of **corrosion** phenomena.



CO₂ emissions measured throughout the life cycle of products from the **ZERO line** in 2023 using Life Cycle Assessment (LCA) methodology, verified and certified with EPDs, have been offset through the acquisition of certified carbon credits in support of renewable energy and forestry protection projects. A commitment to the planet, to people, and to biodiversity. For more details on how emissions are calculated and on climate mitigation projects financed through certified carbon credits, visit [ZERO.mapei.com](https://www.zero.mapei.com).

Thanks to their special formulation, **ZERO repair mortars** have excellent fatigue resistance, which has been proven by tests in external laboratories.



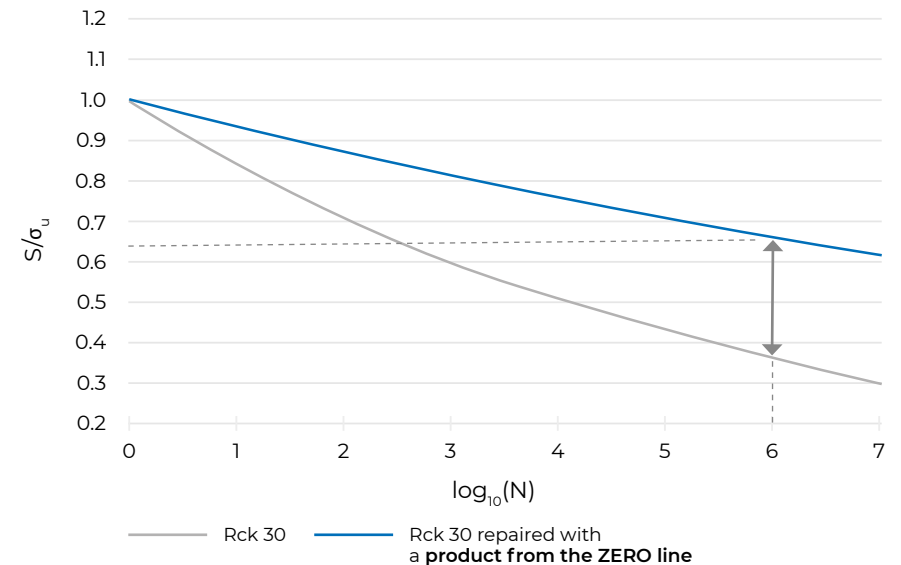
Objectives

- Increase in dynamic flexural strength of repaired concrete elements.
- Increased resistance to cracking.










Test results

- High cracking resistance.
- High fatigue strength.










The graph shows how a mortar from the **ZERO Line**, used to repair concrete, is able to increase its dynamic flexural strength characteristics. Specifically, it can be seen that with the same number of load cycles, the dynamic flexural strength is significantly higher.



Mapefer 1K ZERO

DESCRIPTION	One-component anti-corrosion cementitious mortar Applied to steel reinforcement to prevent the formation of rust.		
USE	 Application procedure	 approx. 60 Min +20°C Pot life	 > 2 mm Thickness
CHARACTERISTICS	 Protection of reinforcing bars	 Very low emission of VOC	 One-component, ready-to-use mortar
CERTIFICATIONS			

Planitop Smooth & Repair R4 ZERO

DESCRIPTION	Structural R4-class, quick-setting, thixotropic, fine-grained cementitious mortar Suitable for structural repairs and skimming internal and external horizontal and vertical concrete surfaces. Suitable for repairing structures exposed to the air and in permanent contact with water.		
USE	 Application procedure	 approx. 15 Min +20°C Pot life	 da/from 3 mm alto 40 mm Thickness
CHARACTERISTICS	 2 products in 1	 Applicable at low thickness	 Structural restoration
CERTIFICATIONS			

Planitop Smooth & Repair ZERO

DESCRIPTION	Quick-setting, R2-class, thixotropic, fine-grained cementitious mortar Ideal for non-structural repairs and skimming internal and external, horizontal and vertical concrete surfaces. It is suitable for repairing structures exposed to the air and in permanent contact with water.		
USE	 Application procedure	 approx. 15 Min +20°C Pot life	 da/from 3 mm alto 40 mm Thickness
CHARACTERISTICS	 2 products in 1	 Applicable at low thickness	 Natural fine-grained finish
CERTIFICATIONS			




Mapegrout 430 ZERO

DESCRIPTION	Fibre-reinforced, fine-grained, thixotropic compensated-shrinkage mortar It is used to repair the protective concrete layer on deteriorated concrete structures and may be applied with a continuous-feed rendering machine.		
USE	 Application procedure	 approx. 60 Min +20°C Pot life	 da/from 5 mm alto 40 mm Thickness
CHARACTERISTICS	 Easy to apply	 Also continuous mixing	 Natural fine-grained finish
CERTIFICATIONS			




Mapegrout Easy Repair ZERO

DESCRIPTION **Thixotropic, resistant to aggressive sulphates, fibre-reinforced, shrinkage-compensated mortar**
It is used to repair deteriorated concrete structures, even subject to attack from aggressive sulphates. It may also be applied with a continuous-feed rendering machine.





USE


Application procedure:  Pot life: approx. 60 Min at +20°C  Thickness: da/from 5 mm, a/to 50 mm 

CHARACTERISTICS

Also continuous mixing:  Resistant to sulphate aggression:  Natural fine-grained finish: Max 1,5mm 

CERTIFICATIONS




   






Mapegrout Hi-Flow ZERO

DESCRIPTION **Hi-flow, fibre-reinforced, shrinkage-compensated mortar for concrete repair**
Suitable for repairing structures where particular thicknesses and the state of deterioration require the use of high flow mortars. Certified for repairing and anchoring work.





USE


Application procedure:  Pot life: approx. 60 Min at +20°C  Thickness: da/from 10 mm, a/to 40 mm 

CHARACTERISTICS

High fluidity:  No need of vibration:  High mechanical performance: 

CERTIFICATIONS




   






Mapegrout Thixotropic ZERO

DESCRIPTION **Thixotropic, fibre-reinforced, shrinkage-compensated mortar**
Ideal for repairing horizontal and vertical surfaces on deteriorated concrete structures; may be applied even in heavy thicknesses, without the need for formwork.





USE


Application procedure:  Pot life: approx. 60 Min at +20°C  Thickness: da/from 10 mm, a/to 50 mm 

CHARACTERISTICS

Easy to apply:  Excellent workability:  Structural restoration: 

CERTIFICATIONS




   






Mapefill ZERO

DESCRIPTION **Fluid mortar with positive internal tension**
Suitable for precision anchoring of machinery or metallic structures and repairing damaged structures that require the use of free-flowing mortars.





USE


Application procedure:  Pot life: approx. 90 Min at +20°C  Thickness: da/from 10 mm, a/to 100 mm 

CHARACTERISTICS

High fluidity:  Excellent adhesion:  Resistance to dynamic/mechanical stress: 

CERTIFICATIONS



EVERYTHING'S OK WITH MAPEI

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