

ZERO REPAIR MORTARS

Building a sustainable future together

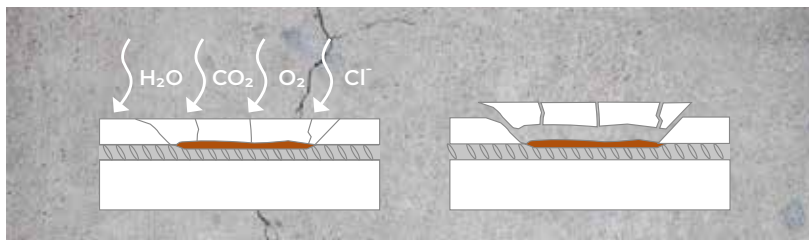




ZERO repair mortars

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.



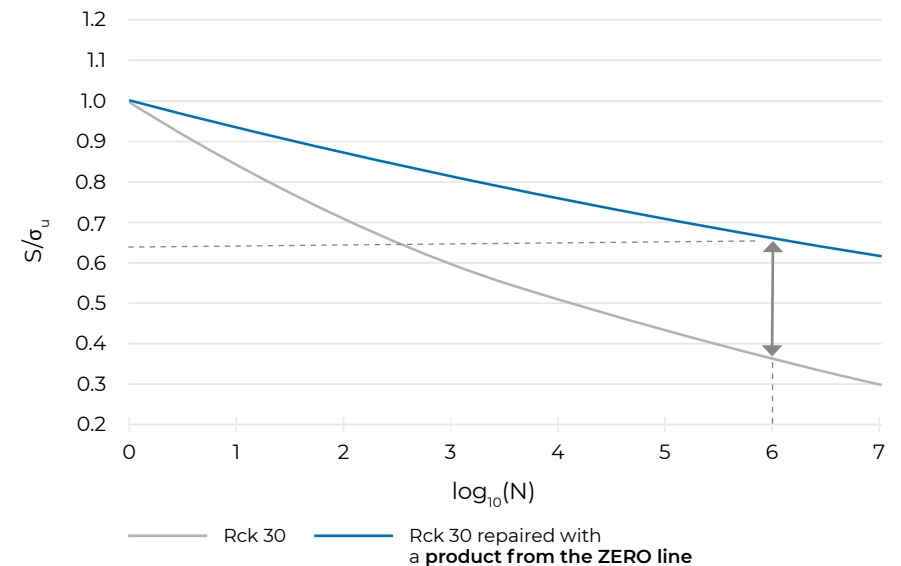
Objectives

- 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:  Pot life: approx. 60 Min at +20°C  Thickness: > 2 mm 

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:  Pot life: approx. 15 Min at +20°C  Thickness: da/from 3 mm, alfo 40 mm 

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:  Pot life: approx. 15 Min at +20°C  Thickness: da/from 3 mm, alfo 40 mm 

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:  Pot life: approx. 60 Min at +20°C  Thickness: da/from 5 mm, alfo 40 mm 

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, +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, +20°C  Thickness: da/from 10 mm, a/to 40 mm 

CHARACTERISTICS

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

CERTIFICATIONS




     





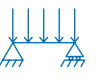
Mapegrout Thixotropic ZERO

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, +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, +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

HEAD OFFICE
MAPEI SpA
Via Cafiero, 22
20158 Milan
+39-02-37673.1
mapei@mapei.it
mapei.com

