

Mapefer

Corrosion-inhibiting cement mortar for reinforcing rods



WHERE TO USE

- Anti-rust protection of concrete reinforcement.
- Bonding slurries for repair mortars or new-on-old concrete.

Some application examples

Prevents corrosion and restores alkalinity in reinforcing rods during concrete repair with **Mapegrout** non-shrink mortars or with normal cement mortars modified with synthetic resin latexes. It can be applied both below and above grade.

TECHNICAL CHARACTERISTICS

Mapefer is a two-component system based on polymers in water dispersion, cement binders and corrosion inhibitors, to be applied on reinforcing rods to prevent rust formation, made according to a formula developed in the MAPEI research laboratories.

Mapefer is supplied ready-to-use, as two pre-dosed components: Part A (powder) and Part B (liquid).

The two parts must be mixed without the addition of water or any other ingredients.

The anti-rust action of **Mapefer** is provided through:

- its impermeability to water and aggressive gases present in the atmosphere (carbon dioxide, sulphur dioxide, nitric oxide);

- the presence of corrosion inhibitors which protect the metal surfaces from oxidation;
- its high level of alkalinity;
- its excellent adhesion to metal.

RECOMMENDATIONS

- Do not dilute **Mapefer** with water during preparation or when setting has started.
- Do not add cement or aggregates to **Mapefer**.
- Do not leave cleaned rods without protection for a long time. Apply **Mapefer** immediately after cleaning.
- Do not apply **Mapefer** when the temperature is below +5°C.

APPLICATION PROCEDURE

Preparing the rods

To ensure that **Mapefer** is able to develop its anti-corrosion properties efficiently it is essential that the rods to be treated are free from all surrounding degraded and carbonated concrete and from loose particles, grease, oil and rust.

A high-pressure washer is recommended to clean the rods down to white metal.

If for logistic reasons this is not possible, vigorous brushing of the metal surface should be carefully and thoroughly carried out.

Mapefer



Demolition of degraded concrete



Cleaning reinforcing rods



Mixing Mapefer

TECHNICAL DATA (typical values)

In compliance with:

– DIN 55 928 Part 4 Sa 2 1/2

PRODUCT IDENTIFICATION

Customs class: 3824 50 90

PART A:

Consistency: powder

Colour: white

Bulk density (kg/m³): 1000

Dry solids content (%): 100

Storage: 12 months in original packaging in a dry place

Hazard classification according to EC 99/45: irritant.
Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet

PART B:

Consistency: fluid liquid

Colour: blue

Density (g/cm³): 1.02

pH: 7.2

Dry solids content (%): 30

Storage: 1 year in original packing

Hazard classification according to EC 99/45: none.
Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet

APPLICATION DATA at +23°C and 50% R.H.

Colour of mix: blue

Mixing ratio: Part A : Part B = 3:1

Consistency of mix: plastic-brushable

Brookfield Helipath viscosity (mPa·s): 20000
(shaft 6 - 10 rev.)

Density of the mix (kg/m³): 1900

pH of mix: > 12.6

Application temperature range: from +5°C to +35°C

Pot life: 60 minutes

Surface drying time 90-120 minutes

Waiting time before application of repair mortar: 4-5 hours

FINAL PERFORMANCES

Adhesion to concrete (N/mm²): > 2.5

Adhesion to cleaned steel (N/mm²): > 2.5

Additional or substitute rods must be prepared in the same way.

Preparing the product

Pour Part B (liquid) into a clean container and while mixing, slowly add Part A, then mix vigorously for a few minutes to obtain a homogeneous mix.

Following these procedures, a brushable mortar, with a pot life of 60 minutes, is obtained.

Applying the mix

Apply two coats of **Mapefer** with a brush.

The second coat can be applied 90-120 minutes after the first and preferably within 24 hours. It is recommended that the surfaces of the rods be completely covered in one homogeneous coat.

This is not difficult because brush application with **Mapefer** is extremely easy.

The total thickness of the two coats must be 1.5-2 mm.

Inevitably, during the application, the surrounding concrete will also receive treatment. This will not create any problems as **Mapefer** also greatly improves the adhesion of all mortars.

The application of the repair mortar (e.g. **Mapegrout**) that follows, can be carried out 4-5 hours after **Mapefer** has been applied, depending on the temperature.

Precautions to be observed during application

The product can be applied when the ambient temperature is between +5°C and +35°C. However, in hot weather the mixed material should not be exposed to direct sunlight, as the pot life will be reduced.

Cleaning

While still fresh, **Mapefer** can be removed from brushes and tools with water. Once

hardened, it can only be removed mechanically.

CONSUMPTION

Approximately 150 g per linear metre of rod with a diameter of 10 mm, when the applied coat is 1.5 mm thick.

PACKAGING

Mapefer is available in 2 kg buckets (A+B).

STORAGE

Store **Mapefer** in a dry place at temperatures above +5°C.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Mapefer part A contains cement that when in contact with sweat or other body fluids may produce an alkaline irritating reaction. Avoid any type of contact with skin and eyes by always wearing protective gloves and goggles especially when mixing the two parts and when using the product.

For further information please refer to the Safety Data Sheet.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this product report correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

**All relevant references
of the product are available
upon request**



Application of Mapefer

Mapefer



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