

Mapegrout Fast-Set

**Fast-setting,
shrinkage-
compensated,
fibre-reinforced mortar
for concrete repair**



WHERE TO USE

Repairing exterior vertical and horizontal surfaces in deteriorated concrete.

Some application examples

- Restoration of deteriorated concrete structures, edges of pillars, beams, and balconies damaged by the oxidation of reinforcing rods.
- Fast repair of industrial concrete flooring.
- Sealing surface cracks in all types of buildings in concrete and cement renders.
- Fast smoothing of surface defects in concrete pour, such as gravel nests, shrinkage joints, formwork spacer holes, exposed rods.
- Assembly of concrete pipes.
- Repair of damaged edges of concrete pipes.
- Grouting joints between bricks on structures to be waterproofed with **Idrosilex Pronto**.

TECHNICAL CHARACTERISTICS

Mapegrout Fast-Set is a ready-mixed powder product of special hydraulic binders, selected aggregates, special additives and synthetic fibres in a formula developed in the MAPEI research laboratories.

Mixed with water, **Mapegrout Fast-Set** becomes an easily trowellable mortar with such good thixotropic properties that it can be applied up to 2-2,5 cm thick on vertical surfaces with no need for formwork.

Mapegrout Fast-Set sets in 20 minutes and can be subjected to loads a few hours after application.

Once cured, **Mapegrout Fast-Set** has the following properties:

- high compressive and flexural strength;
- excellent resistance to water;
- excellent adhesion to old concrete;
- good resistance to wear.

RECOMMENDATIONS

- Do not add more water to the mix after setting has begun in the attempt to make it trowellable again.
- Do not add cement, lime, gypsum or admixes to **Mapegrout Fast-Set**.
- Do not use **Mapegrout Fast-Set** for restoration work to be done with plaster sprayers (use **Mapegrout Thixotropic**).
- Do not use **Mapegrout Fast-Set** for precision anchors (use **Mapefill** or **Mapefill R**).
- Do not apply **Mapegrout Fast-Set** to dry or dirty surfaces.
- Do not leave bags of **Mapegrout Fast-Set** exposed to sunlight before use.
- Do not apply **Mapegrout Fast-Set** if ambient temperature is lower than +5°C.

- Do not use **Mapegrout Fast-Set** if the bag has already been opened or damaged.
- After hardening, **Mapegrout Fast-Set** could change colour, therefore its use is not recommended when it is left as a façade.

APPLICATION PROCEDURE

Preparing the substrate

A) Restoring deteriorated concrete structures

Remove all damaged and loose concrete until the substrate is solid, strong and rough. Any earlier repair work that does not adhere perfectly should be removed.

Clean concrete and reinforcing rods of dust, rust, cement crust, grease, oil and paint by sandblasting or by careful brushing if surfaces are not excessively large.

Protect all reinforcing rods with **Mapefer** or **Mapefer 1K**.

Wet substrate with water.

Wait for any excess water to evaporate before applying **Mapegrout Fast-Set**.

Compressed air can be used, if necessary, to facilitate removal of unabsorbed water.

For better adhesion, it is advisable to brush

on a coat of bonding slurry composed of

1 part of **Mapegrout Fast-Set** with

0.24-0.25 parts of water.

B) Repairing concrete flooring

Remove all damaged or loose concrete. Then chisel the edges of the repair area at right angles and clean it of all residues.

Wet the substrate with water. If the substrate is particularly absorbent, brush on a coat of bonding slurry composed of 1 part

Mapegrout Fast-Set with 0.24-0.25 parts water.

Preparing the mix

While stirring, pour a 25-kg bag of **Mapegrout Fast-Set** into a container holding 3.75-4 litres (15-16%) of clean water and mix with an electric mixer until the product is smooth with no lumps.

Given **Mapegrout**'s **Fast-Setting** time, prepare only enough of the product for use within 10 minutes (at +20°C).

Applying the mix

A) Restoring deteriorated concrete structures

Apply the mix with a float or a trowel to freshly slurred surface.

Maximum thickness is 2-2.5 cm per layer.

When particularly deep areas are to be repaired, apply several layers of **Mapegrout Fast-Set** at intervals of approx. fifteen minutes.

Once the repair work is finished, keep the restored patches damp for at least 24 hours.

Mapegrout Fast-Set can be painted with **Elastocolor** after three days at +20°C.

B) Repairing concrete flooring

Lay **Mapegrout Fast-Set** with a trowel on freshly slurred surface and finish with a plastering trowel.

After the application, protect the repaired surface from rapid water evaporation with sheets of polyethylene or wet bags.

Mapegrout Fast-Set can be used for light traffic after approx. three hours at +20°C.

PRECAUTIONS TO BE TAKEN DURING PREPARATION AND APPLICATION OF MAPEGROUT FAST-SET

No special precautions need be taken when temperature is approx. +20°C.

In warm weather do not to expose material to sunlight and use cold water for preparing the mix.

In low temperatures, the water should be approx +20°C and the material should be stored in heated areas because initial setting and curing is delayed at low temperatures.

N.B. - After hardening, **Mapegrout Fast-Set** could change colour, therefore its use is not recommended when it is left as a façade.

Cleaning

Before it hardens, **Mapegrout Fast-Set** can be cleaned from tools with water. After setting, residues can be removed by mechanical means.

CONSUMPTION

1.8 kg/m² per mm of thickness.

PACKAGING

Mapegrout Fast-Set is available in 25-kg bags.

STORAGE

Mapegrout Fast-Set can be stored for 12 months if kept in its original packaging and in a dry place.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

It contains cement that when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction and allergic reactions to those predisposed. Use protective goggles and gloves. For further information refer to the safety data sheet.

FOR PROFESSIONALS.

WARNING

N.B. Although the technical details and recommendations contained in this 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 use of the product.

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

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey
Specific gravity (kg/dm³):	1.20
Dry solids content (%):	100
Storage:	12 months in unopened 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 packaging and safety data sheet
Customs class:	3824 50 90

APPLICATION DATA

Colour of mix:	grey
Mix ratio:	one 25 kg bag with 3.75-4 l of water
Consistency:	plastic-thixotropic
Specific gravity (kg/dm³):	2.0-2.15
pH:	12
Minimum application temperature:	+5°C
Pot life:	> 10' (at +20°C)
Setting time:	< 30' (at +20°C)
Set to light foot traffic:	2-3 h
Interval between layers:	about 15' (at +20°C)

FINAL PERFORMANCES

Mechanical characteristics according to EN 196/1:	
Compressive strength (MPa):	
- after 3 h:	> 10
- after 24 h:	> 20
- after 7 d:	> 35
- after 28 d:	> 40
Flexural strength (MPa):	
- after 3 h:	> 4
- after 24 h:	> 5
- after 7 d:	> 7
- after 28 d:	> 8
Adhesion to substrate (measured by pull-off test on concrete soaked with water. Mapegrout Fast-Set was kept damp for the first 24 hours) (MPa):	
- after 7 days at +23°C and 50% R.H.:	2.0 (concrete failure)
- after 7 days at +23°C and 50% R.H. + 21 days in water:	2.0 (concrete failure)



BUILDING THE FUTURE

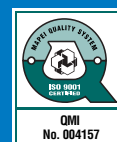
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