

MAPEFILL DEEP POUR

High performance dual shrinkage compensated structural cementitious grout for application thicknesses ranging from 20 to 500mm.

WHERE TO USE

Mapefill Deep Pour is perfectly suited to the reinstatement of large structural sectional repairs in concrete elements as well as smaller sections where form and pour application is preferred to hand placement and trowel finishing. **Mapefill Deep Pour** is also well suited to structural grouting of machine baseplates, bridge bearings, anchoring of posts and columns as well as restoring concrete floors for industrial facilities and transport infrastructure.

TECHNICAL CHARACTERISTICS

Mapefill Deep Pour is a ready mixed powder consisting of high strength cement, selected aggregates and additives that offset the drying shrinkage in both the plastic and the hardened state.

Mapefill Deep Pour, once mixed with water, becomes a highly fluid grout suitable for pouring or pumping into formwork without segregation of aggregates, even when forming great thicknesses.

Mapefill Deep Pour is produced using small aggregate sizes for ease of pumping and placement.

Mapefill Deep Pour, once cured, has the following qualities:

- Very high compressive strength.
- Low drying shrinkage.
- Highly impermeable, resistant to chlorides and carbonation.
- Extremely low chloride content.
- Low electrical resistivity and compatible for use with galvanic and cathodic protection systems.
- Sulphate resistant and extremely low in sulphate content.
- High bond strength.

RECOMMENDATIONS

- Do not use **Mapefill Deep Pour** on smooth concrete surfaces; always roughen to a CSP 4 or greater and insert reinforcement rods if necessary.
- Do not use **Mapefill Deep Pour** for applications by spray or trowel; Use **Planitop LSN R4**.
- Do not add cement or additives to **Mapefill Deep Pour**
- Do not add water after the mix has begun to set.
- Do not use **Mapefill Deep Pour** if the bag is damaged or it has been exposed to moisture.

APPLICATION PROCEDURE

TECHNICAL INFORMATION FOR APPLICATION

Composition of mix:	Fluid
Thickness layer:	20 - 500 mm
Application temperature range:	+5°C to +35°C
Pot life of mix:	Approximately 60 minutes
Waiting time between each layer:	Approximately 4-6 hours

Preparing the substrate

- Remove weak, loose or friable concrete until the substrate is sound and suitably textured. (CSP >4) Any previous restoration work that is not soundly bonded should also be removed.
- Clean the concrete and any exposed reinforcement rods to remove all dirt, rust, laitance, grease, oil and previously applied paints or coatings.
- Soak the prepared substrate with clean fresh water until it is saturated (min. 2 hours). Allow the excess water to drain away and make sure there is no standing water when placing the mix. If necessary, use oil-free compressed air to facilitate the removal of free water.

Preparing the mortar

Pour **2.4 – 2.8 litres** of fresh water into a mortar mixer. Start the mixer and slowly and continuously add the **Mapecore E30**. Mix for 1-2 minutes, scraping any unmixed dry powder off the sides of the mixer and remix for a further 1 – 2 minutes and until the mix is fluid and free of lumps. Depending on the quantity being prepared, **Mapecore E30** may also be mixed in a clean container with a drill and mixing paddle. Avoid entraining air during the mixing process.

Applying the mortar

When placing **Mapecore E30** and to ensure the efficient and complete filling of the void, pour the mix continuously and from one point, ensuring air can escape the form from the opposite side.

PRECAUTIONS TO BE TAKEN DURING AND AFTER APPLICATION

In hot weather, it is advisable to prevent the material from being exposed to the sun and to use cold water for preparing the mix. When temperature is low, the water used for the mix should be around 20°C. Once poured, **Mapecore E30** must be cured very carefully. The surface of the mortar exposed to air must be protected against the rapid evaporation of water, particularly in warm and windy conditions, to prevent plastic shrinkage surface cracking. Spray water onto the surface during the first 24 hours of curing or apply a curing agent e.g. **Mapecure E30**.

The protection of concrete structures enlarged or repaired with **Mapecore E30** may be enhanced with **Mapelast Guard** or **Elastocolor** protective coating systems.

Mapecore E30 must always be applied in constrained applications.

Consult the Mapei Technical Department for further advice on construction details when casting large volumes or high thickness of **Mapecore E30**.

CLEANING

Before hardening, the mortar can be cleaned from tools with water. After setting, cleaning is difficult and may only be removed mechanically.

CONSUMPTION

20 kg/m² per 10 mm of thickness.

PACKAGING

20 kg Bags.

TECHNICAL DATA (TYPICAL VALUES)

PRODUCT IDENTITY

Consistency:	Powder
Colour:	Grey
Maximum size of aggregate:	2.5 mm
Chloride ion content: - minimum requirement \leq 0.05% - according to EN 1015-17:	\leq 0.05%

TECHNICAL INFORMATION FOR THE PREPARATION OF THE PRODUCT

Composition of mix:	100 kg of Mapefill Deep Pour 12 - 14 litres water
Preparation of the mix:	Mixing of the product according to EN 196-1

CHARACTERISTICS OF FRESH MIX (AT +20°C - 50% R.H.)

Colour of mix:	Grey
Consistency of mix:	Fluid
Density of mix:	Approx. 2,200 kg/m ³

FINAL PERFORMANCE

According to curing defined in test methods

Performance characteristic	Test Method	Product Performance
Compressive strength: - 1 day - 7 days - 28 days	AS 1478.2	>15 MPa >45 MPa >65 MPa
Flexural strength (28 days):	EN 196-1	>9 MPa
Bond strength to substrates determined by tensile:	AS 1012.24	>1 MPa
Drying Shrinkage (28 days):	AS 1478.2	<600 μ m
Sulphate content (% of cement weight):	AS 1012.20	<0.4

Electrical Resistivity (28 days):	AASHTO T 358	<25,000 Ω cm
Restrained Expansion (7 days):	ASTM C878	0.054%

NOTES: Preparation of samples: compaction according to EN 196-1.

STORAGE

12 months in its original, unopened packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.au
PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet 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 application; 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. The values declared in the TECHNICAL DATA table (typical values) were obtained in compliance with test methods and curing cycles defined in the technical standards referenced therein. Therefore, please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com.au

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The most up-to-date TDS can be downloaded from our website www.mapei.com.au

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