

MAPEFILL DEEP POUR

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



BENEFITS AND FEATURES

- Very high compressive strength
- Low drying shrinkage
- For application thicknesses ranging from 20 - 500 mm
- Highly impermeable, resistant to chlorides and carbonation
- Extremely low chloride content
- Low electrical resistivity
- Sulphate resistant and extremely low in sulphate content
- High bond strength
- Safe for use in potable water AS/NZS 4020:2018

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.

RECOMMENDATIONS

- Do not use **Mapefill Deep Pour** on smooth concrete surfaces; always roughen to a CSP 4 or greater and insert reinforcement rods where 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 affected by moisture.

APPLICATION PROCEDURE

TECHNICAL INFORMATION FOR APPLICATION

Composition of mix:	100 kg of Mapefill Deep Pour 12 - 14% L of water
Thickness layer:	20 - 500 mm
Application temperature range:	+5°C to +35°C
Pot life of mix:	Approximately 60 minutes (at +20°C)

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 **Mapefill Deep Pour**. 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, **Mapefill Deep Pour** 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 **Mapefill Deep Pour**, to ensure the efficient and complete filling of the void, pour the mix continuously and from one point, ensuring air can escape 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, **Mapefill Deep Pour** 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 **Mapefill Deep Pour** may be enhanced with **Mapelastix Guard** or **Elastocolor** protective coating systems.

Mapefill Deep Pour 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 **Mapefill Deep Pour**.

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
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Colour:	Grey
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Maximum size of aggregate:	2.5 mm
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Ion-chloride content according to EN 1015-17 (minimum requirement according to EN 1504 ≤ 0.05%):	≤ 0.05%
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TECHNICAL INFORMATION FOR PRODUCT PREPARATION

Composition of the mix:	100 parts by weight of Mapefill Deep Pour with 13% water.
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Preparation of the mix:	Mix the product in compliance with the standard EN 196-1
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Curing conditions:	CC according to Annex A – EN 12190
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CHARACTERISTICS OF FRESH MIX (AT +20°C - 50% R.H.)

Colour of mix:	Grey
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Consistency of the mix:	fluid
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Flow (AS 1478.2 App D):	455 mm
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Density of the mix:	2,280 kg/m ³
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Setting time (AS 1012.18):	Initial setting time: > 5 hours Final setting time: < 10 hours
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FINAL PERFORMANCE

According to curing defined in test methods

Performance characteristics	Test Method	Product Performance
Compressive strength: - 1 day - 7 day - 28 days	AS 1012.9	> 15 MPa > 50 MPa > 70 MPa
Flexural strength: - 28 days	AS 1012.11	9 MPa
Tensile strength: - 28 days	AS 1012.10	4 MPa
Modulus of elasticity: - 28 days	AS 1012.17	38 GPa
Adhesion to concrete by pull-off:	EN 1542	> 2 MPa (at 28 days)
Drying Shrinkage:	AS 1478.2	<600 µm (at 28 days)
Sulphate content:	AS 1012.20	<0.4% (of cement weight)
Electrical Resistivity:	AASHTO T 358	<25,000 Ωcm (at 28 days)
Restrained Expansion:	ASTM C878	positive (at 7 days)

Notes: Specimens preparation: pour the mortar into the moulds filling them without compacting.

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 contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

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

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