



Mapefill GP AU

General purpose non-shrink grout

WHERE TO USE

Mapefill GP AU is a general purpose non-shrink grout recommended for grouting voids in structural elements such as patching up honeycombs in concrete, filling gaps in precast elements and grouting base plates and bridge bearings.

TYPICAL APPLICATIONS

- Anchoring of mechanical equipment
- Anchoring of steel bars
- Filling rigid joints between elements in concrete and precast concrete structures
- Execution of underpinning
- Pressure grouting of concrete structures
- Grouting of machine base plates or bridge bearings
- Concrete repair

TECHNICAL CHARACTERISTICS

Mapefill GP AU is a pre-blended grey powdered grout, based on high strength cement, 1mm graded aggregate, special additives and an expansive agent.

When mixed with water, **Mapefill GP AU** is transformed into a non-segregated, exceptionally high fluid grout that is able to fill intricate spaces.

Due to its expansive agent, **Mapefill GP AU** is characterised by a total absence of shrinkage in the plastic (ASTM C827) and hardened phase and develops early flexural and compressive strength.

Mapefill GP AU also has the following qualities:

- Excellent impermeability to water
- Excellent adhesion to rebars and concrete
- Excellent resistance to dynamic mechanical stress
- Modulus of elasticity and thermal expansion co-efficient similar to those of high-quality concrete
- DOES NOT contain metallic aggregates
- Non-toxic
- Non-corrosive
- Chloride-free

Mapefill GP AU meets all the main requirements defined by EN 1504-9 ("Products and systems for the protection and repair of concrete structures; definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems") and the minimum requirements claimed by EN 1504-6 ("Anchoring steel reinforcement").

RECOMMENDATIONS

- Do not add cement or additives to **Mapefill GP AU**
- Do not add water when the mix begins to set
- Do not use **Mapefill GP AU** if the bag is damaged or has already been opened
- Do not apply **Mapefill GP AU** at temperatures below +5°C

APPLICATION PROCEDURE

Preparing the substrate

- Remove all deteriorated concrete from the substrate
- Scarify the surface and eliminate the presence of dust, oil, grease, debris and laitance
- Soak the sides of the cavity to be filled with water. Before pouring, remove all excess water from the cavity. To facilitate the elimination of unabsorbed water, use compressed air if necessary

Preparing the Grout

Pour up to 80% of the required water into a clean container and then slowly and continuously add the **Mapefill GP AU** powder.

Water Ratio

Dry Pack mix—
20 kg bag **Mapefill GP AU** with
2.2 litres of water

Trowellable mix—
20 kg bag **Mapefill GP AU** with
2.6-3.0 litres of water

Pumpable mix—
20 kg bag **Mapefill GP AU** with
3.0-3.4 litres of water

Pourable mix—
20 kg bag **Mapefill GP AU** with
3.4-3.8 litres of water

Add the remaining water to achieve the required blend, mixing for 1 to 2 minutes with a mechanical mixer set at low speed. Remove any powder from the sides of the mixing container to ensure that all the powder is blended. Remix for another 2 to 3 minutes until a fluid homogeneous paste is obtained.

Depending on the quantities to be prepared, a grout mixer or a mechanical mixer can be used paying careful attention to avoid the formation of air bubbles. Mixing by hand is not recommended.

POT LIFE

Pot life of the mix at +23°C is approximately one (1) hour.

APPLICATION

Anchoring (Pourable Mix Ratio only)

Pour **Mapefill GP AU** from one side only in a continual flow encouraging the discharge of air bubbles.

The use of **Mapefill GP AU** for connecting precast concrete elements and the filling of rigid joints is recommended for a thickness up to 60 mm. It is not necessary to vibrate the grout mechanically. To facilitate the filling of spaces that are particularly difficult use a wood list or an iron rod.

Grouting of thick section

For filling cavities that have dimensions greater than those indicated, please consult your Mapei Technical Representative for assistance.

IMPORTANT INSTRUCTIONS

Instructions to be observed before and after application:

- At temperatures around +20°C no particular precautions are required
- In hot weather it is advisable not to expose the material to the sun and to use cold water when preparing the mix
- In cold temperatures it is advisable to use water that is at +20°C
- After casting, **Mapefill GP AU** must be properly cured. The surface of grout exposed to the air must be protected from rapid water evaporation that can cause the formation of surface cracks due to plastic shrinkage especially in hot or windy weather
- Spray water on the surface exposed to the air for the first 24 hours of curing or apply an anti-evaporant.

CLEANING

Fresh grout can be removed from tools with water. After curing, cleaning can only be done mechanically.

CONSUMPTION

Every 20 kg bag of **Mapefill GP AU** can yield 10-11 litres of grout.

PACKAGING

Mapefill GP AU is available in 20 kg bags.

STORAGE

Mapefill GP AU may be stored in a dry, sheltered place in original unopened packaging for up to 12 months.

TECHNICAL DATA (typical values)

In compliance with:

- EN 196: 1995
- ASTM C939 - 97
- ASTM C940 - 98
- ASTM C827 - 97

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey
Maximum diameter of aggregate (mm):	1
Dry solids content (%):	100
Bulk density (kg/m ³):	1300
Chlorid ions content: minimum requirement $\leq 0.05\%$ according to EN 1015-17 (%):	≤ 0.05

APPLICATION DATA

Colour of the mix:	grey
Mixing ratio: - dry packable - trowellable - pumpable - pourable	20 kg bag Mapefill GP AU with 2.2 litres of water 20 kg bag Mapefill GP AU with 2.6 - 3.0 litres of water 20 kg bag Mapefill GP AU with 3.0 - 3.4 litres of water 20 kg bag Mapefill GP AU with 3.4 - 3.8 litres of water
Consistency:	fluid (using 19% water)
Flow (ASTM C939):	< 60 seconds (using 19% water)
Specific gravity (kg/m ³):	2200 - 2350
pH of mix:	> 11.5
Temperature range:	from +5°C to +40°C
Pot Life	60 minutes

FINAL PERFORMANCES (19% OF WATER)

Performance characteristic	Test method	Requirements according to EN 1504-6	Product performance
Initial setting time:	-	not required	7 hr
Final setting time:	-	not required	8 hr
Compressive strength (MPa):	EN 12190	> 80% of the value declared by the manufacturer	> 15 (after 1 day) > 50 (after 7 days) > 55 (after 28 days)
Flexural strength (MPa):	EN 196/1	not required	> 5 (after 1 day) > 7 (after 7 days) > 8 (after 28 days)
Bleeding:	ASTM C940	not required	absent
Volume expansion (%):	ASTM C827	not required	1.0
Drawing resistance of steel rods - displacement at 75 kN load (mm):	EN 1881	≤ 0.6	≤ 0.6
Reaction to fire:	EN 13501-1	Euroclass	A1, A1 _{FL}

Mapefill GP AU



SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefill GP AU is not hazardous according to the ruling standards on the classification of mixtures. It is recommended to take the usual precautions for handling chemical products. The Material Safety Data Sheet is available upon request, or can be downloaded from www.mapei.com.au

PRODUCT FOR PROFESSIONAL USE.

WARNING

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 the use of the product.

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

LEGAL NOTICE

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.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.com.au

Mapei Australia Pty. Ltd

180 Viking Drive Wacol Qld 4076

Tel. +61-7-3276 5000 - Fax. +61-7-3276 5076

Website: www.mapei.com.au - Email: sales@mapei.com.au



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