

Mapecfill PT

Super-fluid, shrinkage-compensated, sand-free cementitious grout

WHERE TO USE

Filling of voids in narrow or congested spaces especially where the grout needs to be pumped long distances without bleeding or segregation.

Some application examples

- filling post-tensioning cable ducts in pre-stressed concrete horizontally & vertically;
- repair grouting of voids and cavities in cable ducts;
- slurry for filling narrow cavities and cracks in rock or damaged concrete;
- slurry for consolidating loose soil

TECHNICAL CHARACTERISTICS

Mapecfill PT is a sand-free, cementitious grout for preparing super-fluid injection slurries which can be pumped long distances without bleeding or segregation. It does not contain any hydrogen-generating aluminum powder and thus has no corrosive effects on steel. The expanding action of **Mapecfill PT** completely eliminates hydraulic shrinkage.

RECOMMENDATIONS

- Do not use **Mapecfill PT** for precision grouting. Use **Mapecfill SP**
- Do not use **Mapecfill PT** to fill clear gaps greater than 10 mm

APPLICATION PROCEDURE

Preparing the substrate

For cable duct grouting, all surfaces, openings and inlet/outlet points must be clean and free of dust, loose particles, greases, oils and all contaminants. For other applications, the substrate must be completely clean and solid. Unsound or loose sections, cement laitance and traces of form-release oils must be removed by scrubbing and/or washing with high-pressure water-jetting. Pre-wet concrete substrates to saturated-surface-dry (SSD) condition prior to placement of the grout.

Preparing the mix

Pour up to 80% of the required water into a clean container. Gradually add **Mapecfill PT** while mixing continuously using a mechanical mixer. Mix for 1-2 minutes. Release any powder adhering to the sides of the container into the mix. Add the remaining water as required and continue mixing for 2-3 minutes to achieve the desired lump-free and homogenous consistency. For grouting volumes larger than the mixer capacity, transfer the material from each mix into the holding hopper and keep the grout agitated at slow speeds. The grout should remain pumpable for about 30 minutes. This will vary depending on the ambient temperature and mix ratio.

Do not expose the material, whether in bags or mixed, to direct sun. If required, cold water may be used for preparing the mix.

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Applying the mix

The pumping and placing method must be selected to suit the project parameters. It is strongly recommended that trials simulating site conditions and covering all procedures including mixing, pumping, placing and testing are carried out and monitored by the engineer to ensure the project's requirements are met.

Cleaning

Fresh grout can be removed from tools with water. After hardening, cleaning becomes very difficult and can only be done mechanically.

Consumption

25 kg bag of **Mapefill PT** yields approximately 14.5 – 16.0 litres of grout (depending on water addition).

PACKAGING

Mapefill PT is available in 25 kg bags.

STORAGE

Store in a cool, dry, covered place in its original unopened packaging. **Mapefill PT** is stable for at least 6 months.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeill PT contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed.

It is recommended to use protective gloves and goggles and to take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention.

TECHNICAL DATA (Typical values)

PRODUCT IDENTITY

Consistency:	sand-free powder
Colour:	grey
Dry Solid Content (%):	100
Chloride ion content (%): (MS 522: Part4 / BS EN 196-2)	<0.05
Storage:	6 months in its original, unopened packaging.

APPLICATION DATA

Colour of the mix:	grey
Mixing Ratio:	25 kg of Mapefill PT with 6.25 to 7.75 liters (25%-31%) of water depending on consistency required.
Flow (s) (ASTM C 939):	15 - 38 (using 25% - 31% water)
Flow (s) (ASTM C 939 modified per FL DOT):	7 - 20 (using 25% - 31% water)
Mass density of mix (kg/m³):	2000 - 2200
pH of mix:	~12
Minimum application thickness (mm):	2
Application temperature (°C):	+5 to +40

FINAL PERFORMANCES

Compressive Strength (MPa) (EN196-1):	25% water	29% water	31%water
- 1 day	>35	>25	>15
- 7 days	>70	>60	>50
- 28 days	>80	>70	>60
Bleeding (%) (ASTM C940):	0		
Expansion (%) (ASTM C940):	>0, <2		

KLANG VALLEY MASS RAPID TRANSIT (KVMRT) SPECIFICATIONS

PROPERTY	REQUIREMENTS	COMPLIANCE
Fluidity (s): (KVMRT 232.7.2)	12 - 25	Pass
Settlement after 3 hours (mm): (KVMRT 232.7.3)	≤4	Pass
Bleeding after 3 hours (%): (KVMRT 232.7.3)	≤2	Pass
Expansion after 3 hours (%): (KVMRT 232.7.3)	≤10	Pass
Compressive Strength (N/mm ²) (KVMRT 232.7.4)		
- 7 days	>17	Pass
- 28 days	>30	Pass

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

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.

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

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

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