

# Planigrout PT

Post-Tensioning Grout



## DESCRIPTION

*Planigrout® PT* is a non-shrinking, fluid, cement-based grout used to fill the annular space around post-tensioned strands in PT ducts.

## FEATURES AND BENEFITS

- Easily pumped
- Long working time
- Corrosion-resistant with no added chlorides
- Aggregate-free
- Silica-fume-enhanced
- Used for horizontal or vertical grouting of PT tendons as well as repair applications of already grouted tendons.

## WHERE TO USE

- Interior/exterior use
- Post-tensioned cables and ducts
- Grouting of areas with tight clearances where traditional non-shrink grouts that contain aggregates cannot be used
- Can be used for anchoring tie rods, anchor bolts and tendons in rock and soil

## SURFACE PREPARATION

### As a PT grout

- Areas to be grouted must comply with the preparation requirements of PTI M55.1-19.

### As a non-shrink grout with tight clearances

- Concrete surface must be clean and free of loose particles, efflorescence, paint, tars, grease, asphaltic materials, bond breakers, curing compounds, wax and any foreign substance.
- Mechanically prepare the substrate as to achieve a concrete surface profile (CSP) of #5 to #10 per the guidelines of ICRI 310.2R.
- Thoroughly wet the concrete surface, preparing it to a saturated surface-dry (SSD) condition. Remove all standing water from low areas on the foundation, as well as from bolt holes.
- Ensure that the concrete substrate and ambient room temperatures are between 41°F and 95°F (5°C and 35°C) before application. Maintain temperatures within this range for at least 72 hours after the placement of *Planigrout PT*; water and material should be maintained at about 70°F (21°C).

## MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- For *Planigrout PT* injection, refer to PTI M55.1-19 for mixing and placement requirements.
- For small voids and trial batches, *Planigrout PT* may be mixed in a bucket by drill and Jiffy mixer.

1. The maximum water allowed is 1.9 U.S. gals (7.19 L). Add 1.8 U.S. gals. (6.81 L) of clean, potable water.
2. While mixing, add the bags of *Planigrout PT*.
3. Trials should be performed prior to placement. Mixing time should be in line with the trials and should not exceed 4 minutes for a vane mixer or 2 minutes for a high-speed shear mixer. Refer to the PTI Guide Specification for additional details and mixing speeds.

## CLEANUP

- Immediately clean any mixing equipment, pumps, etc., with water before the material hardens. Cured material can only be removed mechanically.

## CURING

- Cure all exposed areas of *Planigrout PT* with an approved ASTM C309 water-based curing compound, or sheet-cure with plastic for 72 hours.

## LIMITATIONS

- When *Planigrout PT* is used as a PT grout for bridges and structures, it is highly recommended that the contractor be certified through the Post-Tensioning Institute.
- When *Planigrout PT* is used as a non-shrink grout under baseplates, it must not be used in areas less than 1/2" (2.5 cm) or greater than 2" (5 cm) in depth.
- A pre-job meeting should be conducted to fully understand the design and grouting procedures to be used.

- Condition all materials to a temperature between 45°F and 95°F (7°C and 35°C) for at least 24 hours before mixing and placement.
- MAPEI is not responsible for any corrosion-causing contaminants within the mixing water or flushout materials.
- Do not add anything but potable water to *Planigrout PT*. Utilize hot-weather or cold-weather grouting practices based on the temperature. Contact MAPEI's Technical Services Department if assistance is needed.

### Product Performance Properties

at 73°F (23°C) and 50% relative humidity

Laboratory Tests	Results
Flow rate – ASTM C939 (modified per PTI)	< 20 seconds, initial flow < 30 seconds at 30 minutes*
Initial setting time – ASTM C953	About 6 hours
Compressive strength – ASTM C942	> 3,000 psi (20.7 MPa) at 24 hours > 5,000 psi (34.5 MPa) at 7 days > 7,000 psi (48.3 MPa) at 28 days
Hardened height change – ASTM C1090	
24 hours	0.0%
28 days	0.0%
Plastic expansion – ASTM C940	Up to 3%
Wick induced bleed – ASTM C940**	
3 hours	0.0%
Schupack pressure bleed test at 50 psi	0%
Rapid chloride permeability – ASTM C1202 (modified per PTI)	< 2,500 coulombs

\* Remixed for 30 seconds prior to testing.

\*\* Modified per PTI Guide Specification c.4.4.6.1

### Shelf Life and Application Properties

Shelf life	6 months in original, unopened container at 73°F (23°C). Store at 40°F to 95°F (4°C to 35°C).
Mixing ratio, per 50 lbs. (22.7 kg) of <i>Planigrout PT</i>	1.9 U.S. gals. (7.19 L) for fluid consistency (31.6% of water by weight of the material)
Pot life at 73°F (23°C)	About 30 minutes
Application temperature range	45°F to 95°F (7°C to 35°C)
VOC content	0 g per L

## CSI Division Classification

Grouts	03 62 13

## Packaging

Size
Bag: 50 lbs. (22.7 kg)

## Approximate Coverage\*\*\*

per 50 lbs. (22.7 kg)

Yield
0.51 cu. ft. (0.0144 m <sup>3</sup> ) at fluid consistency

\*\*\* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

## ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (SDS) for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact [sustainability\\_USA@mapei.com](mailto:sustainability_USA@mapei.com) (USA) or [sustainability-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com) (Canada).

## WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. 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.

#### LEGAL NOTICE

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Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

## CONTACT INFORMATION

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