



# Planigrout 300 SP

## High-performance easy-flow tri-component epoxy mortar

### WHERE TO USE

**Planigrout 300 SP** is an epoxy mortar specially developed for fastenings, repairs and structural filling.

#### Some application examples

- Repair and structural reinforcement of beams and columns by casting formworks.
- Rebuilding and renovation of crumbled joints in industrial floors.
- Repair of overhead and bridge-crane runways.
- Repair of joints between concrete slabs in deteriorated industrial floors (butt joints).
- Filling of large holes in concrete floors and slabs.
- Foundations for presses and general heavy machinery.
- Evening-out of the surfaces of support and bolts in existing concrete, stone, rock and steel structures.
- Structural fixing of pull-rod fasteners and bolts in existing concrete, stone, rock and steel structures.

### TECHNICAL CHARACTERISTICS

**Planigrout 300 SP** is a tri-component product based on epoxy resin, selected well-graded aggregates and special additives, blended according to a formula developed in MAPEI's own research laboratories.

After mixing Component A of **Planigrout 300 SP** with its relative hardener (Component B) and charger (Component C), a fluid mixture which may be easily poured and applied in layers up to 5 cm is obtained.

After preparation, **Planigrout 300 SP** hardens in approximately 12 hours at +23°C by means of chemical reticulation without shrinking, and is transformed into a compound with exceptional bonding strength and chemical and mechanical resistance characteristics.

After hardening **Planigrout 300 SP** is durable and may be used for both internal and external applications.

**Planigrout 300 SP** may be applied in a temperature range of between +10°C and +40°C.

### RECOMMENDATIONS

- **Planigrout 300 SP** must not be used for sealing flexible joints or joints which are subject to movement (use **Mapesil AC** and **Mapeflex PU20**).
- **Planigrout 300 SP** must not be used for cold joints between fresh and old concrete (use **Eporip**).
- **Planigrout 300 SP** must not be used on wet surface.
- **Planigrout 300 SP** must not be used on dirty or crumbly surface.
- **Planigrout 300 SP** must not be used for bonding and grouting antiacid ceramic tiles (use **Kerapoxy**).

### APPLICATION PROCEDURE

#### Preparation of the substrate

To guarantee that **Planigrout 300 SP** bonds well to the substrate, special care must be taken in the preparation of the surfaces to be bonded.

The concrete, natural stone or brick substrate must be clean, dry and solid.

**TECHNICAL DATA (typical values)****PRODUCT IDENTIFICATION**

	<b>Comp. A</b>	<b>Comp. B</b>	<b>Comp. C</b>
<b>Consistency:</b>	liquid	liquid	powder
<b>Colour:</b>	off-white	straw-yellow	grey
<b>Density (kg/dm<sup>3</sup>):</b>	1.09	1.04	
<b>Viscosity (mPa.s):</b>	700	400	
<b>Storage:</b>	24 months in their original packaging if kept closed, at a temperature of between +5°C and +30°C		12 months in the original unopened packaging in a dry and ventilated place. Protect from humidity
<b>Hazard classification according to Directive EC 99/45:</b>	irritant	corrosive	irritant
	hazardous for the environment Before using, consult the "Safety Instruction" section and the information on the packaging and on the safety data sheet.		
<b>Customs code:</b>	3506 91 00		

**APPLICATION DATA AT +23°C - 50% R.H.**

<b>Mixing ratio:</b>	A : B : C = 4 : 1.5 : 25
<b>Consistency of mix:</b>	fluid
<b>Brookfield viscosity (mPa.s):</b>	35,000
<b>Colour of the mix:</b>	dark grey
<b>Density of mix (kg/dm<sup>3</sup>):</b>	2.1
<b>Pot life (at +23°C):</b>	75 min.
<b>Setting time (at +23°C):</b>	9-12 hours
<b>Application temperature range:</b>	from +10°C to +40 °C
<b>Complete setting time</b>	7 days

**FINAL PERFORMANCES**

<b>Adhesion to concrete (MPa)</b>	> 3 (concrete failure)
<b>Tensile strength (ASTM D638) (MPa):</b>	15
<b>Extension due to tensile strain (ASTM D638) (%):</b>	1
<b>Compressive strength (ASTM D638) (MPa):</b> - after 1 day: - after 7 days:	> 60 > 95
<b>Modulus of elasticity under compression ASTM D638) (MPa):</b>	2,400
<b>Flexural strength (ISO 178) (MPa):</b>	35
<b>Modulus of elasticity under flexion (MPa):</b>	10,000

The most suitable methods for preparing the substrate are chiselling, sand-blasting, milling, shot blasting, grinding or sanding the surface in order to remove irregular or loose parts, efflorescence, cement laitance, traces of oil and form release agents.

Then remove all traces of dust from the substrate with compressed air and/or an industrial vacuum cleaner.

Metallic surfaces must be free of all traces of rust, paint and oil preferably by means of sandblasting down to bare metal (SA 2<sup>1/2</sup>).

With structures made on-site in cast concrete, a minimum curing time of 4 weeks must be allowed before applying **Planigrout 300 SP** to avoid the stresses induced by hydrometric shrinkage in the concrete being concentrated at the interface of the joined parts.

The application temperature of **Planigrout 300 SP** must not be lower than +10°C.

### Preparing the mix

The three components which make up **Planigrout 300 SP** have to be mixed together. Pour Component B into Component A, making sure that the container with the catalyst (Component B) is completely emptied, and mix them together with a drill fitted with a low-speed mixer until a completely homogenised paste is formed. At this point, pour in the selected aggregates (Component C) with a continuous, regular flow, and mix together for 4 or 5 minutes until a uniformly wet paste with a homogenous colour is obtained. The packages are already pre-dosed. Therefore, avoid using only partial quantities of the packages to avoid accidental errors in the mix ratio, which would lead to a lack or only partial setting of **Planigrout 300 SP**.

### Mixing ratio

4.0 parts in weight of Component A;  
1.5 parts in weight of Component B;  
25 parts in weight of Component C.

### Application of the mix

**Planigrout 300 SP** is applied by pouring and, where necessary, into sealed formworks.

In order to achieve good bonding, it is advisable to pre-treat the surfaces to be repaired with **Primer MF**.

The air temperature has an effect on the setting time of the product; at +23°C, **Planigrout 300 SP** may be worked for approximately 90 minutes.

**Planigrout 300 SP** must be applied with the indicated pot time. Therefore, make sure that the work is organised and programmed so

that all the operation are completed within the time indicated above.

### Guidelines to follow before use

While taking into account the fact that the product sets in the time indicated above, no particular precautions need to be taken when the temperature is between +10°C and +40°C.

### SAFETY INSTRUCTION FOR THE PREPARATION AND APPLICATION

Component A and C in **Planigrout 300 SP** may irritate and cause an allergic reaction in those people who are subject to such conditions. Component B may cause burns to the skin and serious damage to the eyes. The use of gloves and protective goggles is recommended. **Planigrout 300 SP** is also hazardous for the environment. Waste and leftovers of the product must be treated as hazardous substances, and disposed of according to current norms and guidelines foreseen by the law.

### Cleaning

**Planigrout 300 SP** has a high bonding capacity even on metals, and it is advisable to wash all tools with a suitable solvent (ethyl alcohol, toluene etc.) before the product completely sets.

### COMSUMPTION

2.00 kg/m<sup>2</sup> per mm of thickness.

### PACKAGING

In packages of 30.5 kg (4 kg of Component A, 1.5 kg of Component B and 25 kg of Component C).

### STORAGE

The product must be conserved in their original packaging and stored in an area with a minimum +10°C.

FOR PROFESSIONALS.

### WARNING

*While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use these products, must ensure beforehand that they are suitable for their intended application and, in all cases, the user is to be held responsible for any consequences deriving from their use.*

**All relevant references  
of the product are available  
upon request**



**MAPEI GROUP CERTIFIED MANAGEMENT SYSTEMS  
(Quality, Environment and Safety)**

<p>CERTQUALITY No. 250</p>	<p>The Mapei Environmental Management System <b>ISO 14001</b> Plant in Robbiano di Mediglia CERTQUALITY No.1230</p>	<p>The Mapei Environmental Management System <b>ISO 14001</b> Plant in Latina CERTQUALITY No. 6127</p>	<p>EMAS VERIFIED ENVIRONMENTAL MANAGEMENT Reg. No. 1.000019 PLANT IN ROBBIANO DI MEDIGLIA</p>	<p>OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS <b>OHSAS 18001</b> CERTIFIED BY CERTQUALITY PLANT IN ROBBIANO DI MEDIGLIA Certificate No. 3586 MAPEI</p>	<p>MAPEI QUALITY SYSTEM ISO 9001 CERTIFIED CERTQUALITY No. 3358</p>	<p>MAPEI QUALITY SYSTEM ISO 9001 CERTIFIED ITC No. 03 0063 SJ</p>	
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