

Planigrout 300 SP

High-performance easy-flow three-component epoxy grout

WHERE TO USE

Planigrout 300 SP is an epoxy grout specially developed for fastenings, repairs and structural grouting.

Some application examples

- Grouting of beams and columns.
- Grouting and renovation of crumbled joints in industrial floors.
- Grouting of overhead and bridge-crane baseplates.
- 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 grouting of pull-rod fasteners and bolts in existing concrete, stone, rock and steel structures.

TECHNICAL CHARACTERISTICS

Planigrout 300 SP is a three-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 it 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 water ponded 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

Preparing 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.

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 2½).

With structures made on freshly casted 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;
22.5 parts in weight of Component C.

Application of the mix

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

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 within the indicated pot life. Therefore, make sure that the work is organised and programmed so that all the operations 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 PREPARATION AND APPLICATION

Components 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

2.10 kg/m² per mm of thickness.

PACKAGING

In packages of 28 kg (4 kg of Component A, 1.5 kg of Component B and 22.5 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.

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION

	Comp. A	Comp. B	Comp. C
Consistency:	liquid	liquid	powder
Colour:	off-white	straw-yellow	grey
Density (kg/dm ³):	1.09	1.04	1.30
Viscosity (mPa.s):	700	400	
Storage	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.
Hazard classification according to Directive EC 1999/45:	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.		
Customs code:	3506 91 00		

APPLICATION DATA (at +23°C - 50% R.H.)

Mixing ratio:	A : B : C = 4 : 1.5 : 22.5
Consistency of mix:	fluid
Brookfield viscosity (mPa.s):	35,000
Colour of the mix:	dark grey
Density of mix (kg/l):	2.0
Pot life (at +23°C):	75 min
Setting time (at +23°C):	9-12 hours
Application temperature range:	from +10°C to +40 °C
Complete setting time:	7 days

FINAL PERFORMANCE

Adhesion to concrete (MPa):	> 3 (concrete failure)
Tensile strength (ASTM D307) (MPa):	16
Compressive strength (ASTM C349) (MPa):	
- after 1 day:	> 60
- after 7 days:	> 95
Flexural strength (ASTM C348) (MPa):	40

**Planigrout
300 SP**

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

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