

Planigrout 300

High-performance easy-flow tri-component epoxy mortar

WHERE TO USE

Planigrout 300 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 elements for the bearing of bridge beams.
- Structural fixing of pull-rod fasteners and bolts in existing concrete, stone, rock and steel structures.

TECHNICAL CHARACTERISTICS

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

Planigrout 300 may be applied in a temperature range of between +10°C and +35°C.

RECOMMENDATIONS

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

APPLICATION PROCEDURE

Preparation of the substrate

To guarantee that **Planigrout 300** 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			
	Comp. A	Comp. B	Comp. C
Consistency:	liquid	liquid	powder
Colour:	off-white	straw-yellow	grey
Density (kg/dm³):	1.09	1.04	
Viscosity (mPa·s):	700	400	
Storage:	12 months in their original packaging if kept closed, at a temperature of between +5°C and +30°C		
Hazard classification according to Directive CE 99/45:	irritant hazardous for the environment Before using, consult the "Safety Instructions" section and the information on the packaging and on the safety data sheet	corrosive	irritant
Customs class:	3506 91 00		
COMPOSITION AND PROPERTIES OF THE MIXTURE			
Mixing ratio:	A : B : C = 4.8 : 1.8 : 30		
Consistency of mix:	fluid		
Brookfield viscosity (mPa·s):	35,000		
Colour of mix:	dark grey		
Density of mix (kg/dm³):	2.0		
Pot life (at +23°C):	75 min.		
Setting time (at +23°C):	9-12 hours		
Application temperature range:	from +10°C to +35°C		
Complete setting time:	7 days		
FINAL PERFORMANCES (after 7 days at 23°C)			
Adhesion to concrete (MPa):	> 3 (concrete failure)		
Tensile strength (ASTM D638) (MPa):	15		
Extension due to tensile strain (ASTM D638) (%):	1		
Compressive strength (ASTM D695) (MPa): – after 1 day: – after 7 days:	40 90		
Modulus of elasticity under compression (ASTM D695) (MPa):	2,400		
Flexural strength (ISO 178) (MPa):	35		
Modulus of elasticity under flexion (MPa):	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^{1/2}).

With structures made on-site in cast concrete, a minimum curing time of 4 weeks must be allowed before applying **Planigrout 300** 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** must not be lower than +10°C.

Preparing the mix

The three components which make up **Planigrout 300** 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**.

Mixing ratio

4.8 parts in weight of Component A;
1.8 parts in weight of Component B;
30 parts in weight of Component C.

Application of the mix

Planigrout 300 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** may be worked for approximately 90 minutes.

Planigrout 300 must be applied within the indicated pot time. 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 +35°C.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Components A and C in **Planigrout 300** 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** 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 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.

CONSUMPTION

2.00 kg/m² per mm of thickness.

PACKAGING

In packages of 36.6 kg (4.8 kg of Component A, 1.8 kg of Component B and 30 kg of Component C).

STORAGE

The products must be conserved in their original packaging and stored in an area with a minimum temperature of +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**



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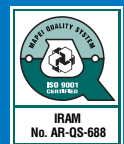
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