PLANIBOND BA 100

Two-component fluid epoxy resin for anchoring steel bars

CE
EN 1504-6

IN COMPLIANCE WITH EUROPEAN STANDARD
EN 1504-6
MAPEI
ANCHORING STEEL REINFORCEMENT BARS

WHERE TO USE

Planibond BA 100 is a high performance epoxy resin suitable for anchoring metal bars and metal structures in general.

Some application examples

- Anchoring metal structures and rebar.
- Anchoring bolts and tie-rods in existing concrete, stone, rock and steel structures exposed to vibrations and aggressive chemicals.

TECHNICAL CHARACTERISTICS

Planibond BA 100 is a two-component, solvent-free, fluid epoxy resin with special fillers according to a formula developed in the MAPEI Research Laboratories.
When **Planibond BA 100** component A is mixed with its catalyser component B it forms a product with a highly fluid consistency and low viscosity. **Planibond BA 100** cures without shrinking and, once hardened, it is extremely strong and waterproof and has excellent dielectric properties. It also adheres very strongly to both concrete and steel.
Planibond BA 100 remains workable for around 30 minutes at +23°C and may be applied at a temperature of +5°C to +35°C. When applying **Planibond BA 100** at high temperatures its workability time is considerably reduced. In such conditions, therefore, we recommend conditioning the product at +23°C (in a temperature-controlled container for example) prior to application.
Planibond BA 100 meets all the main requirements for EN 1504-9 ("*Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems*") and the minimum requirements for EN 1504-6 (" *Anchoring of reinforcing steel bar*").

RECOMMENDATIONS

- Do not apply **Planibond BA 100** on wet surfaces.
- Do not apply **Planibond BA 100** on dusty, crumbling or weak substrates.
- Do not use **Planibond BA 100** to seal expansion joints.
- Do not use **Planibond BA 100** if the temperature is lower than +5°C or higher than +35°C.

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APPLICATION PROCEDURE

Preparation of the substrate

Concrete substrates must be sound, clean and dry.
Remove all crumbling and detached areas and all traces of dust, cement laitance and paint by brushing or sandblasting. Concrete impregnated with oil or grease must be completely demolished. Reintegrate areas where concrete has been removed with products from the **Mapegrout** range. To obtain perfect adhesion between **Planibond BA 100** and metal, we recommend removing all traces of dust, loose material, paint and greasy or oily substances by sandblasting to a near white metal finish (grade SA 2½).

Preparation of the product

The two components which make up **Planibond BA 100** must be mixed together. Pour component B into component A and mix by hand with a spreader or a drill at low-speed with a mixing attachment until the resin is completely blended; avoid entraining air into the mix.
NB: *when the product reacts it generates heat. Therefore, we recommend applying the resin as soon as possible after mixing without leaving the container unattended and in confined areas.*
Each component is supplied in pre-dosed quantities. Do not use partial quantities to avoid accidental errors in the mixing ratio, otherwise **Planibond BA 100** may not harden correctly. If only partial quantities of the components need to be used, weigh them out with high-precision electronic scales to maintain the mixing ratio indicated in the Technical Data table.

Application of the product

Pour the resin into holes previously drilled in the substrate.
The surrounding temperature has an effect on the hardening time of the product. At +23°C **Planibond BA 100** remains workable for approximately 30 minutes.
Apply **Planibond BA 100** within this period and organise work schedules so that the application cycle may be completed within the time mentioned above.

Cleaning

Planibond BA 100 forms a strong bond, including on metal, and we recommend cleaning tools with solvent (such as ethyl alcohol, toluene, etc.) before it hardens.

CONSUMPTION

Approximately 2 kg/dm³.

PACKAGING

3 kg kit (A + B):

- component A = 2.7 kg;
- component B = 0.3 kg

STORAGE

24 months in its original packaging.
Store the product in an area with a temperature of +5°C to +35°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

When the product reacts, it generates considerable heat. After mixing components A and B, we recommend applying the product as soon as possible and never leaving the container unattended until it is completely empty.
Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	comp. A	**comp. B**
Consistency:	thick paste	liquid
Colour:	beige	straw yellow
Density:	2.15 g/cm³	1.0 g/cm³
Brookfield viscosity:	70,000 mPa·s (spindle 6 - 5 revs)	7,000 mPa·s (spindle 2 - 20 revs)

PRODUCT APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	A : B = 90 : 10 by weight
Colour of mix:	beige
Consistency of mix:	fluid
Density of mix:	1.9 kg/dm³
Brookfield viscosity:	16,000 mPa·s (spindle 5 - 10 revs)
Application temperature:	+5°C to +35°C
Pot life of mix:	30 mins.
Setting time:	3 h
Full hardening time:	7 days

FINAL PERFORMANCE

Performance characteristic	Test method	Requirements according to EN 1504-6	Product performance
Glass transition temperature:	EN 12614	≥ +45°C	≥ +45°C
Creep - movement under a load of 50 kN for 3 months:	EN 1544	≤ 0.6 mm	0.20 mm
Pull-oute of rebar - movement under a load of 75 kN:	EN 1881	≤ 0.6 mm	0.45 mm
Bonding to concrete:	EN 1542	not required	> 3 N/mm² (failure of concrete)
Compressive strength at +23°C:	EN 12190	> 80% of the value declared by the manufacturer	100 N/mm² (after 7 days)
Adhesion strength of bar anchored with Planibond BA 100 in concrete (MC 0.40 type substrate - water/cement ratio = 0.40) according to EN 1766*:	EN 1881	not required	14 MPa
Reaction to fire:	EN 13501-1	Euroclass	D-s3, d2

** Test carried out using a Ø 16 rebar with 150 mm of anchoring length and hole diameter of 20 mm. In each test the failure is of type 1 (failure of the rebar)*

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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements p er the TDS in force at the

time of the MAPEI product installation.
The most up-to-date TDS can be downloaded from our website www.mapei.com.
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