



# Planobond



**High performance self-backbuttering cementitious adhesive, with extended open time for ceramic tiles and stone material**



## **CLASSIFICATION IN COMPLIANCE WITH EN 12004**

**Planobond** is an improved (2) cementitious adhesive (C) with extended open time (E) of class C2E.

## **WHERE TO USE** **Installing floors**

- Internal and external floor bonding of all types of ceramic tiles, including medium and large sizes, stone material (provided that not sensitive to moisture and not subjected to efflorescences), Tuscan terracotta and terrazzo tiles.

## **Some application examples**

- Void-free bonding of large porcelain tiles in heavy traffic areas such as offices, shops, hospitals, schools, supermarkets.
- Bonding of stone material and terrazzo tiles, also in large sizes.
- Bonding grès, klinker, and single-fired tiles on terraces and balconies.
- Bonding all types of ceramic tile on any type of radiant heating floor.
- Laying ceramic tiles and stone material over old flooring (ceramic, natural stones, terrazzo tiles), provided that they are sound, bonded to the substrate and perfectly clean.

## **TECHNICAL CHARACTERISTICS**

**Planobond** is a grey powder composed of cement and graded sand that contains a large amount of synthetic resins and special additives manufactured according to

a formula developed in the Mapei Research and Development laboratories.

Mixed with water, **Planobond** becomes a mortar with the following characteristics:

- semi-fluid consistency and therefore easily workable;
- the adhesive transfer to the tile back is 100% ensured. **Planobond** can be used in thicknesses from 3 to 20 mm without the formation of empty spaces. Is ideal for external installations and heavy traffic areas;
- perfect bonding to all materials normally used in building;
- hardens without noticeable shrinkage becoming mechanically very strong;
- is resistant to water, weathering action and frost.

## **RECOMMENDATIONS**

Do not use **Planobond** on:

- walls or sloping surfaces;
- wood and wooden composites;
- metal, rubber, PVC or linoleum surfaces;
- with natural stone and agglomerates materials subject to movement due to moisture.

## **APPLICATION PROCEDURE** **INSTALLING FLOORS**

### **Preparing the substrates**

Substrates must be cured, sound, free of loose parts, grease, oil, paint, wax and sufficiently dry. Cementitious substrates must not be subjected to

shrinkage after the installation of the tiles. During warm weather, cementitious screeds must be cured for at least 28 days, unless special MAPEI binders for screeds such as **Mapecem**, **Topcem** or **Topcem Pronto** have been used.

Dampen the surfaces with water to cool down if they should be too warm or exposed to direct sunlight.

Gypsum substrates and anhydrite screeds must be perfectly dry, sufficiently hardened and free from dust. It is absolutely essential that they be treated with **Primer G** or **Mapeprim SP**. In areas subject to extreme damp, prime the substrate with **Primer S**.

### Preparing the mix

Mix **Planobond** in a clean container with 5 to 5.5 litres of clean water for every 25-kg bag until an even, lump-free paste is obtained. Let stand for 3 minutes, then remix briefly and the mix is ready to be applied. The **Planobond** mix is workable for approximately 8 hours at +23°C and 50% R.H.

For thick applications or for use with heavy tiles, 20% clean graded sand can be added to prevent shrinkage and avoid tiles from sinking.

### Applying the mix

**Planobond** should be trowelled on. The size of the trowel depends on the levelness of the substrate, the size of the tiles and the type of back.

For smooth surfaces and medium sized tiles, use MAPEI trowel no. 6 or 10 (consumption approx. 3-5 kg/m<sup>2</sup>).

For irregular surfaces, large tiles, or tiles with high ribbed backs, use Mapei trowel no. 10 or trowel for **Adesilex P4** with rounded notch (consumption approx. 5-10 kg/m<sup>2</sup>).

### Installing the tiles

No soaking of the tiles is needed. Very dusty tiles, however, should be dipped in clean water.

Set the tiles into the **Planobond** without any pressure. Just a slight movement of the hand is needed for 100% transfer of the adhesive.

**Planobond** open time is approximately 30-35 minutes under normal temperature and humidity conditions. Unfavourable weather conditions (direct sunlight, dry wind, high temperatures) or very absorbent substrates can reduce the open time considerably.

Therefore the adhesive should be checked constantly to make sure it is still fresh and that it has not developed a surface skin. Wetting the substrate before applying the adhesive helps extended the open time. If a skin forms, freshen the adhesive by trowelling it again with a notched trowel.

Do not add water to the adhesive if a skin forms because the water will form an anti-adhesive film instead of loosening it.

Tiles should be adjusted if needed within 45 minutes after applying the adhesive, after that, tile adjustment becomes difficult.

Flooring set with **Planobond** should not be washed down or exposed to rain for at least 24 hours at +23°C and must be protected from frost and direct sunlight for at least 5-7 days after installation.

### GROUTING AND SEALING

Joints can be grouted after 24 hours with the special MAPEI cementitious or epoxy grouts, available in different colours.

Expansion joints must be sealed with the special MAPEI sealants.

### SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after approximately 24 hours.

### READY FOR USE

Surfaces are ready for use after approximately 14 days.

### Cleaning

Tools and hands can be cleaned with plenty of water, tiles with a damp sponge or cloth. Water can be used after several hours and with moderation.

### CONSUMPTION

- Medium sized tiles, smooth surfaces (no. 6 or no. 10 trowel): approx. 3 to 5 kg/m<sup>2</sup>.
- Large sized tiles, irregular surfaces (no. 10 trowel or for **Planobond**): approx. 5 to 10 kg/m<sup>2</sup>.

Consumption is generally 1.3 kg/m<sup>2</sup> per mm of thickness.

### PACKAGING

**Planobond** is available in 25-kg paper bags.

### STORAGE

12 months in a dry place in original packaging.

### SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Contains cement that when in contact with sweat or other body fluids produces an irritant alkaline reaction and allergic reactions to those predisposed. Use gloves and protective goggles. For further information refer to the safety data sheet.

FOR PROFESSIONALS.

### WARNING

*Although the technical details and recommendations contained in this product report 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 applications; 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.*

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

## TECHNICAL DATA (typical values)

In compliance with:

- EN 12 004 as C2E
- DIN 18156 Part 2
- Canadian 71 GP 30 M type 2

### PRODUCT IDENTITY

<b>Consistency:</b>	powder
<b>Colour:</b>	grey
<b>Bulk mass density (kg/m<sup>3</sup>):</b>	1300
<b>Dry solids content (%):</b>	100
<b>Storage:</b>	12 months in original packaging in a dry place
<b>Hazard classification according to EC 99/45:</b>	irritant. Before use refer to the "Safety Instruction" paragraph and the information on the packing and safety data sheet
<b>Customs class:</b>	3824 50 90

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

<b>Mix ratio:</b>	20-22 parts water per 100 parts <b>Planobond</b>
<b>Consistency of mix:</b>	semi-fluid
<b>Mass density of the mix (kg/m<sup>3</sup>):</b>	1500
<b>pH of mix:</b>	> 12
<b>Pot life:</b>	8 hours
<b>Application temperature:</b>	from +5°C to +35°C
<b>Open time (according to EN 1346):</b>	30-35 minutes
<b>Adjustability time:</b>	approx. 45 minutes
<b>Ready for grouting:</b>	24 hours on dry substrates
<b>Set to light foot traffic:</b>	24 hours on dry substrates
<b>Ready for use:</b>	14 days on dry substrates

### FINAL PERFORMANCE DATA

<b>Adhesion (according to EN 1348) (N/mm<sup>2</sup>):</b> - initial (after 28 days at +23°C and 50% R.H.): - after heat ageing: - after immersion in water: - after freeze/thaw cycles:	2.0 2.3 1.2 1.3
<b>Resistance to acids:</b>	good if pH > 3
<b>Resistance to alkali:</b>	excellent
<b>Resistance to oils:</b>	excellent (poor to vegetable oils)
<b>Resistance to solvents:</b>	excellent
<b>Temperature when in use:</b>	from -30°C to +90°C

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**BUILDING THE FUTURE**

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

<p><b>CERTQUALITY</b> No. 250</p>	<p><b>ISO 14001</b> Plant in Bologna di Modigliana CERTQUALITY No. 1230</p>	<p><b>ISO 14001</b> Plant in Latina CERTQUALITY No. 8127</p>	<p><b>EMAS</b> VERIFIED ENVIRONMENTAL MANAGEMENT SYSTEM No. 1000013 PLANT IN MODIGLIANA</p>	<p><b>OHSAS 18001</b> CERTIFIED BY CERTQUALITY No. 5580 PLANT IN MODIGLIANA</p>	<p><b>CERTQUALITY</b> No. 6853</p>	<p><b>CERTQUALITY</b> No. 3358</p>	<p><b>ITC</b> No. 03 0063 SJ</p>
MAPEI S.p.A. - ITALY				MAPEI CORP - U.S.A.	MAPEI FAR EAST Pte Ltd MAPEI MALAYSIA SDN BHD	MAPEI s.r.o. - CZECH REP.	
<p><b>CERTQUALITY</b> No. 1517</p>	<p><b>QMI</b> No. 004157</p>	<p><b>DNV</b> No. 94-OSL-AQ-6236</p>	<p><b>ISO 14001</b> Plant in Singapore DNV No. 2002-GR-1511-0141</p>	<p><b>EMAS</b> VERIFIED ENVIRONMENTAL MANAGEMENT SYSTEM No. 2003-GR-AC-9111 PLANT IN SINGAPORE</p>	<p><b>DNV</b> No. 12026-2002 AQ-BUD-TGA</p>	<p><b>IRAM</b> No. AR-QS-688</p>	<p><b>CERTQUALITY</b> No. 5776</p>
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