



# Tixobond Fine S1



**Ultra-white cementitious deformable fine grained adhesive with no vertical slip and extended open time, for the installation of ceramic tiles on walls and floors**

**CLASSIFICATION ACCORDING TO EN 12004**  
Tixobond Fine S1 is a normal (1) cementitious adhesive (C) with no vertical slip (T) and extended open time (E) of class C1TE.

**CLASSIFICATION ACCORDING TO EN 12002**  
Tixobond Fine S1 is a deformable adhesive of class S1.

#### WHERE TO USE

For interior and exterior floor and wall installation, suitable for, including all ceramic tile types, mosaic, porcelain, fully vitrified and quarry tiles over most traditional, well prepared non deflecting substrates such as cured concrete, render and fibre-cement sheeting and plasterboard.

#### Some application examples

For ordinary concrete slabs, suspended concrete slabs and screeds completely cured which have been wood floated or broom finished, such as:

- for gypsum renders as long as they are treated with **Primer G**;
- for plasterboard and compressed cement sheeting that is pre-primed for tiling purposes and gypsum wall-board;
- for conventional cured and sound renders;
- for laying ceramic tiles diagonally or starting from the top and working downwards, without the use of spacers;

- laying tiles on substrates and renders with up to 15 mm of unevenness, thick set, thin set adhesive;
- suitable for use over MAPEI approved waterproofing membranes.

#### TECHNICAL CHARACTERISTICS

**Tixobond Fine S1** is a fine, ultra-white powder made up of cement, special filler, synthetic resins and special additives according to a special blend developed in MAPEI's own Research Laboratories.

When **Tixobond Fine S1** is blended with water, it becomes a creamy mortar which is easy to spread. It has high bonding and thixotropic characteristics, so that it may be applied on vertical surfaces without dripping or letting the tiles slip, even for heavy tiles.

**Tixobond Fine S1** is characterised by its particularly white colour, and so any excess adhesive in the joint does not significantly affect the final appearance when filled with white grouting mortar.

**Tixobond Fine S1** hardens without significant shrinkage and becomes extremely resistant, bonding perfectly to all materials normally used in construction.

#### RECOMMENDATIONS

Do not use **Tixobond Fine S1** in the following cases:

- on wooden substrates;

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- on metallic, rubber, PVC or linoleum surfaces;
- where surfaces must be set to light foot traffic in quick time;
- on non-absorbent substrates.

## APPLICATION PROCEDURE

### Preparation of the substrates

The substrates must be well cured, mechanically sound, dry and free of loose parts, grease, oil, paint and wax. Cementitious substrates must not shrink after the tiles have been laid. Therefore, during good weather, renders must be cured for at least 1 week per centimetre of thickness.

If the surfaces are too hot due to exposure to the sun, cool them down with water.

Gypsum substrates must be perfectly dry, sufficiently hard, free of dust and, in all cases, treated with **Primer G** or **Mapeprim SP**. Areas which are subject to high humidity must be treated with **Primer S**.

### Preparation of the mix

Blend **Tixobond Fine S1** with clean water until a smooth, lump-free paste is obtained. Leave the mix standing for 5-10 minutes, then re-mix it. It is now ready to be applied.

Use 32-34 parts of water for every 100 parts (in weight) of **Tixobond Fine S1**, equal to approximately 6-6.4 litres for every 20 kg of **Tixobond Fine S1**.

If the above indications are carefully followed, **Tixobond Fine S1** mix remains workable for at least 8 hours.

### Application of the mix

Apply **Tixobond Fine S1** with a trowel on the substrate. When choosing the trowel, the basic rule to follow is to choose one which guarantees sufficient coverage of the back of the tile.

To guarantee good bonding, spread a thin layer of **Tixobond Fine S1** on the substrate using the smooth edge of the trowel. Immediately after, build up the thickness required according to the type and size of tile, using a suitable notched trowel:

- A 20 kg bag cover's (6 to 7.50 m<sup>2</sup>) with a square-notched trowel (6x6x6 mm) and (4 to 5 m<sup>2</sup>) with a (6x10x6 mm) square notched trowel.

In the case of external floors and finishing materials subject to freezing weather, or in the case of particularly difficult laying conditions, such as when laying tiles larger than 900 cm<sup>2</sup>, **Tixobond Fine S1** must also be spread on the back of the tile (double-buttering method).

### Laying the tiles

It is not necessary to wet the tiles before they are laid. Only in the case of tile backs which

are very dusty do we recommend washing them by dipping them in clean water. Press firmly on the tiles when laying, to make sure that they make good contact with the adhesive.

The open time of **Tixobond Fine S1** is 30 mins. under normal temperature and humidity conditions. Unfavourable conditions (such as direct sunlight, dry wind and high temperatures), or if the substrate is very absorbent, may drastically reduce this time to only a few minutes.

Therefore, repeatedly check that a skin does not form on the surface of the adhesive and that it is still "fresh". If skin forms on the surface, refresh the adhesive by re-spreading it with the trowel. It is inadvisable to wet the adhesive when surface skin forms, because the water forms a film which prevents bonding instead of dissolving it.

If necessary, the tiles must be "adjusted" within 40 minutes of laying, otherwise, it will be difficult to move them.

Coverings laid with **Tixobond Fine S1** must not be washed down or exposed to rain for at least 24 hours, and must be protected against freezing weather or direct sunlight for at least 5-7 days after laying.

## GROUTING AND SEALING

The tile joints may be grouted after 4-8 hours when laid on walls, with the specific MAPEI cementitious or epoxy grouts, available in different colours.

Expansion joints must be sealed with a suitable MAPEI sealant.

## SET TO LIGHT FOOT TRAFFIC

Floors are ready for foot traffic after approx. 24 hours.

## READY FOR USE

The surfaces may be put into service after approx. 14 days.

## Cleaning

Tools and containers may be cleaned using plenty of water while the **Tixobond Fine S1** is still fresh. Surfaces must be cleaned with a damp cloth before the adhesive sets.

## CONSUMPTION

Approx. 1.25 kg/m<sup>2</sup> per mm of thickness.

## PACKAGING

**Tixobond Fine S1** is available in 20 kg paper bags.

## STORAGE

**Tixobond Fine S1** may be stored for 12 months in original packaging in a dry place.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Tixobond Fine S1** contains cement that, when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction.



Spreading  
**Tixobond Fine S1**  
on a substrate



Laying large-sized  
porcelain tiles on walls



Laying large-sized,  
double-fired tiles on  
wall starting at the  
top and working  
downwards

## TECHNICAL DATA (typical values)

Conforms to Standard:

- European EN 12004 as C1TE
- European EN 12002 as S1
- ISO 13007-1 as C1TE

### PRODUCT IDENTITY

<b>Consistency:</b>	powder
<b>Colour:</b>	white
<b>Bulk density (kg/m<sup>3</sup>):</b>	1,400
<b>Dry solids content (%):</b>	100
<b>Storage:</b>	12 months in original packaging in a dry place
<b>Hazard classification according to EC 1999/45:</b>	irritant. Before using refer to the "Safety instructions for preparation and application" 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>Mixing ratio:</b>	100 parts <b>Tixobond Fine S1</b> with 32-34 parts water in weight
<b>Consistency of mix:</b>	creamy paste
<b>Density of the mix (kg/m<sup>3</sup>):</b>	1,550
<b>pH of mix:</b>	13
<b>Pot life:</b>	over 8 hours
<b>Application temperature range:</b>	from +5°C to +35°C
<b>Open time (according to EN 1346):</b>	30 minutes
<b>Adjustability time:</b>	approx. 40 minutes
<b>Ready for grouting on walls:</b>	after 4-8 hours
<b>Ready for grouting on floors:</b>	after 24 hours
<b>Set to light foot traffic:</b>	after 24 hours
<b>Ready for use:</b>	14 days

### FINAL PERFORMANCES

<b>Bonding strength in compliance with EN 1348 (N/mm<sup>2</sup>):</b> <ul style="list-style-type: none"><li>- initial bonding (after 28 days):</li><li>- bonding after heat exposure:</li><li>- bonding after immersion in water:</li><li>- bonding after freeze/thaw cycles:</li></ul>	<ul style="list-style-type: none"><li>2</li><li>2.5</li><li>0.8</li><li>1.2</li></ul>
<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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Wear protective clothing, gloves and eye face protection.

For further information, refer to the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

## 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 this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**

