

ULTRAFLEX S2 QUICK

One component, highly flexible, high performance, quick-setting and hydrating cementitious adhesive, easy to trowel with no vertical slip and an extremely high yield, for ceramic, porcelain and natural stone tiles and mosaics



CLASSIFICATION IN COMPLIANCE WITH EN 12004 & UKCA

Ultraflex S2 Quick is a cementitious (C), improved (2), fast setting (F), reduced slip (T), highly deformable (S2) tile adhesive classified as C2FT S2.

Ultraflex S2 Quick is CE marked, as declared in **TT** certificate n° **25070199/Gi (TUM)** issued by the Technische Universität München laboratory (Germany).

WHERE TO USE

The bonding of all sizes and types of ceramic, porcelain and non-moisture sensitive natural stone tiles and mosaics, to internal and external walls and floors.

Some application examples

The bonding of suitable tiles to:

- Cementitious and gypsum/anhydrite-based screeds.
- Floors containing underfloor or undertile heating systems, encapsulated within suitable screeds or smoothing compounds.
- Floorboards, exterior grade plywood and P5 grade chipboard timber floors.
- Existing tiled surfaces.
- Prefabricated concrete walls and concrete floors.
- Cementitious or lime-based renders and gypsum plaster.
- Plasterboard and tile backer boards.
- Mapei waterproofing and anti-fracture membranes.
- Areas where fast track installation is required, such as public buildings, supermarkets, pedestrian walkways, airports etc.
- Areas exposed to direct sunlight and temperature changes, such as facades, balconies and roof terraces.
- Areas where impact noise caused by footsteps needs to be reduced such as hospital entrance halls, school corridors, public buildings, etc (when used in conjunction with **Mapesonic CR** acoustic membrane this performance is further improved).

TECHNICAL CHARACTERISTICS

Ultraflex S2 Quick is a grey-coloured powder made up of a blend of special cements, graded sand, a high quantity of synthetic resins and micronised elastomers, according to a formula developed in MAPEI's own Research Laboratories.

When mixed with water, it forms a mortar with the following characteristics:

- The innovative Ultralite Technology™ provides a low-density product which results in two key advantages:
 1. weight advantage: 15 kg of Ultraflex S2 Quick weighs less than traditional cementitious adhesives of the same volume, enabling easier handling and lower transport costs.
 2. increased yield: yield is approximately 30% more compared with MAPEI's traditional cementitious adhesives;
- low viscosity and, therefore, excellent wetting out and good workability.
- highly thixotropic: **Ultraflex S2 Quick** may be applied on vertical surfaces without sagging and there is no risk of the tiles slipping. It is also possible to lay the tiles from the top working downwards and diagonally without using spacer pegs.
- excellent capacity for following deformation in the substrate and tiles;
- bonds perfectly to all materials normally used in the building industry.

Ultraflex S2 Quick develops high bonding strength after only 2-3 hours at +23°C (after 8 hours at +10°C); therefore, floors finishes laid using this product may be used after a very short period of time.

RECOMMENDATIONS

Do not use **Ultraflex S2 Quick** in the following cases:

- on metallic, rubber, PVC or linoleum surfaces;
- with marble or artificial composite material subject to considerable movement in the presence of humidity.

Do not apply directly over underfloor/under tile heating systems. Pipes or heating cables must be encapsulated in either a suitable screed or smoothing compound.

Do not add more water to the mix once it has started to set.

APPLICATION PROCEDURE

Preparation of the substrate

The substrates must be mechanically strong, dry and free from crumbling parts, grease, oil, paint and wax. Generally, cementitious substrates used for laying ceramic must not be subject to shrinkage once the tiles have been laid. Since **Ultraflex S2 Quick** is particularly flexible, it is able to compensate for micro-cracks which form in the screed if it is not sufficiently cured, meaning that standard sand/cement screeds can be tiled over with ceramic or porcelain tiles & mosaics once the screed is foot trafficable without leaving indentation. Gypsum substrates and anhydrite screeds must be perfectly dry, sufficiently hard, free from dust and, in all cases, treated with **Primer G** or **Eco Prim T Plus**.

Mixing

Blend 15 kg of **Ultraflex S2 Quick** with 5.1 - 5.4 l of clean water until a smooth, lump-free paste is obtained. Leave the mix standing for 5 minutes, then re-mix.

The mix prepared as above lasts approx. 30 minutes.

Applying the product

Apply **Ultraflex S2 Quick** on the substrate using a notched trowel. Use a trowel which guarantees perfect buttering of the back of the tile. To obtain a good bond, spread a thin layer of **Ultraflex S2 Quick** on the substrate using the smooth side of the trowel. Immediately spread a further layer of **Ultraflex S2 Quick** to the thickness required using a suitable notched trowel, according to the size and type of the tiles. When laying floors, tiles in wet areas and on external surfaces, spread the adhesive on the back of the tile to guarantee total buttering. Maximum bed depth of 10 mm.

Installing the tiles

It is not necessary to wet the tiles before they are laid. Only in the case of tile backs being very dusty, we recommend washing them by dipping them into clean water. The tiles must be applied with a slight pressure to guarantee that they are well buttered. Tiles are to be pressed into the applied adhesive bed using a twisting/sliding action to ensure full contact.

At normal temperatures and humidity conditions, the open time of **Ultraflex S2 Quick** is approximately 15-20 minutes. Unfavourable conditions (direct sunlight, dry wind and high temperatures), or if the substrate is very absorbent, may reduce this time to only a few minutes.

Continuously check the adhesive to make sure that a skin does not form on the surface and that it is still fresh. If a skin forms, re-spread the adhesive using the notched trowel. It is inadvisable to wet the adhesive when a surface skin forms, because the water forms a film which prevents bonding instead of dissolving it.

Finishes laid with **Ultraflex S2 Quick** must not be washed down or exposed to rain for at least 3-4 hours and must be protected against freezing weather or direct sunlight for at least 24 hours after laying.

GROUTING AND MOVEMENT JOINTS

The tile joints may be grouted after 2-3 hours when laid on walls and after 5-6 hours when laid on floors using a special MAPEI cementitious or epoxy grout, which are available in a variety of colours. Expansion joints must be sealed using an appropriate MAPEI sealant.

SET TO LIGHT FOOT TRAFFIC

Floors are ready for foot traffic after approx. 5-6 hours.

READY FOR USE

The surfaces may be put into service after approx. 24 hours.

CLEANING

Tools and containers may be cleaned using plenty of water while **Ultraflex S2 Quick** is still fresh. Surfaces must be cleaned with a damp cloth before the adhesive sets.

CONSUMPTION

0.9 kg/m² per mm of thickness, equal to 1.5-2.5 kg/m².

PACKAGING

Ultraflex S2 Quick is available in 15 kg paper bags.

STORAGE

Ultraflex S2 Quick may be stored for up to 12 months in its original packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

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.co.uk.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

Conforms to the following standards:

- European EN 12004 as C2FTS2
- ISO 13007-1 as C2FTS2
- American ANSI A 118.4 - 1999
- Canadian 71 GP 30 M type 2

PRODUCT IDENTITY

Consistency: powder

Colour: grey

Bulk density (kg/m³): 870

Dry solids content (%): 100

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

Mixing ratio: 100 parts of **Ultraflex S2 Quick** with 35-37 parts of water by weight

Consistency of the mix: creamy

Density of mix (kg/m³): 1,200

pH of mix: > 12

Pot life of mix: > 30 mins

Application temperature range: from +5°C to +35°C

Open time (according to EN 1346): 15-20 mins

Grouting of wall tile joints: 2-3 hours

Grouting of floor tile joints: 5-6 hours

Set to light foot traffic: 5-6 hours

Ready for use: 24 hours

FINAL PERFORMANCE

Adhesion strength according to EN 1348 (N/mm²):

- initial (after 28 days): 1.90
- after application of heat source: 1.80
- after immersion in water: 1.30
- after freeze-thaw cycles: 1.40

Resistance to alkalis: excellent

Resistance to oils: excellent (poor to vegetable oils)

Resistance to solvents: excellent

Temperature in service: from -30°C to +90°C

Deformability according to EN 12002: S2 - highly flexible (> 5 mm)



Example of porcelain gres laid on Mapeiastic using Ultraflex S2 Quick

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 web site www.mapei.co.uk

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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 per 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.co.uk.

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