

# ULTRALITE S2 QUICK

One-component, high-performance, highly-deformable, lightweight, rapid-setting and hydrating cementitious adhesive. With extended open time, good trowelability, high wetting capacity, extremely high yield and with very low emission of volatile organic compounds, for ceramic, porcelain and natural stone tiles and mosaics. Ideal for thin porcelain tiles.



## CLASSIFICATION ACCORDING TO EN 12004

**UltraLite S2 Quick** is a cementitious (C), improved (2), fast-setting (F), extended open time (E) and highly-deformable (S2) tile adhesive with the classification of C2FE S2.

Conformity of **UltraLite S2 Quick** is declared on **APPLUS+** certificates n° 12/5363-1240-S and n° 12/5363-1241-S issued by LGAI Technological Center laboratory, Bellaterra (Spain).

## WHERE TO USE

- Bonding all types and sizes of ceramic tiles (double-fired, single-fired, porcelain tile, klinker, terracotta, etc.) to internal and external substrates.
- Bonding natural stone to internal and external substrates.
- Bonding all types and sizes of thin porcelain tiles to floors and walls, including external façades.
- Bonding all types of mosaic to internal and external substrates even in swimming-pools.
- Bonding standard ceramic and porcelain tiles directly over cable undertile heating systems.

Especially suited for use in large floor areas and for the installation of large format tiles without the need to back butter. Because of its high wetting capacity to the backs of tiles, it is particularly suitable for laying any type of thin porcelain tile (using the double buttering technique).

### Some application examples

- Single-fired, double-fired, klinker, terracotta, porcelain and thin porcelain tiles and ceramic and glass mosaic.
- Natural stone (marble, granite, etc.) which requires the use of rapid adhesives to:
  - no-slump consistency cementitious screeds, self-levelling cementitious screeds and anhydrite screeds (after applying a suitable primer);
  - heated screeds;
  - cementitious render or lime-mortar render;
  - gypsum-based render (after applying a suitable primer);
  - plasterboard, precast panels and cement-fibre panels;
  - waterproofing membranes such as **Mapelastic**, **Mapelastic Smart**, **Mapelastic AquaDefense** and **Mapegum WPS**.
- Rapid restoration work or where surfaces need to be put back into service immediately (areas for public use, motorway service stations, supermarkets, airports, pedestrian areas).

Unlike other rapid-setting cementitious adhesives, the extended workability time of **Ultralite S2 Quick** facilitates work carried out in the summer and at high temperatures.

- Overlaying existing ceramic or stone flooring with new ceramic or stone tiles where normal setting adhesives would delay bringing the floor into service due to long setting times.
- Installation on marine-plywood, wooden agglomerates and old, stable wooden floors.
- Installing ceramic and stone on façades, balconies, terraces and paving slabs exposed to direct sunlight and thermal gradients.
- Installation on precast concrete walls and concrete substrates.

## TECHNICAL CHARACTERISTICS

**Ultralite S2 Quick** is a grey or white powder made from special binders, selected graded sand and a high quantity of synthetic resin, with added micro-spheres of recycled silica material which help to make the mix lighter, according to a special formulation developed in MAPEI's Research Laboratories, which contributes to the development of a eco-sustainable building industry.

The special technology used to manufacture **Ultralite S2 Quick** gives it a low density, a characteristic which offers two main advantages:

1. bags of **Ultralite S2 Quick** have the same volume but weigh less (15 kg) than bags of conventional cementitious adhesive (25 kg). This ensures easier handling and savings in transport costs;
2. higher yield: yield is approximately 80% higher than conventional MAPEI cementitious adhesives of class S2.

**Ultralite S2 Quick** mix has a low viscosity, which makes it easier and quicker to apply. The product's excellent wetting capacity on the back of tiles means that the double-buttering technique may be avoided when laying large tiles in internal environments. Its excellent back-face buttering capacity also makes this adhesive particularly suitable for laying thin porcelain tiles. For further details please refer to the relevant technical notebook ("Systems for installing thin porcelain tiles").

The application of **Ultralite S2 Quick** using the double-buttering technique on flat substrates ensures that there are absolutely no gaps in the adhesive on the back face of the slabs, thus avoiding the risk of fracture when in service.

- Excellent capacity of absorbing deformation in the substrate and in the tiles.
- Excellent wetting capacity on the back of the tiles.
- Adheres perfectly to all materials normally used within the building industry.
- **Ultralite S2 Quick** develops a high degree of adhesion in just 2-3 hours from application at +23°C (8 hours at +10°C), which means floors and coatings may be put into service extremely quickly.
- The particularly long open time of the mix compared with other rapid-setting adhesives makes fixing operations more simple, even in the summer and at high temperatures.
- **Ultralite S2 Quick** is in the S2 deformability class according to EN 12004 and, unlike adhesives with the same characteristics, there is no need to add latex, making it simpler and quicker to use.

## RECOMMENDATIONS

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

- on metal, rubber, PVC or linoleum surfaces;
- for slabs of marble and natural stone which are subject to efflorescence or staining;
- for slabs of natural stone highly subject to movement due to humidity, such as green marble, certain types of sandstone and slate (in these cases use **Keralastic**).

Do not add water to the mix once it starts to set.

## APPLICATION PROCEDURE

### Preparation of the substrate

Substrates must be mechanically strong, free of loose parts, grease, oil, paintwork, wax, etc., and must be sufficiently cured.

Cementitious substrates must not shrink after tiles installation. Therefore, in good weather, render must be cured for at least one week per cm of thickness, and cementitious screeds must be cured for at least 21 days, unless they are made using special MAPEI binders for screeds, such as **Mapecem** and **Topcem**, or pre-blended mortars, such as **Mapecem Pronto** and **Topcem Pronto**. If the surface is too hot due to direct sunlight, cool it down with water.

Gypsum substrates and anhydrite screeds must be perfectly dry, hard enough for the final intended use (where anhydrite screeds are used ensure that all surface laitance is mechanically removed prior to further works) and free of dust. Prime the prepared dry area using either **Primer G** (neat) or **Eco Prim T Plus** (diluted 1-2).

Substrates on which thin porcelain tiles are to be laid must be perfectly flat. Therefore, where necessary, even out the substrate before laying the floor with a smoothing compound from the MAPEI range.

### Preparation of the mix

Blend **Ultralite S2 Quick** with clean water to obtain a smooth, lump-free mix. Let the mix stand for approximately 5 minutes, then blend again.

The amount of water required is approximately 4.6-5.1 litres for grey and 4.9-5.2 litres for white per 15 kg bag. When blended as described above, the mix remains workable for approximately 50 minutes.

## Applying the product

Apply **Ultralite S2 Quick** on the substrate using a notched trowel. Use a trowel with a notch size which guarantees complete buttering of the back of the tile.

To guarantee a good bond, apply a thin layer of **Ultralite S2 Quick** on the substrate using the smooth side of the trowel and then immediately apply another layer of **Ultralite S2 Quick** to the thickness required using a suitable notched trowel, according to the type and size of the tiles, to guarantee that the backs of the tiles are well buttered. When fixing tiles to walls and floors externally, for tile sizes larger than 900 cm<sup>2</sup> and floors subject to heavy loads, complete buttering of the back of the tiles must be guaranteed.

When installing thin porcelain tiles, we recommend that the adhesive is also spread on the backs of the tiles (with a suitable notched trowel) to guarantee there are no gaps, to avoid the risk of fracture when in service.

## Installing the tiles

Tiles do not need to be wet before they are installed. However, if the backs of the tiles are particularly dusty, wash them by dipping them in clean water.

When fixing tiles, apply a firm pressure and a twisting/sliding motion to guarantee full contact.

The open time for **Ultralite S2 Quick** is at least 30 minutes in normal weather and humidity conditions. When conditions are not ideal (direct sunlight, dry wind, high temperatures, etc.), or if the substrate is particularly absorbent, this time may be reduced to only a few minutes.

Keep checking the adhesive to make sure skin does not form on the surface and that it is still fresh. If skin forms, spread the adhesive again with the notched trowel. Do not wet the surface of the adhesive if a skin forms. Water does not dissolve the skin but creates a film which impedes bonding. Final adjustment of the tiles must be carried out within 15 minutes of installation.

Tiled finishes fixed using **Ultralite S2 Quick** must be protected from water and rain for at least 3-4 hours and from frost and direct sunlight for at least 24 hours.

## GROUTING AND MOVEMENT JOINTS

Joints may be grouted after 2-3 hours on walls and 2-3 hours on floors. Use a MAPEI cementitious or epoxy grout, available in a wide variety of colours.

Seal expansion joints using an appropriate MAPEI sealant.

## SET TO LIGHT FOOT TRAFFIC

Floors set to light foot traffic after approximately 2-3 hours.

## READY-TO-USE

Surfaces are ready-to-use after approximately 24 hours.

## CLEANING

Clean tools and containers with plenty of water while **Ultralite S2 Quick** is still fresh. Clean the surfaces of coatings using a damp cloth before the adhesive hardens.

## CONSUMPTION

0.8 kg/m<sup>2</sup> per mm of thickness, equivalent to 1.5-2.5 kg/m<sup>2</sup>.

## PACKAGING

**Ultralite S2 Quick** is supplied in 15 kg paper bags with handle.

## STORAGE

**Ultralite 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](http://www.mapei.co.uk).

PRODUCT FOR PROFESSIONAL USE.

<b>TECHNICAL DATA (typical values)</b> Complies to the following standards:		– European EN 12004 (C2FES2) – ISO 13007-1 (C2FES2)
<b>TECHNICAL DATA</b>		
Consistency:	powder	
Colour:	grey and white	
Density:	900	
Dry solids content (%):	100	
EMICODE:	EC1 Plus - very low emission	
<b>APPLICATION DATA (at +23°C - 50% R.H.)</b>		
Mixing ratio:	100 parts of <b>Ultralite S2 Quick</b> with 31-34% parts of water for Grey and 32-35% parts of water for White	
Consistency of the mix:	creamy	
Density of mix (kg/m <sup>3</sup> ):	1,100	
pH of the mix:	more than 12	
Pot life of the mix:	50 minutes	
Application temperature:	from +5°C to +40°C	
Open time (according to EN 1346):	≥ 30 minutes	
Adjustment time:	15 minutes	
Grouting tile joints on walls:	after 2-3 hours	
Grouting tile joints on floors:	after 2-3 hours	
Set to light foot traffic:	2-3 hours	
Ready-to-use:	24 hours	
<b>FINAL PERFORMANCE CHARACTERISTICS</b>		
Adhesion according to EN 1348 (N/mm <sup>2</sup> ): – initial adhesion (after 28 days): – adhesion after application of heat source: – adhesion after immersion in water: – adhesion after freeze-thaw cycles: – initial adhesion after 6 hours:	2.5 2.0 1.2 1.3 0.8	

Resistance to alkalis:	excellent
Resistance to oils:	excellent (poor with vegetable oils)
Resistance to solvents:	excellent
In-service temperature range:	from -30°C to +90°C
Deformability according to EN 12004:	S2 - highly deformable (> 5 mm)

## N.B.

*Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that the end users satisfy themselves that the product and conditions are suitable for the envisaged application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification.*

*End users should ensure that our latest product data and safety information sheets have been consulted prior to use. Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.co.uk](http://www.mapei.co.uk)*

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