



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 and extremely high yield, for ceramic tiles and stone, ideal for thin porcelain tiles



Ultralite
Technology™

CLASSIFICATION ACCORDING TO EN 12004

Ultralite S2 Quick is a cementitious (C), improved (2), rapid-setting (F), extended open time (E), highly-deformable (S2) C2FES2 class adhesive.

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.) on internal and external substrates.
- Bonding stone on internal and external substrates.
- Bonding all types and sizes of thin porcelain tiles on floors and walls, including external façades.
- Bonding all types of mosaic on internal and external substrates even in swimming-pools.

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 on the backs of tiles, it is particularly suitable for laying any type of thin porcelain tile (using the double buttering technique), including on thermal insulation systems such as **Mapetherm Tile System**.

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

on

- 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 made using **Mapelastec Smart**, **Mapelastec AquaDefense**, **Monolastic** 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.
- Installing thin porcelain tiles on the thermal insulation system **Mapetherm Tile System** (refer to specific technical notebook).

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Excellent wetting between the substrate and the back of the tile

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 an 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 makes for 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 in 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 dry. 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 28 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 and free of dust. They must also be treated with **Primer G** or **Eco Prim T**, while areas subject to high humidity must be primed with **Primer S**.

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 self-levelling skimming 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 5.1-5.7 litres per 15 kg bag. When blended as described above, the mix remains workable for approximately 50 minutes.

Spreading the mix

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 ceramic tiles to walls and floors externally, for tile sizes larger than 900 cm² 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.

Laying 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 to guarantee good buttering.

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.

TECHNICAL DATA (typical values)

Complies to the following standards:

- European EN 12004 (C2FES2)
- ISO 13007-1 (C2FES2)

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey and white
Bulk density (kg/m ³):	900
Dry solids content (%):	100

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

Mixing ratio:	100 parts of Ultralite S2 Quick with 34-38% parts of water (by weight)
Consistency of mix:	creamy
Density of mix (kg/m ³):	1100
pH of mix:	more than 12
Pot life of 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

FINAL PERFORMANCE

Adhesion according to EN 1348 (N/mm ²):	
– initial adhesion (after 28 days):	2.5
– adhesion after application of heat source:	2.0
– adhesion after immersion in water:	1.2
– adhesion after freeze-thaw cycles:	1.3
– initial adhesion after 6 hours:	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)

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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 sealing

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.

PACKAGING

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

CONSUMPTION

0.8 kg/m² per mm of thickness, equivalent to 1.5-2.5 kg/m².

STORAGE

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

The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultralite S2 Quick it contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. We recommend the use of protective gloves and goggles and to take the usual precautions for handling chemical products.

If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

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



All relevant references for the product are available upon request and from www.mapei.com



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