ULTRALITE S1 QUICK

One-component, high-performance, deformable, lightweight, rapid-setting and hydrating cementitious adhesive with no vertical slip, good trowelability, high wetting capacity and very high yield, for ceramic tiles, stone and thin porcelain tiles



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1 AND EN 12004

Ultralite S1 Quick is a cementitious (C), improved (2), rapid-setting (F), slip-resistant (T), deformable (S1) C2FTS1 class adhesive.

WHERE TO USE

· Bonding all types and sizes of ceramic tiles (double-fired, single-fired, porcelain, klinker, terracotta, etc.) on uneven internal and external substrates, without having to even out the surface before laying
· Bonding stone material on internal and external substrates
· Bonding all types of mosaic on internal and external substrates even in swimming pools
· Bonding thin porcelain tiles on floors and walls, including on external façades

Some application examples

· Ceramic tiles (single-fired, double-fired, klinker, porcelain, thin porcelain tiles, large format ceramic tiles and glass mosaic).
· Natural stone (marble, granite, etc.) which requires the use of rapid adhesives on
  – cementitious and anhydrite screeds (after applying a suitable primer)
  – heated screeds
  – cementitious render or lime-mortar render
  – gypsum-based plaster (after applying a suitable primer)
  – plasterboard, precast panels and cement-fibre panels
  – waterproofing membranes produced using **Mapelastic**, **Mapelastic Smart**, **Mapelastic Turbo**, **Mapelastic AquaDefense**, **Monolastic** or **Mapegum WPS**.

Rapid restoration work where surfaces need to be put back into service immediately (areas for public use, motorway service stations, supermarkets, airports, and pedestrian areas).
· Overlaying existing flooring (ceramic, marble, etc.) with new ceramic or stone tiles where normal setting adhesives would delay bringing the floor into service
· Laying on marine plywood, wooden agglomerates and old, stable wooden floors
· Laying ceramic and stone on balconies, terraces and roof tops exposed to direct sunlight and thermal gradients
· Installation on precast concrete walls and concrete substrates

TECHNICAL CHARACTERISTICS

Ultralite S1 Quick is a grey or white powder made from special binders, selected graded sand and a high quantity of synthetic resin, with added recycled silica micro-spheres which help to make the mix lighter, according to a special formulation developed in MAPEI's Research & Development Laboratories, which contributes to the development of eco-sustainable building industry.

The special technology used to manufacture **Ultralite S1 Quick** gives it a low density, a characteristic which offers two main advantages:

1. Bags of **Ultralite S1 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 60% higher than conventional MAPEI cementitious adhesives

Ultralite S1 Quick mix has a low viscosity, which makes application quicker and easier. In spite of these characteristics, the thixotropic nature of **Ultralite S1 Quick** means there is no vertical slip when installing on walls, even when fixing large-sized tiles. The excellent wetting capacity on the back of tiles, combined with its thixotropic consistency, make **Ultralite S1 Quick** particularly suitable for installing thin porcelain tiles. The application of **Ultralite S1 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. Its excellent non-slip properties also make it particularly easy and safe to fix tiles on vertical surfaces.

When mixed with water, **Ultralite S1 Quick** forms a mortar with the following characteristics:
· Excellent capacity of absorbing deformation in the substrate and in the tiles
· Excellent buttering capacity on the back of the tiles
· Adheres perfectly to most materials normally used in the building industry
· **Ultralite S1 Quick** develops a high degree of adhesion in just 2-3 hours from the application at +23°C (8 hours at +10°C), which means floor and wall finishes may be put into service extremely quickly
· With a longer pot life compared to other quick setting adhesives, installation is easier even at high and summer temperatures

RECOMMENDATIONS

Do not use **Ultralite S1 Quick** in the following cases:
· On metal, rubber, PVC or linoleum surfaces
· For slabs of marble and natural stone highly subject to efflorescence or staining
· For slabs of natural or agglomerate stone highly subject to movement due to humidity, such as green marble, certain types of sandstone and slate, etc. (in these cases use **Keralastic**).

Do not use **Ultralite S1 Quick** for installing thin porcelain tiles with reinforcement mesh larger than 5000 cm² on internal surfaces, heated screeds and external façades. Use an "S2" deformability class adhesive for this type of application such as **Ultralite S2**, **Ultralite S2 Quick**, **Kerabond**/**Kerabond T** mixed with **Isolastic**, **Elastorapid** or **Keraquick Maxi S1** + **Latex Plus**.

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 tile 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-leveling skimming compound from the MAPEI range.

Preparation of the mix

Blend **Ultralite S1 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 5.1-5.4 litres per each 15 kg bag. When blended as described above, the mix remains workable for approximately 50 minutes.

Spreading the mix

Apply **Ultralite S1 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 good adhesion, apply a thin layer of **Ultralite S1 Quick** on the substrate using the smooth side of the trowel, and then immediately apply a further layer of **Ultralite S1 Quick** to the thickness required using a suitable notched trowel, dependent on the type and size of the tiles. When installing ceramic tiles externally to walls and floors for tile sizes larger than 900 cm² and floors subject to heavy loads, spread the adhesive also on the back of the tiles to ensure complete buttering. When laying thin porcelain floor tiles, we recommend that the adhesive is also spread on the back of the tiles (with a suitable notched trowel) to guarantee there are no voids, to avoid the risk of fracture when in service.

Installing tiles

Tiles do not need to be wet before they are laid. However, if the back of the tiles is particularly dusty, wash them by dipping them in clean water.
When installing tiles, apply a firm pressure to guarantee good buttering. The open time for **Ultralite S1 Quick** is at least 30 minutes in normal weather and humidity conditions.
When installing 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 a 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 laying.
Tiles fixed using **Ultralite S1 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.

Cleaning
Clean tools and containers with plenty of water while **Ultralite S1 Quick** is still fresh. Clean the tile surfaces using a damp cloth before the adhesive hardens.

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

Ready to use
Surfaces are ready-to-use in approximately 24 hours.

PACKAGING

Ultralite S1 Quick is supplied in 15 kg paper bags.

CONSUMPTION

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

STORAGE

Ultralite S1 Quick may be stored for up to 12 months in its original packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instruction for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.ae.

TECHNICAL DATA (typical values) Conforms to the following standards: – European EN 12004 (C2FTS1) – ISO 13007-1 (C2FTS1)	
PRODUCT IDENTIFICATION	
Consistency:	powder
Colour:	grey and white
Bulk density (kg/cm³):	900
Dry solids content (%):	100
APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio:	100 parts of **Ultralite S1 Quick** with 34-36 parts of water (by weight)
Consistency of mix:	creamy
Density of mix (kg/m³):	1200
pH of mix:	more than 12
Pot life of the mix:	50 minutes
Application temperature range:	from +5°C to +40°C

Open time (according to EN 1346):	≥ 20 minutes
Adjustability 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 for use:	24 hours
FINAL PERFORMANCE	
– 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:**	2.0 1.8 1.1 1.2 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 and ISO 13007 -1:	S1 - deformable (> 2.5 mm, < 5 mm)

IMPORTANT NOTES

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 nstallers 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. The installer 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.com.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into other project-related documents, 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.com.

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

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