

# UNILITE S1

LIGHTWEIGHT, RESPIRABLE SILICA FREE  
TILE ADHESIVE



## DESCRIPTION:

**RLA UNILITE S1** is a premium grade cementitious floor and wall tile adhesive featuring respirable silica free technology.

Combining super lightweight fillers and the latest polymer advancements, Unilite S1 offers significantly higher yields and extended coverage compared with regular sand/cement blends. The unique formulation delivers exceptional workability, material consistency and general ease of use to make a Unilite S1 versatile, high performance solution for a broad range of tiling applications.

## FEATURES & BENEFITS:

- Lightweight, respirable silica free technology
- Superior yield and coverage compared to standard sand/cement based adhesives
- Enhanced efficiencies by reducing weight while improving volume and coverage
- Excellent workability and material consistency
- Excellent open time
- Lighter packaging for easier cartage and handling
- Suitable for use over early age concrete, screed/render
- Immersible
- Green Tag Certified

## USES:

- Floor and wall tiling to internal and external areas for commercial and residential construction.
- Internal/external wet areas
- Fixing porcelain and vitrified tiles, mosaics and natural stone (not moisture sensitive)
- Immersed areas - pools, spas and water features

## SUBSTRATES:

- Concrete
- Screed
- Render
- Compressed fibre cement sheeting & tile underlay
- Plasterboard
- Acoustic matting
- RLA wet area membranes

## SURFACE PREPARATION:

- Ensure all surfaces are clean, sound, dry, and free from dirt, dust, oil, grease, wax residues, curing compounds, release agents, paints, sharp protruding objects and all other loose and contaminating materials that could compromise the adhesion of the overlaid tiling system.
- All surfaces and substrates to be fit for purpose for their intended use and installed as per manufacturers recommendations and relevant building codes enforced at the time of installation
- Ensure all concrete slabs are allowed to cure for at least seven days, have a wood float finish and a minimum compressive strength of 20MPa
- Steel-trowelled, burnished and dense concrete surfaces must be mechanically abraded to roughen surfaces and provide a key before commencing tiling. Alternatively, surfaces can be primed with [RLA NON POROUS PRIMER](#)
- Rendered and screeded surfaces must be allowed to cure for at least 24 hours before commencing tiling.
- Existing tiled surfaces must be well bonded, sound and secure. Surface of tiles to be mechanically abraded/roughened to remove at least 80% of the tile glaze for direct fixing. Alternatively, prime tiled surfaces with [RLA NON POROUS PRIMER](#)

## PRIMING:

Highly porous and non-porous surfaces to be primed before installation of Unilite S1

## POROUS/ABSORBENT SURFACES:

- Apply [RLA POROUS PRIMER](#) by brush or roller at a minimum coverage of 1litre/8m<sup>2</sup> per coat to the substrate and allow to dry

## NON POROUS/NON ABSORBENT SURFACES:

- Apply [RLA NON POROUS PRIMER](#) by brush or roller at a minimum coverage of 1litre/10m<sup>2</sup> to the substrate and allow to dry

**NOTE:** Refer to RLA primer data sheets for specific application and coverage details

## **MIXING:**

- The mixing ratio of Unilite S1 is 5.6litres of water per 12.5kg bag.
- Pour 5.6Litres of clean water into a clean pail, and gradually add the Unilite S1 mixing continuously using an electric stirrer with paddle attachment until a smooth, lump-free consistency is obtained.
- Always add powder to the liquid.
- Allow the mix to stand for 3 minutes and re-stir before applying the adhesive onto the substrate

## **APPLICATION:**

- All preparation and tiling should be carried out in accordance with AS 3958
- Once the surface has been suitably prepared, apply the adhesive onto the substrate using an appropriately sized notched trowel for the tile size
- For tiles larger than 300 x 300mm back-butter the tiles in addition to notching the floor
- With Clip systems use a 12,15 or 20mm notch and back butter the tile to ensure coverage complies with the standard
- Unilite S1 should be applied onto the substrate at a rate of 1m<sup>2</sup> at time. Application rates greater than this can result in the adhesive skinning before the tiles are laid
- Once the adhesive skins, do not lay tiles into it, remove and re-apply fresh adhesive.
- When placing the tiles, press them into the wet bed of adhesive by using a sliding action. Ensure no voids occur and full coverage of adhesive is under the tiles.
- For tiles with lugs, grooves or uneven backing it may be required to butter the back of the tile with adhesive in addition to trowelling the adhesive onto the substrate.
- The final bed thickness of the adhesive should be at least 2mm for wall tiling and 3mm for floor tiling.
- Once the tiling is completed do not disturb the tiled surface for at least 24 hours at 20°C.

## **COVERAGE:**

- 5-6m<sup>2</sup> using a 10mm notch

## **EXPANSION / MOVEMENT JOINTS:**

- Movement joints to be installed as per AS 3958

## **GROUTING APPLICATION:**

- Grouting application can commence after adhesive has cured for 24 hours at 23°C, or until the adhesive has hardened sufficiently that tiles are well fixed and will not be displaced during the grouting application\*
- Any adhesive that has leached into the grout joint must be raked out with a knife/spatula etc. prior to grouting
- Use [RLA LUMINOUS GROUT](#) as per product installation recommendations
- Protect tiling from rain and inclement weather until 24 hours after grouting is complete.

**\*Drying times may be extended in humid conditions and colder temperatures.**

## **CLEAN UP:**

- Excess adhesive from the face of the tiles can be cleaned up with a damp cloth while the adhesive is still in a wet state
- Tools and other equipment can be cleaned using water while the adhesive is still wet.
- Dried adhesive to be removed by mechanical means

## **PACKAGING:**

12.5 kg bags

## **SHELF LIFE & STORAGE:**

- 12 months stored in original unopened packaging
- Best stored in a dry area at room temperature
- Keep off cold floors and out of direct sunlight

## **HEALTH AND SAFETY**

For information and advice on the safe handling, first aid, storage and disposal of chemical products, users must refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## **LIMITATIONS:**

- Do not apply Unilite S1 when surface or ambient temperatures are above 35°C and below 5°C.
- Unilite S1 is not suitable for fixing tiles directly to timber flooring.
- Not suitable for use with moisture sensitive stone
- For detailed advice on applications not mentioned in this TDS, contact the RLA Technical Department

| TECHNICAL DATA:                                                                                 |                     |
|-------------------------------------------------------------------------------------------------|---------------------|
| Colour                                                                                          | White               |
| Bulk Density (kg/dm <sup>3</sup> )                                                              | 0.74                |
| Shelf life                                                                                      | 12 months           |
| Packaging                                                                                       | 12.5kg bags         |
| Coverage - 10mm notch                                                                           | 5-6m <sup>2</sup>   |
| 12mm notch                                                                                      | 4-5m <sup>2</sup>   |
| 15mm notch                                                                                      | 3-4m <sup>2</sup>   |
| APPLICATION DATA - 23°C AT 50% RH                                                               |                     |
| Note: Ambient and surface temperatures, humidity, tile and surface porosity will vary dry times |                     |
| Mixing Ratio                                                                                    | 5.6L per 12.5kg bag |
| Open Time                                                                                       | 30 mins             |
| Adjustment Time                                                                                 | 45 mins             |
| Pot Life                                                                                        | 60 mins             |
| Ready for Grouting                                                                              | 24 hours            |
| Light Foot traffic                                                                              | 24 hours            |
| Ready for wet area service                                                                      | 3-4 days            |
| Ready for immersion                                                                             | 7 days              |
| Suitability for underfloor heating                                                              | Yes                 |
| Maximum adhesive bed thickness                                                                  | 20mm                |
| PERFORMANCE (ISO 13007)                                                                         |                     |
| Tensile adhesion strength after                                                                 |                     |
| 28 days                                                                                         | ≥ 1MPa              |
| Water immersion                                                                                 | ≥ 1MPa              |
| Freeze/thaw                                                                                     | ≥ 1MPa              |
| CLASSIFICATION                                                                                  | C2TES1              |

**WARRANTY STATEMENT:**

RLA Polymers guarantees this product against manufacturing defects and guarantees it to be manufactured to our published specification.

We certify that this product is suitable for use when fully cured and will perform as described in our technical data sheet or other published materials.

RLA Polymers will replace the product free of charge when purchased from any legally verifiable source and where a product is proven to have been stored, handled, and install according to instructions published on our packaging and within the stated shelf life. The Installation of all materials must be carried out in accordance with relevant Australian Standards.

Warranty doesn't apply if damage, loss, failure to follow instructions, or other circumstances are out of our control.

Sufficient time and access to investigate any complaint must be accorded to RLA Polymers.

The consumer is responsible for any expenses incurred in making a claim.

A claim form can be requested by:

**PHONE:** 1800 242 931

**EMAIL:** [info@rlapolymers.com.au](mailto:info@rlapolymers.com.au)

**MAIL:** 215 Colchester Road Kilsyth Victoria 3137  
(Attention Customer Service)

**WEBSITE:** [www.rlapolymers.com.au](http://www.rlapolymers.com.au)

**AUSTRALIAN CONSUMER LAW:**

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality, and the failure does not amount to a major failure. The benefits under our warranty are in addition to other rights and remedies available to the consumer under the law in relation to the goods and services to which the warranty relates.

**DISCLAIMER:**

All statements and technical information contained herein are based on tests we believe to be reliable, but the accuracy thereof is not guaranteed.

Users assume all risk and liability resulting from the use of the product and must confirm the suitability thereof by their own tests. Conditions of Sale contain a limited warranty against manufacturing defects.

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