

# MAX STICK S1

**A flexible modified cement  
based tile adhesive**



## DESCRIPTION

**Max Stick S1** is a non-slump cement-based flexible tile adhesive for internal & external applications.

**Max Stick S1** is specially designed for large format tiles and is ideal for bonding a large range of wall & floor tile including ceramic, fully vitrified, porcelain, natural stone, terrazzo, glass and mosaics.

**Max Stick S1** accommodates for shrinkage movement associated with early age concrete and screeds and is ideal for the application over **Bonded** Waterproof Membranes, **Barrierbond WPM** and **Barrierbond Fast (2P)**. For suitable approved membranes please contact Bonded Technologies or your local distributor.

## Benefits & Uses

- High performance.
- Flexible S1.
- Non-Slump.
- Extended Open Time.
- Adhesive-meets C2SITE classifications.
- Ideal product for Large Project applications e.g. Unit Blocks.
- Low VOC content which easily meets Green Building Council of Australia Green Star IEQ-13 requirements.

## Substrates

Concrete, renders, screeds, **Bonded** Waterproofing Membrane, block work, gyprock, plasterboard and fibre cement surfaces.

## Surface Preparation

Ensure surfaces are sound and free from movement, oil, grease, wax, dust and any curing and release agents and any other barrier materials. Ensure surface to be tiled over is strong enough to support the weight of the tiles being fixed. Surface needs to be dry before tiling, with no residue or permanent damp. All surfaces must be primed with either **Prepbond AP** (porous and semi-porous substrates) or **Prepbond NP Grip** (non-porous substrates)

## Concrete & Cement Render

Ensure all concrete slabs are allowed to cure for at least 7 days in accordance with AS 3958.1-2007 and have a wood float finish. The maximum variation in the plane of the concrete must not exceed 5mm in 3 meters for floors and 4mm in 2 metres for walls. Steel troweled finished concrete surfaces must be mechanically abraded or primed first using **Prepbond NP Grip**. All render surfaces must be allowed to cure for at least 24 hrs. prior to commencing tiling.

## Existing Tiles

Existing Tiles need to be sound and clean. Remove all cracked, drummy or otherwise unsound tiles and repair appropriately. Prime surfaces using **Prepbond NP Grip**.

## Plaster Board & Fibre Cement Sheet Wall /Floor

Fibre cement sheeting / Plasterboard Sheets must be the correct sheeting for the installation and be used and installed in accordance to the manufacturer's written specifications. The surface must be primed with **Prepbond AP**

## Mixing

Mix **Max Stick S1** with 4.5 litres of water, add powder to water/liquid. Mix using a mixing paddle, Allow to stand for 3min and then re-mix. Adhesive is now ready to use.

## Fixing Tiles

Tiles should be fixed in accordance with Australian Standard AS 3958.1-2007 apply the adhesive using a square notched trowel.

For tiles < 300 x 300 mm use a 10mm Square notch and for tiles > 400 x 400 use a 12mm notch and butter the back of each tile. Apply adhesive at a rate of 1m<sup>2</sup>, ensure adhesives still tacky, and press the tiles firmly into the adhesive before it skins. Do not spot fix, remove all excess adhesives.

## Grouting

Commence grouting when tile adhesive has hardened sufficiently so that the tiles will not be dislodged. A proprietary grout such as **Bonded Colour-In SG or FS** (Fast set) should be mixed and used as per grout written instructions for use.

## Clean Up

Excess adhesive can be removed using a clean damp cloth while still wet, Tools and other equipment can be cleaned up using water while the adhesive is still wet.

## Coverage

A 20kg bag of **Max Stick S1** will cover approximately 12m<sup>2</sup> on walls using a 6mm notched trowel and 7m<sup>2</sup> on floors using a 10mm notched trowel. The coverage will vary depending on substrate condition, tile type and application technique.

## Expansion Joints

Must be installed in accordance with Australian Standard AS3958.1-2007.

Movement Joints must be placed from the substrate through the tile bed up to the face of the tile. Movement joints must be clean and free from dirt, adhesive droppings and tile spacers. They must be a minimum of 6mm wide and no wider than 10mm. they should be filled with a suitable elastomeric sealant.

## Position of Movement joints

- Every 4.5 metres externally and every 6 metres internally.
- Around the perimeter of the floor; over existing joints in the substrate.
- Where 2 different materials meet (e.g. wood and concrete).
- Around fixtures in the substrate (e.g. columns).
- Internal vertical corners; changes in direction of the tiling at changes in storey height.
- Over existing movement joints.

## Technical Data

| Rating  | C2SITE                                       |
|---|--|
| Appearance  | Available in White & Grey Powder             |
| Mixing ratio  | 20kg bags mixes with 5 litres of Clean Water |
| Pot Life  | 3 hours at 23°C                              |
| Open Time   | 45 minutes at 23°C                           |
| Thickness of Mixed Product                          | Stiff Mixture will stand up on trowel        |
| Application temperature range                       | 5°C to 35°C                                  |
| Drying Time   | Ready to grout in 8 hours                    |
| Mechanical Properties (AS4992; ISO13007.1)          |  |
| Compressive Strength                                | 30MPa  |
| Tensile Strength                                    | 1.92MPa                                      |
| Tensile Strength after heat Aging                   | 1.5MPa                                       |
| Tensile Strength after Water Immersion              | 1.4MPa                                       |
| Sag Distance (mm)                                   | 0.09   |
| Flexural deformation                                | 2.9  |
| Specific Gravity                                    | 1.4kg /l                                     |
| Water Absorption                                    | 3.2g per kg                                  |
| pH of Mixed Product                                 | Over 11.5                                    |
| Adjustability Time at 23°C                          | 45 minutes                                   |
| Ready to Grout at 23°C on walls                     | 8 hours                                      |
| Ready to Grout at 23°C on floors                    | 12 hours                                     |
| Time for Foot traffic at 23°C over porous substrate | 24 hours                                     |
| Environment Temperature Range After Cured           | -40°C to 125°C                               |

## Precautions

Do not apply **Max Stick S1** in temperatures below 5°C and above 35°C. **Max Stick S1** has an open time of 35 minutes at 23°C. and an adjustment time of 60 minutes. Please be aware of site conditions when considering times and only spread enough adhesive so that tiles can be fixed while the adhesive is still wet.

**Max Stick S1** is not recommended for external tiling over 2.7m. Do not use for tiling over existing tiles in immersed situations such as swimming pools spas etc.

**Max Stick S1** cannot be used when fixing moisture sensitive tiles or stone. For applications or situations not mentioned in this data sheet please contact Bonded Technologies.

**Max Stick S1** is cement based and is alkaline in nature, and therefore may cause dermatitis. It is recommended that applicators wear PVC gloves or similar and safety goggles

## Packaging

**Max Stick S1** is available in a 20kg bag.

## Shelf Life

A bag of **Max Stick S1**, when kept in a cool, dry environment, and stored above ground level, will have a shelf life of 12 months.

## Warranty

All **Bonded** products come with a 15 year warranty, providing the application is in accordance with AS3958.1 2007 and the manufacturer's printed directions for use on the latest Technical Data Sheet.