

## Surface Preparation

- Surfaces** to be tiled must be firm, clean and free of dust, waxes and other contaminants.
- Dusty surfaces** must be primed with **Primebond** prior to tiling (i.e., cement sheeting and gypsum plaster board).
- Brick and block** walls must be allowed to cure for a minimum of four weeks before tiling.
- Render/Screed** must be allowed to cure for seven days and finished to a semi-smooth finish with a wood float.
- Concrete** walls and floors must be allowed to cure for a minimum of four weeks before tiling. Smooth concrete/laitance must be mechanically abraded.
- Timber or steel** framed construction must have studs at 450mm maximum centres in the areas to be tiled. Cladding to be fixed in accordance with manufacturer's instructions.
- Structural Timber Flooring:** Cover with cement sheet flooring.
- Painted surfaces:** Not a suitable surface for ceramic tiling and must be removed.
- Tiled surfaces** must be firmly adhered and must be mechanically abraded or primed with **Primax** or **Kembond**.
- Vinyl** (firmly adhered): Clean thoroughly, removing all polish and waxes. Roughen by sanding. Adhere tiles with **Kemflex** or **Monoflex**.
- Bitumen:** We **do not** recommend any of our adhesives/products over this surface.
- Glass Mosaics:** Fix with **Ultima** or **Mosaicbond**.
- Building Boards (manufacturer approved):** Prime surface with **Primax** or **Primebond**.

## Oil, Grease, Release Agents

Remove excessive grease and grime with a scraper or wire brush. Degrease the surface with an industrial detergent, e.g. one part Tri Sodium Phosphate (TSP) to 20 parts water solution or a caustic soda solution. Scrub the surface with a stiff broom and hose down thoroughly.

## Render coat to level uneven masonry surfaces

Apply screed 1:3 cement : sand render approximately 10mm thick to true uneven surfaces and finish semi-smooth (to give a good mechanical key) with a wood float. Let cure for 7 days before tiling.

## Fixing Tiles

Tiling to be done in accordance with the relevant Standard. Apply dry tiles to the adhesive before it skins on the surface. Apply the adhesive using a (1) notched trowel, (2) solid bed or (3) buttering method. Never spot fix tiles. Press the tiles firmly into the adhesive using a slight sliding action and check tiles occasionally (one in 20 tiles) to see that the tile is fully in contact with the adhesive. No voids are to occur under the tiles. Do not fix tiles with tight joints. A guide for joints between tiles is internal tiles 2mm to 4mm, external tiles 4mm to 8mm, terracotta tiles 8mm to 12mm. Surplus adhesive left on the face of the tiles must be removed before it sets. Improve the adhesion to difficult substrate by using **Primax**. Brush apply to substrate before fixing tiles. Use a flexible adhesive on all external tiling and surfaces subject to movement, vibration and cracking.

## A guide to tile joint sizes

Internal minimum 2mm, external minimum 4mm or as specified by the tile manufacturer and AS3958.1. **Do not** fix tiles with tight joints. When grouting joints of less than 3mm we recommend mixing the grout with **Primebond**. Greater care is needed to place the grout deep into joints before pointing the joints to compact the grout surface.

## Notched Trowel Method

Apply the adhesive as a screed then comb with the appropriate notched trowel. Do not apply more than a square metre at a time.

**Thin Bed** - Use a notched trowel for surfaces that are basically flat (i.e. true to 3mm over a 2m length). Thin bed adhesive should be 3mm thick when the tile is adhered.

**Thick Bed** - Use a 10mm to 12mm notched trowel for surfaces that have a greater than 6mm variations over a 2m length or use the solid bed or buttering application. Thick bed adhesives should be between 3mm to 12mm thick when the tiles is adhered.

## Thin Bed Fixing

Tile size	Notched trowel size
200mm x 200mm _____	8mm
250mm x 250mm _____	10mm
300mm x 300mm _____	12mm

For tiles 400mm x 400mm or greater use a 12mm notch and butter tile back (as per the relevant Standard).

## Acceptable Coverage

Internal Residential Walls _____	65%
Residential Floors _____	80%
Wet Areas _____	90%
Swimming Pools _____	90%
External Walls _____	90%
External Floors, Decks and Roofs _____	90%

A copy of the A.S 3958.1 can be downloaded from: [www.standards.org.au](http://www.standards.org.au)

## Solid Bed Method

Work one square metre applying the adhesive to the substrate and make it true and level before bedding tiles.

## Buttering Method

Butter the back of the tile evenly with adhesive slightly thicker than the required thickness. Press or tap the tile into position. **Irregular Backed Tiles** and **large tiles** or **slabs** must be buttered flat or covered with adhesive before pressing into the adhesive ribs to ensure complete bond.

## Fixing tiles that vary in thickness

(e.g. **Marble and Slate**)

Sort tiles into four different thicknesses and lay the thickest tile first. If a flat surface is required build the thinner tiles up with a thicker bed. A natural fall can be obtained by using the same thickness bed.

## Wet Area Tiling

Shower alcoves, wet areas, balconies, roof tops, pool surrounds and external areas must be graded to allow a free flow of water (water must not pond on the surface).

## Grouting

Grout after the adhesive is set and dry (24-48 hours). Choose the darkest grout that colour matches the tile. Use **Kemgrout** mixed with water for normal applications. When greater mould resistance and a harder more durable grout is required, mix **Primebond** with the grout. Where hygiene and resistance to chemicals is a consideration grout with **Epegrout**. Remove surplus grout regularly with a wet rag before it hardens on the tile surface.

## Movement or Expansion Joints

To allow for tile expansion leave a 5mm minimum gap around the perimeter of floors and in large areas at 5 metre intervals. On walls expansion joints should be made at 3-4.5 metre intervals at vertical corners and coincide with joints in the base slab and around piers and columns, and be in accordance with the Building Standard recommendations. Expansion joints must be free of dirt and adhesive droppings and be filled after the adhesive has cured with a flexible sealant (i.e. **Colour Seal** or **Sealflex**).