

Tile Adhesives **TAL**  
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Develop Africa

**GENERAL SPECIFICATION FOR FIXING PORCELAIN TILES ONTO 'UNI-BOARD MGO' WALL PANELS IN INTERIOR 'DRY' AREAS**

Further to our discussions, and testing of the Uni-Board MgO Panels in the TAL Laboratory, we have pleasure in submitting our materials and methods specification for your perusal.

This specification is based on the samples submitted for testing; please inform us if the board composition/format changes, in which case the specification may be amended.

During Laboratory testing it was established that a stronger adhesive bond was achieved on the Smooth side of the board, rather than the Rough side. It is thus preferable that tiles be installed on the Smooth side.

Please note that 'general' specifications are issued for information purposes and should not be used as project specifications.

As each and every project needs to be assessed individually on its own merits and characteristics please contact the TAL Technical Advice Centre for a project-specific detailed materials and methods specification for specific projects.

It is important that the tile selected is suitable for the application, preferably against a written Supplier's specification. Factors such as water absorption, irreversible moisture expansion, MOR and PEI ratings, chemical resistance and overall stability of the product need to meet the requirements of the service conditions.

**The backs of all tiles must be clean and free from all traces of dust and contaminants.**

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**SPECIAL NOTE MUST BE TAKEN OF THE FOLLOWING :**

**Uni-Board MgO Panels :**

The following is an extract from SANS 10107 : 2011, Code of Practice for the Design & Installation for Ceramic Tiling :

**“An important consideration with this type of background is that the sheets or boards shall be adequately braced to provide a rigid surface, free from any springiness and surface undulations. They shall also not undergo any distortion during and after completion of the tiling.”**

Although we have specified a latex-modified adhesive system for this installation, it should be noted that excessive movement in the background could result in an installation failure.

It is also critical that the maximum weight of tile/m<sup>2</sup> as recommended by the partition walling manufacturer should not be exceeded as this will compromise the integrity of the installation.

**Adhesive System :**

We have specified TAL GOLDSTAR 6 **rapid-setting** high-strength adhesive for this installation. However, if timing allows for a **quick-setting** adhesive option, then TAL GOLDSTAR 12 may be considered.

The advantages of using TAL GOLDSTAR 12 are as follows :

- TAL GOLDSTAR 12 has a longer pot life (pot life of 4 hours, grout after 6 – 8 hours, and adhesive set after 12 hours)
- TAL GOLDSTAR 12 is more cost effective than TAL GOLDSTAR 6

**Tile Panel Movement Joints & Perimeter Joints :**

It should be noted that the lack of movement joints in a tile panel, or poorly constructed joints, is a major cause of tile failure.

Joints must be created at the required spacing and must be well raked out to remove all traces of adhesive residues, debris, contamination, etc, ie the joint must extend through the tile and tile adhesive layers. These joints must be filled with TAL GOLDSTAR SEALMASTER 1000 Polyurethane Joint Sealant (and suitable backing cord where applicable) in accordance with the manufacturer’s instructions.

(See later detail of correctly constructed tile panel movement joint and perimeter joint.)

**The TAL products required for this installation are as follows :**

TAL GOLDSTAR 6  
TAL BOND / TAL BOND POWDER  
TAL WALL & FLOOR GROUT  
TAL SEALMASTER CORD  
TAL GOLDSTAR SEALMASTER 1000  
NOTCHED TROWELS  
SPACERS

**1. BACKGROUND PREPARATION**

- 1.1 The Uni-Board MgO Panels must be erected strictly in accordance with the manufacturer's instructions, and must be **thoroughly braced at maximum 300mm centres in both directions (screwed, not nailed)**.
- 1.2 **The surface must be dry-wiped to remove dust/powder.**  
**It is essential that the substrate is clean and dry, sound, and free of all traces of dust, loose particles and surface contaminants.**

**2. ADHESIVE SYSTEM**

- 2.1 Apply TAL GOLDSTAR 6 rapid-setting adhesive mixed 20kg with 5 litres of TAL BOND (**replacing the water in the mix**) to the background using a notched trowel.  
**Alternatively**, TAL BOND POWDER may be added to the adhesive mixing water at a ratio of 1 x 1kg sachet per 20kg TAL GOLDSTAR 6.
- 2.2 In this tiling situation it is imperative that there is a solid bed of adhesive at least 5mm thick behind each tile. We would recommend the use of a notched FLOOR TROWEL or THICK-BED FLOOR TROWEL.  
**NOTE :** Back buttering with a thin coat of adhesive may also be required when using large format tiles to ensure full contact and a solid bed of adhesive beneath each tile.
- 2.3 At no time spread more adhesive than can be tiled onto in 10 – 15 minutes. Depending on atmospheric conditions, this will normally be around 1 square metre. This prevents the adhesive from drying or "skinning" before the tiles are applied.
- 2.4 Bed dry tiles (do not soak) firmly into the wet adhesive with a twisting action to ensure full contact between the background, tiles and adhesive. Tiles should be well tapped home with a rubber mallet or the wooden handle of a trowel. It is sound practice to remove the occasional tile to ensure that good contact has been achieved.
- 2.5 Clean off any surplus adhesive remaining on the face of tiles and between the joints with a damp sponge before the adhesive dries.
- 2.6 Never butt joint tiles. Joints are required to allow the individual tiles to move with respect to each other and thus avoid a compressive stress build-up. They are also required as vents for the tile adhesive to cure. The joints between porcelain tiles must be a minimum of 3mm wide.
- 2.7 Pot life of the adhesive will vary with climatic conditions. Under no circumstances should adhesive which has been left standing for too long be reconstituted by adding more liquid.
- 2.8 Do not tile over structural, expansion or cold joints in the background. These joints must be extended through the various layers to the surface.
- 2.9 **NOTE :** Ensure that heavy and/or large format wall tiles are well supported by means of a batten or some type of mechanical device until such time that the adhesive has set sufficiently. In this situation it will be 6 hours.

### 3. **GROUTING**

3.1 Grouting must not be carried out until sufficient bond has developed between the bedding mix and the tiles to preclude disturbance of the tiles during the grouting operation. Allow a minimum of 4 hours before grouting.

3.2 Use White or coloured TAL WALL & FLOOR GROUT mixed 20kg with 6 litres of TAL BOND (**replacing the water in the mix**) for filling wall tile joints up to 8mm wide.

**Alternatively**, TAL BOND POWDER may be added to the grout mixing water, at a ratio of 1 x 1kg sachet per 20kg TAL WALL & FLOOR GROUT.

#### 3.3 **WARNING :**

3.1.1 Particular care must be taken to clean the grout off the tile face before it hardens completely. This is especially important when an additive such as TAL BOND or TAL BOND POWDER has been used.

3.1.2 A sample of the tiles to be used should be tested beforehand to ensure that no grout is absorbed into the tile body, causing permanent staining of the tiles.

3.1.3 It is important to use the stipulated amount of liquid in the TAL Grout mixture. When cleaning, a **damp, not wet**, sponge must be used. Over hydration (too much water) of the mix, or in cleaning, causes colour variations in the grout joints, and also affects the integrity of the grout, resulting in a friable product.

### 4. **MOVEMENT JOINTS**

4.1 It should be noted that the lack of movement joints in a tile panel is a major cause of tile failure. They should be specified at the design stage to avoid placing them in heavy traffic areas and spoiling the visual effect of the tiles.

4.2 **Movement joints should be located in both directions at maximum 3 metre centres for this application.**

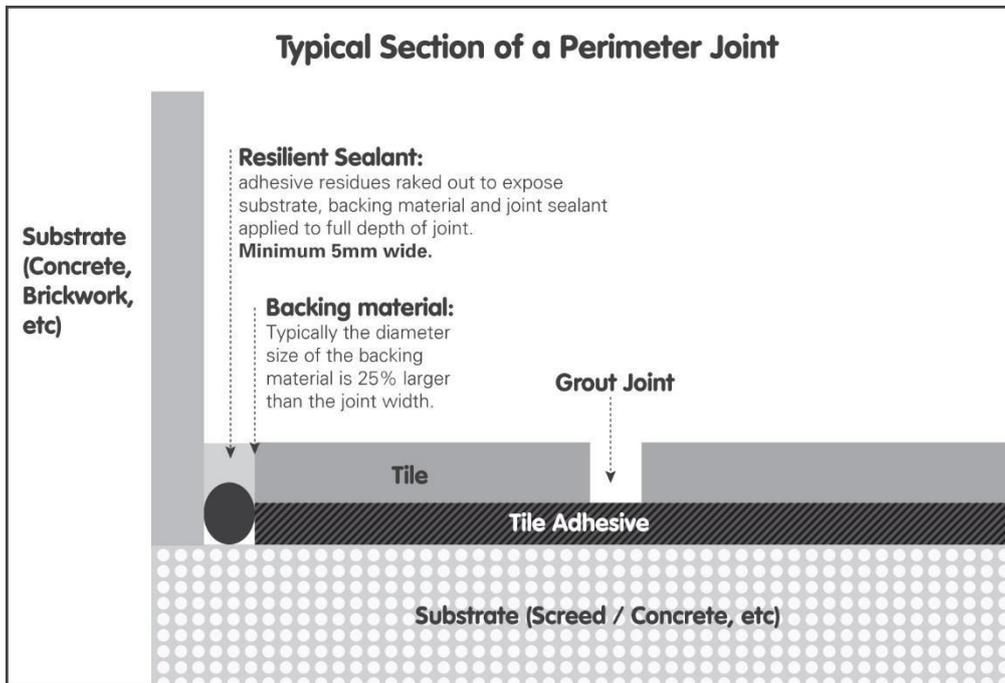
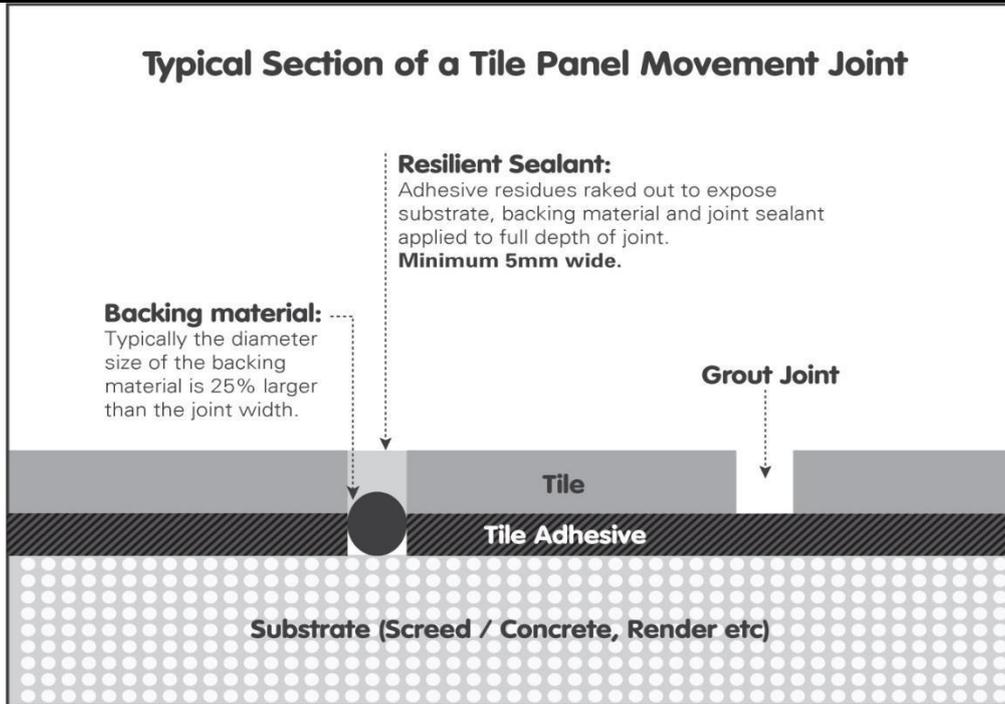
4.3 **Movement joints should also be located in all internal corners and interfaces**, against obstructions fixed to the structural background and **over all discontinuities in building materials, e.g. at interfaces of partition walling and brickwork/concrete**. In addition, movement joints should be located around any fixtures protruding through the tiled surface.

4.4 **The joints should be at least 5mm wide and extend through the adhesive and tile layers.**

4.5 Where practical, the bulk of the depth of the movement joint can be filled with TAL SEALMASTER CORD.

4.6 Seal the joint using TAL GOLDSTAR SEALMASTER 1000 Polyurethane joint sealant in accordance with the manufacturer's instructions. It is important that the joint sealant bonds only to the sides of the movement joint.

4.7 For the key requirements common to all tiling situations please refer to SANS 10107-2011, Code of Practice for the Design and Installation of Ceramic Tiling.



Should you require any further assistance or have any queries regarding the above, please do not hesitate to contact us. Assuring you of our best attention at all times.

Yours sincerely

**SHARON MARGON**  
**TECHNICAL ADVICE SUPERVISOR**

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