

INSTALLATION GUIDELINE

Type: Remedial Replacement of Damaged Floor Tiles



1 December 2024

IMPORTANT:

- **This Installation Guideline is issued for information purposes only, and should not be used as a project specification.**

Please contact the TAL Technical Advice Centre to ensure you have the latest version of this Installation Guideline, as products and application procedures can change.

- **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.**

NB: The backs of all tiles must be clean and free from all traces of dust and contaminants which could impair adhesion.

THE TAL PRODUCTS REQUIRED FOR THIS INSTALLATION ARE AS FOLLOWS:

TAL KEYCOAT + TAL KEYMIX *
TALFIX / TAL GOLDSTAR 12
TAL GOLDSTAR 6 – Rapid-setting adhesive option
TAL WALL & FLOOR GROUT
TAL BOND

NB: Prior to commencing the installation, please refer to the instructions on the packaging and product data sheets for more detailed information pertaining to substrate preparation, product mixing and application, curing times, etc. The products must be applied following a good standard of workmanship.

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SPECIAL NOTE MUST BE TAKEN OF THE FOLLOWING:

The remedial work must be suitably barricaded or cordoned off for the duration of the repair, including curing/drying times of the adhesive and grout systems.

Too early trafficking of newly installed tiles before the adhesive has set sufficiently may result in an impaired bond (hollow-sounding and/or loose tiles).

Application Conditions:

High Ambient Conditions

As indicated on the product data sheets, warm weather conditions (generally, temperatures above 30°C) may shorten the working time of the mixture, and may even result in flash-setting of rapid- or quick-setting adhesives.

High ambient conditions will also impact on the temperatures of the adhesive and grout, mixing liquid (water or additive used in the adhesive and grout mix), substrate (concrete or screed), and tiles.

It is thus important when elevated ambient conditions are encountered that the materials (adhesives, liquids, tiles, etc) are stored in interior, cool conditions prior to use to reduce the risk of too-rapid setting.

NB: Never add more liquid to a mix which has been left standing for too long, as this will compromise the integrity of the product.

Cold Ambient Conditions

Cold ambient conditions will not only impact on the temperatures of the adhesive, grout and mixing liquid (water or additive used in the adhesive and grout mix), but also the temperature of the substrate and tiles.

NB: Longer setting and curing times should thus be anticipated and catered for during extreme cold conditions.

External Applications:

External installations must be protected from inclement weather and too-rapid drying (direct sunlight, drying winds, etc), while the adhesive and grout sets.

1. BACKGROUND PREPARATION

- 1.1 The grout in the joints surrounding the tile should be carefully scraped out (by mechanical or manual means), with due care taken to ensure the edges of the surrounding tiles are not damaged.
- 1.2 Commence chipping at the tile at the point of damage (crack, break), and then to chisel outwards to the edges of the tile.
- 1.3 Once the tile has been removed the adhesive must be chopped out, with due care being taken to prevent damage or disturbance to the adjacent tiles.
- 1.4 **After removal of the tile, the surrounding tiles must be inspected to establish whether they are still sound.**

NB: It may be necessary to replace entire 'panels' of tiles rather than attempt to replace random, isolated tiles, as the possibility exists that the surrounding tile installation may be disturbed when undertaking the remedial work.

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- 1.5 The exposed substrate must be in good condition, firm and sound, and of a quality and consistency suitable for tiling
- 1.6 Carefully sweep and/or vacuum the area to remove all traces of dust, debris and loose particles.
- 1.7 **Any contamination from other trades and general surface contaminants must be identified and removed. The substrate must be clean and dry and free from all traces of dust, loose particles and surface contaminants which could impair adhesion.**
- 1.8 If the surface has been woodfloated it is possible to commence tiling. However, if the surface has been steelfloated it will be necessary to first key the surface with a slurry consisting of 1 part TAL KEYCOAT to 2 parts TAL KEYMIX powder **or** 2 parts TAL adhesive powder (by volume), applied using an appropriate builder's block brush and ensuring complete coverage of the substrate. Allow this slurry coat to dry for 4 – 6 hours before applying the adhesive.*

2. ADHESIVE SYSTEM

2.1 Interior Surface Beds

2.1.1 Option 1: TALFIX / TAL GOLDSTAR 12

2.1.1.1 Mix the adhesive with the stipulated quantity of cool, clean water (TALFIX – 5kg:1.25 litres / TAL GOLDSTAR 12 – 20kg:5 litres) in accordance with the product instructions.

2.1.2 Option 2 : TAL GOLDSTAR 6

2.1.2.1 Mix 20kg TAL GOLDSTAR 6 with 5 litres of cool, clean water in accordance with the product instructions.

2.2 Interior Suspended Slabs

2.2.1 Option 1: TALFIX / TAL GOLDSTAR 12

2.2.1.1 Mix the adhesive with the stipulated quantity of TAL BOND (TALFIX – 5kg:1.25 litres / TAL GOLDSTAR 12 – 20kg:5 litres) in accordance with the product instructions.

2.2.2 Option 2 : TAL GOLDSTAR 6

2.2.2.1 Mix 20kg TAL GOLDSTAR 6 with 5 litres of TAL BOND in accordance with the product instructions.

2.3 Exterior Floors

2.3.1 Option 1: TALFIX / TAL GOLDSTAR 12

2.3.1.1 Mix the adhesive with the stipulated quantity of TAL BOND (TALFIX – 5kg:1.25 litres / TAL GOLDSTAR 12 – 20kg:5 litres) in accordance with the product instructions.

2.3.2 Option 2 : TAL GOLDSTAR 6

2.3.2.1 Mix 20kg TAL GOLDSTAR 6 with 5 litres of TAL BOND in accordance with the product instructions.

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2.4 General – All Installation Areas

- 2.4.1 Where possible the adhesive should be trowelled onto the floor using an appropriated notched FLOOR TROWEL or THICK-BED FLOOR TROWEL.
- 2.4.2 However, when replacing individual tiles it may not be feasible to apply the adhesive to the substrate by trowel.

In this instance the adhesive should be applied onto the back of the tile in a solid bed, ensuring complete coverage of the tile. Gently trace the notched side of a floor trowel through the adhesive to create 'ridges' which will aid in ensuring transfer of adhesive and bonding onto the substrate.
- 2.4.3 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.
- 2.4.4 Position the tile in place, pressing down firmly. Use a spirit level to check that the face of the replacement tile (particularly floor tile) is flush (level) with the surrounding tiles. Carefully scrape excess adhesive out of the joints between the tiles before the adhesive dries.
- 2.4.5 Ensure the same width of grout joints are maintained in the remedial tiling. This is typically 5mm wide for ceramic floor tiles, and 3mm wide for porcelain tiles.
- 2.4.6 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.

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, as follows:**

TALFIX / TAL GOLDSTAR 12 - Allow a minimum of 6-8 hours before light foot trafficking or grouting.

TAL GOLDSTAR 6 – Allow a minimum of 4 hours before light-foot trafficking or grouting.
- 3.2 **Interior Surface Beds**
 - 3.2.1 Use grey or coloured TAL WALL & FLOOR GROUT mixed 5kg with 1.5 litres of cool, clean water for filling tile joints up to 8mm wide.
- 3.3 **Interior Suspended Slabs**
 - 3.3.1 Use grey or coloured TAL WALL & FLOOR GROUT mixed 5kg with 1.5 litres of TAL BOND for filling tile joints up to 8mm wide.
- 3.4 **Exterior Floors**
 - 3.4.1 Use grey or coloured TAL WALL & FLOOR GROUT mixed 5kg with 1.5 litres of TAL BOND for filling tile joints up to 8mm wide.

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3.5 **WARNING:**

- 3.5.1 The joints must be raked out and cleaned before grouting.
- 3.5.2 Ensure that the joints are completely filled, and the grout is thoroughly compacted into the joints.
- 3.5.3 Particular care must be taken to clean the grout off the tile face before it hardens completely. This is especially important when a modified grout system has been used.
- 3.5.4 A sample of the tiles to be used should be tested beforehand to ensure that no grout is absorbed through the glaze, or into the tile body, causing permanent staining of the tiles.
- 3.5.5 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 liquid) 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.
- 4.2 "Soft" tile panel movement joints and perimeter joints in the existing tile installation must be respected and maintained in the remedial tiling – ie these joints must **not** be filled with cementitious grout.
- 4.3 **The joints should be at least 5mm wide and extend through the adhesive and tile layers.**
- 4.4 Where practical, the bulk of the depth of the movement joint can be filled with an inexpensive, compressible material such as polyethylene foam strips, such as TAL SEALMASTER CORD.
- 4.5 Seal the joint using a suitable resilient sealant, such as TAL GOLDSTAR SEALMASTER 1000 polyurethane joint sealant, in accordance with the manufacturer's instructions. It is important that the joint sealant bond only to the sides of the movement joint (edges of tiles).
- 4.6 For the key requirements common to all tiling situations, please refer to SANS 10107, Code of Practice for the Design and Installation of Ceramic Tiling.

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