

# INSTALLATION GUIDELINE

Type: **RESIDENTIAL SWIMMING POOLS ONLY**

**Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles**



1 December 2024

## **IMPORTANT:**

- **NB: WATERPROOFING AND TILING OF SWIMMING POOLS IS A SKILLED OPERATION, AND SHOULD ONLY BE UNDERTAKEN BY COMPETENT AND EXPERIENCED INSTALLERS WITH THE CORRECT TRAINING AND EQUIPMENT. APPLICATION BY UNSKILLED LABOUR IS NOT RECOMMENDED.**
- **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.**
- **NB: It is important that the tile selected is suitable for the application, preferably against a written Supplier's specification. Factors such as water absorption, moisture expansion, 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 which could impair adhesion.**

## **THE TAL PRODUCTS REQUIRED FOR THIS INSTALLATION ARE AS FOLLOWS:**

### **Waterproofing**

TAL FLOOR PRIMER – Priming System for Woodfloated (Porous) Substrates

TAL FLOORKEY + TAL RAPIDFIX – Priming System for Steelfloated (Smooth, dense) Substrates

TAL SUREPROOF

TAL WATERPROOFING MEMBRANE

### **Tiling**

TAL GOLDSTAR 12

TAL BOND / TAL BOND POWDER

**Epoxy Grout Option** - TAL WATER-BASED EPOXY GROUT

**Cementitious Grout Option** - TAL HIGH TRAFFIC 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.**

Page 1 of 10

TAL - a division of Norcros SA (Pty) Ltd | **Gauteng:** Porcelain Road, Olifantsfontein 1665, Private Bag X4 Olifantsfontein 1665, South Africa  
Tel: +27 11 206 9700 | Fax: +27 11 316 2863 | **Technical Advice No: 0860 000 825** | [www.tal.co.za](http://www.tal.co.za)

Norcros SA (Pty) Ltd Reg. 1952/000012/07  
Porcelain Road | Private Bag X4 Olifantsfontein 1665, South Africa | Tel: +27 11 206 9700 | Fax: +27 11 316 2863 | [www.norcros.co.za](http://www.norcros.co.za)  
Norcros SA (Pty) Ltd Divisions: Johnson Tiles, TAL, Tile Africa & House of Plumbing

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



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

#### **Waterproofing & Tiling of Swimming Pools:**

- It is **imperative** that the TAL Waterproofing System is protected against exposure to acids and chlorine found in pool water by fixing of tiles, ie **no** areas of the waterproofing must be left exposed. Failure to do so will compromise the integrity of the installation and may result in an installation failure.
- The shell of the pool must be tested and proved watertight before tiling is commenced. Tiles are installed as an aesthetic finish only.
- All construction / cold joints and structural joints in the background as well as discontinuities in building materials (eg interfaces between concrete and brickwork) must be identified and clearly demarcated, and must extend through the adhesive and tile layers to the surface in the form of tile panel movement joints.
- It must be noted that the pH levels of the water in the swimming pool can affect cementitious grouts, ie if the water is too acidic it can cause the grout in the joints to erode over a period of time. Epoxy-resin grout, which is impervious to dilute acid and alkali attack, is thus recommended for use in swimming pools, particularly if constant pH maintenance cannot be guaranteed.

**If a cementitious grout system is to be used, it is imperative that constant pH maintenance is enforced for this installation. Acids and chemicals should also be diluted in water before being introduced into the pool. TAL cannot be liable for erosion of grout from between the joints due to poor maintenance.**

- The tile installation must be allowed to cure for a **minimum** of 10 days after completion of grouting before being filled with water.
  - The pool must be filled slowly to allow gradual exposure of the installation (pool structure and tiles) to water pressure, thermal and moisture differentials. Too-rapid filling of the pool could result in an installation failure (tiles cracking, etc).
  - The pool should not be filled if there is a possibility of large thermal changes (ie in winter, very cold water into an outdoor pool which has been exposed to direct sunlight for an extended period).
  - Emptying of the pool must also be undertaken gradually.

#### **Waterproofing System:**

TAL SUREPROOF is a flexible and seamless rapid-setting slurry-applied waterproofing membrane specifically designed to be fully compatible with cementitious adhesives.

The substrate must attain a moisture content of **6% or less** before the TAL SUREPROOF application may be commenced.

The waterproofing installation must be allowed to dry completely (24 - 36 hours, depending on ambient and site conditions) before being subjected to *light* foot traffic or application of tiles.

**On completion of the installation, the waterproofing system should be flood-tested and proved watertight. This to be signed off by the waterproofing contractor/main contractor/client, and copy to be submitted to TAL for record keeping. TAL cannot be liable for any damages to the Product by following trades, abusive trafficking, etc.**

**The TAL SUREPROOF application should not be commenced if rain appears imminent. It should be protected from rain or water immersion for at least 48 hours after application.**

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

**Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles**



### **Concrete / Off-Shutter Concrete Substrates:**

Concrete substrates may have the residues of shutter release agents remaining in the surface in addition to curing agents, laitance and/or efflorescence deposits that will impair the ability of the tile adhesive from forming an adequate bond onto these substrates, which may result in an installation failure.

Surface preparation such as grinding, abrasive blasting or high-pressure water hosing may be required to achieve an open-pored textured substrate suitable for waterproofing and tiling.

### **Adhesive System:**

We have specified TAL GOLDSTAR 12 **quick-setting** high-strength adhesive, **mixed with TAL BOND as a total water replacement in the mix**, for this installation.

**It is important that newly installed tiles are protected from traffic (other trades, etc) while the adhesive sets. This is especially important in fast-track installations.**

**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).**

**The new tile installations must be suitably barricaded or cordoned off for the duration of the tiling, including curing/drying times of the adhesive and grout systems.**

### **Epoxy-Resin Grout Installations:**

- **NB: The installation of resin compounds requires effective supervision and the employment of skilled operatives. Resin compounds should only be applied by experienced and competent personnel with the correct training. Application by unskilled labour is NOT recommended.**

- **The compound must be mixed and applied strictly in accordance with the instructions on the packaging and data sheet.**

**NB: The addition of any other substances, including water, will compromise the integrity and performance of the product.**

- **High ambient temperatures will considerably shorten the working time of the epoxy, and flash-setting may occur.**

- **Full cure and chemical resistance will be achieved after 7 days. It is imperative that this installation is suitably protected from water, cleaning agents and service conditions until fully cured (minimum 7 days).**

**Filling of the pool may only commence 10 days after completion of grouting.**

- **Under no circumstances whatsoever should any cleaning agents or compounds other than those recommended be used for cleaning.**

### **External Installations:**

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

# INSTALLATION GUIDELINE



## Type: RESIDENTIAL SWIMMING POOLS ONLY

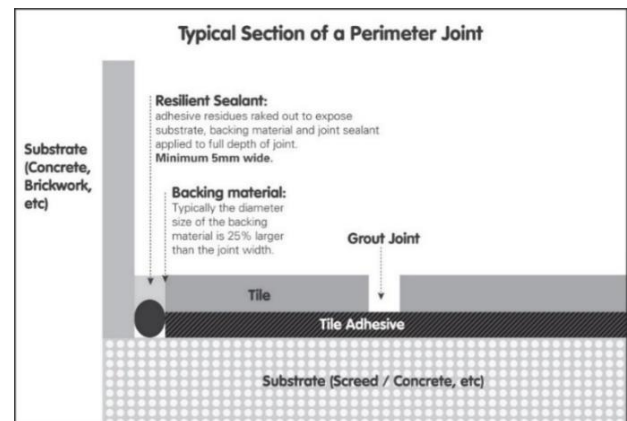
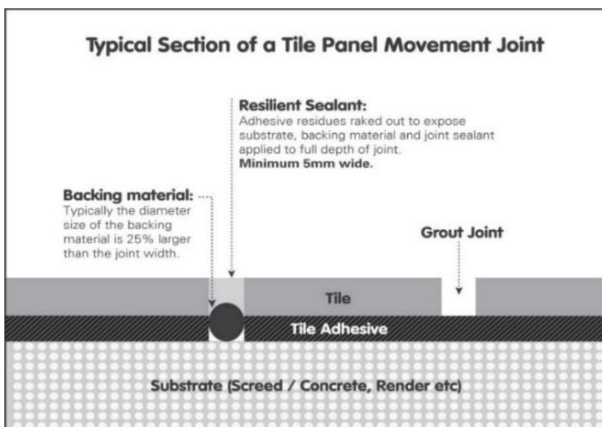
Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles

### Tile Panel Movement Joints & Perimeter Joints:

It should be noted that the lack of, *or poorly constructed*, intermediate tile panel movement joints in a tile panel 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 down to the substrate.

These joints must be filled and sealed with a suitable backing cord/tape and **chemical and acid resistant** resilient joint sealant material in accordance with the manufacturer's instructions.



### Application Conditions:

#### 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.**

#### 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.**

## 1. BACKGROUND PREPARATION

### 1.1 Concrete

**1.1.1 Allow all new concrete work to cure for at least 6 weeks before proceeding.**

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



**When tiling directly onto concrete, ensure that the surfaces are clean and free of all traces of shutter release and curing agents, laitance and any other surface contaminants, preferably by diamond grinding or high-pressure hosing, etc.**

1.1.2 The substrate must be of sufficient strength, must be integrally sound (no crumbling, cracking, etc) and must be of a quality and consistency suitable for waterproofing and tiling. All damaged, defective, deteriorated or hollow sounding areas must be removed and made good before proceeding

### 1.2 Screed & Render

**1.2.1 Allow all new screed and renders to cure for a minimum of 4 weeks and 2 weeks respectively before proceeding.**

1.2.2 The screeding and rendering must be firmly bonded to the underlying concrete or masonry substrate, must be of sufficient strength, must be integrally sound (no crumbling, cracking, etc) and must be of a quality and consistency suitable for waterproofing and tiling. Any damaged, defective, deteriorated or hollow sounding areas must be removed and made good before proceeding.

## 2. WATERPROOFING

**The substrate must attain a moisture content of 6% or less before the TAL SUREPROOF installation can be commenced.**

**The TAL SUREPROOF application must not be commenced if rain appears imminent.**

2.1 **NB: Any contamination from other trades and general surface contaminates 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.**

2.2 **All substrates must be primed prior to the TAL SUREPROOF application, as follows:**

**Woodfloated (Rough, Porous Surfaces)** - prime with a coat of neat TAL FLOOR PRIMER, applied using an appropriate medium-pile roller and ensuring complete coverage of the substrate.

**Steelfloated (Smooth, Dense Surfaces)** – prime with a slurry consisting of 1 part TAL FLOORKEY mixed with 2 parts TAL RAPIDFIX powder (by volume), applied using an appropriate builder's block brush and ensuring complete coverage of the substrate.

**Ensure that no ponding of the primer occurs.** Allow the priming coat to dry for 2 – 3 hours before applying the waterproofing system.

2.3 The TAL SUREPROOF waterproofing system comprises of 2 components, one containing a polymer-modified cementitious compound and the other containing a modified liquid acrylic membrane.

2.4 Add the Powder component to the Liquid whilst stirring slowly with an electric drill of 1.4 kW with a suitable mixing paddle attachment. Stir at low speed until a smooth, lump-free viscous liquid is obtained. Allow to stand for a few minutes and then stir again before use.

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

### Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



**For optimum results it is recommended to mix the entire kit in one mix, ie part mixing of the components is not recommended.** The pot life of TAL SUREPROOF is approximately 1 hour at 23°C and 50% RH. Do not mix up more kits than can be used in that time.

2.5 Apply TAL SUREPROOF to the clean substrate using a block brush, **short hair enamel** paint roller, etc.

#### 2.6 Coving Areas and Internal Corners / Interfaces

2.6.1 To allow for movement, apply a 10mm bead of flexible silicone sealant into the interface between all vertical and internal corners/interfaces prior to the TAL SUREPROOF application.

**Due care must be taken to ensure the silicone bead is not flattened out, ie allow 12 – 24 hours curing time before proceeding.**

2.6.2 Apply a coat of TAL SUREPROOF by block brush or **short hair enamel** paint roller to these interfaces. **Immediately** roll out the TAL WATERPROOFING MEMBRANE (200mm wide) into the **wet** TAL SUREPROOF with the membrane extending 100mm equally on either side of the interface, ensuring that there are no wrinkles/creases in the membrane or air bubbles trapped below.

2.6.3 The membrane must be pushed into the corners, ensuring that the entire interface is covered with TAL WATERPROOFING MEMBRANE. Apply a heavy topcoat of TAL SUREPROOF to completely saturate the membrane **before the first coat dries.**

#### 2.7 Weirs & Light Recesses

2.7.1 Apply a coat of TAL SUREPROOF around and into the weir boxes and light recesses and **immediately** position the TAL WATERPROOFING MEMBRANE into the **wet** TAL SUREPROOF.

2.7.2 Apply a second coat of TAL SUREPROOF to completely saturate the membrane **before the first coat dries.**

#### 2.8 PVC Pipes / Outlets (If Applicable)

2.8.1 PVC pipes must be mechanically abraded to roughen them and to remove all traces of dirt, surface contaminants, etc. The pipes must be clean and dry.

2.8.2 To allow for movement, apply a 10mm bead of flexible silicone sealant around the base of the pipes prior to the TAL SUREPROOF application.

**Due care must be taken to ensure the silicone bead is not flattened out – allow 12 – 24 hours curing time before proceeding.**

2.8.3 Apply a coat of TAL SUREPROOF around and into the pipes and **immediately** position the strip of TAL WATERPROOFING MEMBRANE into the **wet** TAL SUREPROOF. Apply a second coat of TAL SUREPROOF to completely saturate the membrane **before the first coat dries.**

#### 2.9 Main Area Application

2.9.1 **Two coats of TAL SUREPROOF must be applied to ensure a minimum 2mm thickness is achieved.**

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

### Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



- 2.9.2 Apply the first coat of TAL SUREPROOF to the dry, primed surface with a block brush or **short hair enamel** paint roller and allow to dry (approximately 1 – 2 hours).
  - 2.9.3 Apply the second coat of TAL SUREPROOF in a **cross-direction to the first coat** to ensure complete coverage with no air entrapment or pinholes.
  - 2.9.4 It is essential to ensure that the main TAL SUREPROOF application overlaps the corner joints/interfaces, ie the interface application must be completely covered by the main area application.
- 2.10 **Rim Flow Areas & Surround (If Applicable)**
- 14.1.1 It is imperative that the main area waterproofing application extends over and into the rimflow areas and is continuous, and that the waterproofing application extends onto the surround by at least 500mm. These sections of waterproofing must also be protected against exposure to acids and chlorine found in the water by fixing of tiles.
- 2.11 Allow the waterproofing to dry completely (approximately 24 - 36 hours, depending on site and ambient conditions) before being subjected to **light** foot traffic or applying the tiles.

**NB: Due care must be taken to ensure that the TAL SUREPROOF installation is not damaged by following trades.**

## 3. ADHESIVE SYSTEM

- 3.1 Apply TAL GOLDSTAR 12 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 12, **strictly in accordance with the product instructions**.
- 3.2 **In this tiling situation it is imperative that there is a solid bed of adhesive at least 5 - 6mm thick behind/beneath each tile.** We would recommend the use of a notched FLOOR TROWEL or THICK-BED FLOOR TROWEL.
- NOTE:**
- **Back "buttering" (trowelling) with adhesive is also required when using large format tiles to ensure full contact and a solid bed of adhesive behind/beneath each tile.**
  - **The adhesive bed thickness should not exceed 5mm when using lightweight soft-glazed ceramic wall tiles.**
- 3.3 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.
- 3.4 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.

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

### Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



- 3.5 Clean off any surplus adhesive remaining on the face of tiles and between the joints with a damp sponge before the adhesive dries.
- 3.6 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, Hard Body and Glazed Stoneware Porcelain Tiles must be a minimum of 3mm wide, and a minimum of 5mm and 3mm wide between Glazed Ceramic Floor Tiles and Glazed Ceramic Walls Tiles respectively.**

- 3.7 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.
- 3.8 Do not tile over structural, expansion or cold joints in the background. These joints must be extended through the various layers to the surface.

- 3.9 **NOTE: It is critical that the adhesive residues are removed from the grout joints to a minimum depth equal to the tile thickness and the joints properly cleaned prior to the epoxy grout application (preferably before the adhesive dries). Failure to do so will result in a superficial grout layer which may not provide the required protection against the acids and chemicals in the pool water, which will compromise the integrity of this installation.**

**Movement and perimeter joints must be cleaned to the full depth of the joint, ie thickness of tile and adhesive layers.**

**Special care must be taken by the contractor to ensure that the underlying waterproofing installation is not damaged during cleaning out of the joints as this will compromise the integrity of the waterproofing layer.**

## 4. GROUTING

- 4.1 **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 6 – 8 HOURS before light foot trafficking or grouting.**

### 4.2 **Epoxy-Resin Grout Option - TAL WATER-BASED EPOXY GROUT:**

- 4.2.1 Grout with TAL WATER-BASED EPOXY GROUT, a high performance water-based and cleanable epoxy compound ideal for installations where total imperviousness, acid/chemical resistance or hygienic conditions are of importance.

### 4.2.2 **TAL WATER-BASED EPOXY GROUT must be mixed and applied strictly in accordance with the product instructions (refer to Packaging and Data Sheet). DO NOT OVERMIX, AS THIS WILL SHORTEN THE POT LIFE AND WORKING TIME.**

**A mix is useable for approximately 1 hour at 20° C, after which time any portion unused must be discarded. It is essential not to mix more grout kits than can be used within 1 hour. In hot conditions the pot life and working time will be shorter. The grout will take longer to cure at temperatures below 10°C.**



# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



4.2.3 **Working in temperatures between 10°C and 25°C and in small areas at a time, apply TAL WATER-BASED EPOXY GROUT with a squeegee or palette knife and rub the grout well into the joints, making sure the joints are properly filled and the grout is heavily compacted into the joints by means of a suitable pointing tool.**

4.2.4 **NOTE:**

4.2.4.1 The joints must be raked out and cleaned before grouting.

4.2.4.2 **Do not wet the joints before grouting. Care must be taken in the cleaning process to ensure grout is not removed from the joints.**

4.2.4.3 **It is essential that the installation is thoroughly inspected and all residues removed timeously, before the epoxy dries. CURED EPOXY RESIDUES ARE IMPOSSIBLE TO REMOVE.**

**NOTE:**

- **Greater care may be required with some types of tiles, ie those with textured and/or unglazed surfaces.**
- **Due care must be taken during application and cleaning to ensure that the face of soft glazed ceramic wall tiles do not get scratched. The use of soft applicators and equipment is essential.**

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

4.2.4.5 **Newly applied or cleaned installations must not be trafficked until the grout has set sufficiently to ensure that the grout is not dislodged or damaged. Dirt may become embedded in uncured epoxy.**

4.2.4.6 **The installation must be suitably protected for a minimum of 7 days after installation. The hardness of the grout should be checked after 3 days. Allow to cure for a minimum of 7 days before exposure to chemicals.**

4.3 **Cementitious Grout Option – TAL HIGH TRAFFIC GROUT + TAL BOND:**

4.3.1 Use TAL HIGH TRAFFIC GROUT, acid-resistant quick-setting durable grout, **mixed 20kg with 5 - 5.5 litres of TAL BOND (replacing the water in the mix)** for filling tile joints 3 - 12mm wide.

4.3.2 **WARNING:**

4.3.2.1 The joints must be raked out and cleaned before grouting.

4.3.2.2 Ensure that the joints are completely filled, and the grout is thoroughly compacted into the joints.

4.3.2.3 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.

# INSTALLATION GUIDELINE

## Type: RESIDENTIAL SWIMMING POOLS ONLY

### Waterproofing the Concrete, Screeded or Rendered Structure of an Outdoor Swimming Pool, and thereafter Fixing Porcelain, Hard Body or Glazed Ceramic Tiles



**NB: Due care must be taken during application and cleaning to ensure that the face of soft glazed ceramic wall tiles do not get scratched. The use of soft applicators and equipment is essential.**

- 4.3.2.4 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.
- 4.3.2.5 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.

## 5. MOVEMENT JOINTS

- 5.1 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 spoiling the visual effect of the tiles.
- 5.2 **Movement joints should be located in both directions at maximum 3 metre centres for this application.**
- 5.3 **Movement joints should also be located around the perimeter of the floor, in all vertical and internal corners/interfaces, against obstructions fixed to the structural background and over all discontinuities in building materials. In addition, movement joints should be located around any fixtures protruding through the tiled surface, such as outlets and fittings.**

**Movement joints should also be created between the pool tiles and coping tiles.**

- 5.4 **The joints should be at least 5mm wide and extend through the adhesive and tile layers. All construction / cold joints and structural joints in the background must be extended through the adhesive and tile layers to the surface in the form of tile panel movement joints. With regards to structural joints, the full width of the structural joints must be respected and extended through the adhesive and tile layers to the surface.**

**NB: Special care must be taken to ensure that the waterproofing installation is not damaged during cleaning out of the tile panel movement joints and perimeter joints. Failure to do so will result in an impaired waterproofing installation. Ideally the adhesive should be carefully removed from the joints whilst still wet; dried adhesive is significantly more difficult to remove**

- 5.5 Where practical, the bulk of the depth of the movement joint can be filled with an inexpensive, compressible material such as polyethylene foam strips.
- 5.6 Seal the joint using a suitable **chemical and acid resistant** resilient sealant in accordance with the manufacturer's instructions. It is important that the joint sealant bonds only to the sides of the movement joint (edges of tiles).
- 5.7 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.